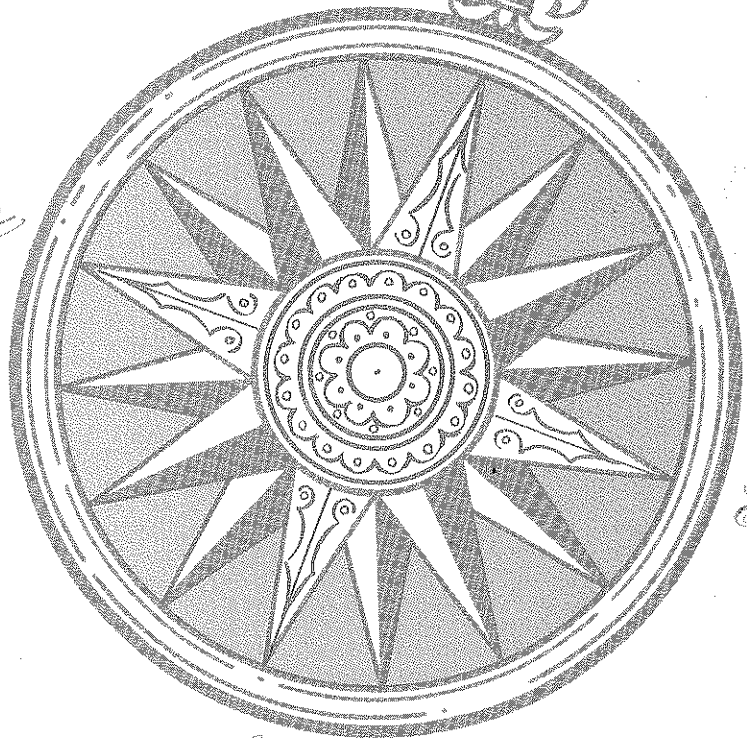


# Lansing Community College

1969-70

NEW TUITION RATES--SUMMER 1970  
RESIDENT 7.00 PER CREDIT  
NON-RESIDENT 11.00 PER CREDIT  
OUT OF STATE 31.00 PER CREDIT



**information for  
prospective students**

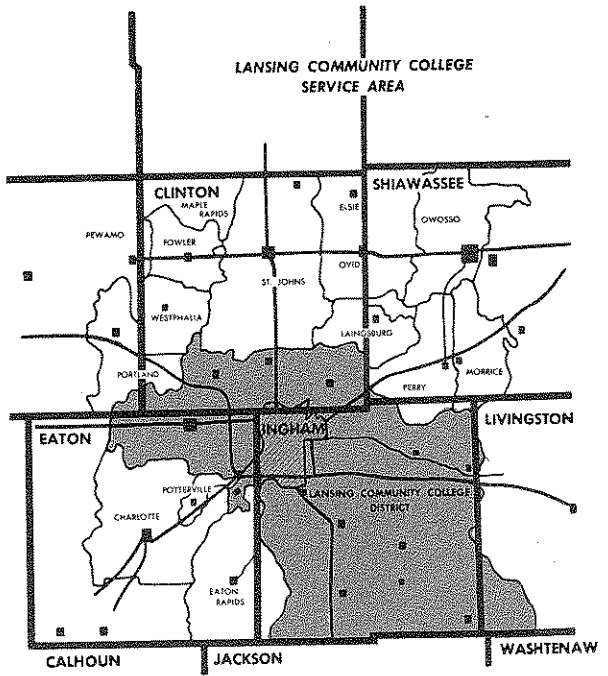


\$1.00  
per copy

*To everything there is a season, and a time  
to every purpose under heaven.*

*Ecclesiastes*

*Painting by Loretta Suelter*





# **LANSING COMMUNITY COLLEGE**

**419 NORTH CAPITOL AVENUE**

**LANSING, MICHIGAN**

**TELEPHONE, 489-3751**

**PUBLISHED DECEMBER 1966**

**REVISED SEPTEMBER 1967**

**REPRINT SEPTEMBER 1968**

**SECOND REPRINT SEPTEMBER 1969**

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



*President Philip J. Gannon*

Dear Students:

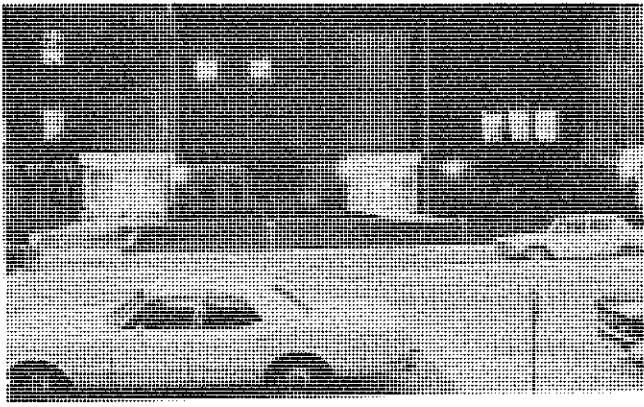
Lansing Community College has completed eleven years of operation and is now a vital part of the metropolitan area. We are creating a new and beautiful campus. When you visit the College, you will find that Old Central has undergone many changes, inside and out. There are new office facilities for the faculty where teacher and student can meet in a pleasant, informal atmosphere, thus retaining the warmth and personality of a small college. Our new Liberal Arts-Health Careers College building is open to students, as well as centers for fine arts, automotive technology and community conferences.

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

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

Sincerely,





# LANSING COMMUNITY COLLEGE



# PURPOSES, FUNCTIONS, AND OBJECTIVES

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

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

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

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

## PURPOSES

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

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

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

Shakespeare

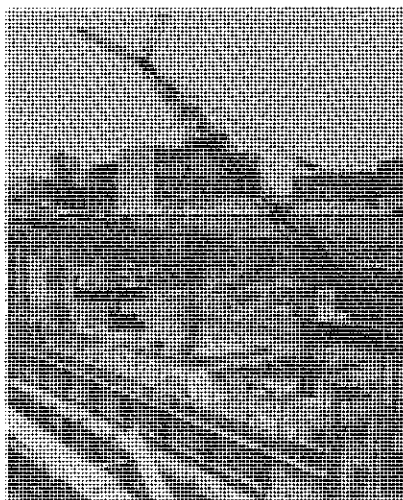
3. The student and the institution, aware that the world is rapidly changing, culturally and technologically, must search diligently for the truth concerning the heritage of this republic and its roots in western civilization and other cultures as they pertain to the dignity and freedom of man. This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

## **FUNCTIONS**

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

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

8



## OBJECTIVES

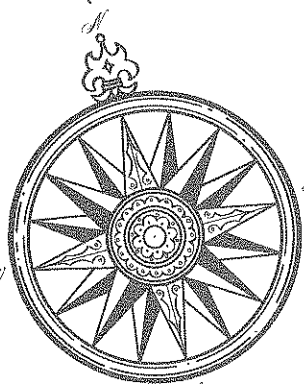
With these purposes and functions in mind, it is felt that a fulfilling and useful life can best be obtained through sound scholarship and training. Specifically, the faculty strives to:

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.

# Division of Student Personnel Services



*William Schaar  
Dean of Student  
Personnel Services*



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

## Student Personnel Services

Student Personnel Services

Registrar and Director of Admissions: Raymond Anderson

### ADMISSIONS

#### Application for New Students

Applications may be obtained from the College Student Records Office or from local high schools. Prospective applicants are urged to contact the Student Records 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 Student Records 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 Student Records Office. An evaluation of credits from institutions will be made and a copy will be sent to the student.

#### Special Applications

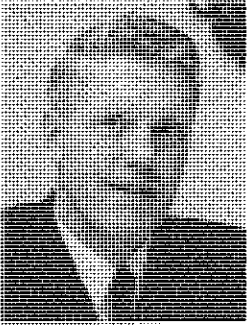
The category of Special student is designed for students taking courses for cultural enrichment, students on apprenticeship programs, and for students not primarily interested in obtaining a degree or transferring to a four-year college. Credits acquired while a student is under Special student status are not transferrable. Transcripts are not necessary for admission. A non-refundable application fee of \$5.00 is required.

#### Guest Applications

Guest students must submit a guest application form supplied by the registrar's office of the college they are attending. Both sides of this form must be completed. Transcripts are not necessary for admission. A non-refundable application fee of \$5.00 is required. A guest application is valid for one term only.

#### Advanced Placement Program

This program is designed to provide an opportunity for qualified high school students to earn college credit commensurate with their high school study, college credit which will count toward a degree program. High school credit will or will not be granted according to the discretion of the participating high school. Advanced placement affords students educational enrichment in specific areas where they have displayed unusual interest and ability in high school.



*Raymond Anderson*

For eligibility in the Advanced Placement Program:

1. Applicant must be working toward graduation requirements at an accredited high school.
2. Applicant must have obtained junior or senior high school standing prior to applying for the program.
3. Applicant must have written recommendation from his high school principal or his representative.
4. The final decision for acceptance rests with Lansing Community College.

A student will be allowed to take no more than two advanced placement courses at the College during any given term.

Application procedure for Advanced Placement:

1. Applicant must obtain a written recommendation from his high school principal or his representative.
2. Applicant must complete a college application as a regular student.
3. The applicant then submits application to the high school records office with an accompanying \$10.00 application fee.
4. The application is completed by the high school records office and sent to the Admissions Office at Lansing Community College.

Applicants who are accepted will receive notification and information concerning registration procedure. Those applicants denied admission will also be notified.

#### Placement Testings

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

#### Registration Procedures

Registration periods are indicated on the school calendar, and students will register for classes according to instructions which are published each term in the student newspaper and the Class Schedule. 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.

### 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 Student Records 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 Student Records 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 Student Records 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. 15

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 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.
- X — Audit.
- S — Satisfactory. Credit granted.
- Z — No credit granted.

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.

Repeat Courses

The student's academic record includes credit hours, honor points, and grade point average only for the second time through a repeated course. The initial election of the course and the grade will appear on the record but the figures will not be averaged in the cumulative totals.

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 Student Records 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 or withdrawal from the course. 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.
8. Have completed a three semester hour (or equivalent) course in Political Science, required by Act 106, Public Acts of 1954, State of Michigan. (Social Science 103 Political Science, and 104 American Government will satisfy this requirement.)

### Degrees

Associate degrees are granted to all who meet graduation requirements. A minimum of 90 credit hours is required for an Associate Degree. 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.

Student Personnel Services 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.

Veterans

Lansing Community College is approved as a school for veterans of military service under provisions of Chapter 31, 34 and 35 of the U. S. Code.

The V. A. cautions veterans matriculating under this program to be prepared to pay their expenses for at least two months after the beginning of the academic year. Once the veteran's application is approved and the award processed, monthly checks will be issued, if the veteran is prompt in submitting to the V. A. the signed certificate attesting to class attendance.

Monetary allowances provided for by the bill vary according to the level at which the veteran is pursuing his academic program as indicated by the following schedule:

LEVEL OF ATTENDANCE	REQUIRED CREDIT HOURS
Full-time	Minimum of 14
Three-Quarter Time	10 to 13
Half-time	7 to 9

After enrollment, veterans should direct their inquiries concerning eligibility to the Student Records Office.

## Evening Classes

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

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

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

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

## Tuition and Fees\*

Tuition, Resident Students	
Per credit hour . . . . .	\$6.80
Limit on hours charged . . . . .	No Limit
Average Tuition per term (15 hours) . . . . .	\$102.00
Tuition, Non-Resident	
Per credit hour . . . . .	\$9.60
Limit on hours charged . . . . .	No Limit
Average Tuition per term (15 hours) . . . . .	\$144.00
Tuition, Out of State Students	
Charge per credit hour . . . . .	\$12.00
Limit on hours charged . . . . .	No Limit
Average Tuition per term (15 hours) . . . . .	\$180.00
Tuition for apprenticeship students varies according to the program of study.	
Fees, all students	
Application fee (new students) . . . . .	\$10.00
Registration fee (guest, special) . . . . .	\$5.00
Late registration fee . . . . .	\$5.00
College activities fee (each term)	
1-6 credit hours . . . . .	\$1.00
7-11 credit hours . . . . .	\$3.00
12 or more credit hours . . . . .	\$5.00
Summer term (all students) . . . . .	\$1.00

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

Laboratory fees vary according to the course of study.

## Tuition Refund Policy

### FALL, WINTER AND SPRING TERMS

Withdrawal during first week of term . . . . .	100% 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 . . . . .	100% of Tuition
Withdrawal during second week of term . . . . .	50% of Tuition
Withdrawal after second week of term . . . . .	No Refund

## Student Personnel Services *Course and Department Codes*

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

Example:

- 3 (3-1) The numerical sequence following course descriptions indicates course credit hours, lecture and laboratory hours per week, in that order.

### *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

## COUNSELING SERVICES

*Director of Counseling: Beverly J. Hunt*

### Academic Advising

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

### Educational-Vocational Information

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

### Counseling Services

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

### Orientation

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

### Testing Services

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

### College Transfer Articulation

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

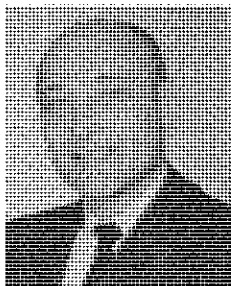
### Housing

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



*Dr. Hunt*

*Director: John Bogner*



*John Bogner*

An increasing number of scholarships, grants and loans are available to students enrolled in the College.

Information and application forms for all types of aid may be obtained from the Financial Aid Office at Lansing Community College or from high school counselors.

It is not necessary to apply for a specific type of aid. One application will entitle the student to consideration for every award offered by Lansing Community College.

Applicants must be accepted for admission.

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

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

#### The State of Michigan Competitive Scholarships

This scholarship provides tuition and fees for entering freshmen who meet the following requirements:

1. Michigan resident for eighteen months preceding application.
2. Graduate of a Michigan public or non-public school with no college training.
3. Participation in the required competitive examination conducted by the Michigan Higher Education Authority.
4. Information and application procedures are available at your high school.

#### Student Government Scholarships

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

#### Trustees Scholarship

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

#### A. S. Corwin Scholarship in Transportation and Traffic Management

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

#### Ukrainian Home Scholarship

Awards made possible with funds given by members of the Ukrainian Home Association. Applicants must live within 25 miles of Lansing Community College and must show evidence of financial need. Preference to Ukrainian students.

#### Educational Opportunity Grants

As a part of the Higher Education Bill of 1965, grants ranging from \$200 to \$1000 a year are awarded to students with exceptional financial need who would not, except for the grant, be financially able to attend college.

### National Defense Student Loan

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.

Applicant should be:

1. A full-time student (12 credits or more).
2. In need of the amount of his loan to pursue his course of study.
3. Capable of maintaining good academic standing in his chosen course of study.

Because a large percentage of the loan is cancelled for borrowers who become teachers, special consideration is given to applicants who express a desire to teach in elementary or secondary schools.

### Federal Guaranteed Loans

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

### 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 students at reasonable terms to help students complete their higher education.

The Student wishing to borrow from this fund must have completed six credits with a 2.0 and be in need of the amount of his loan to pursue his course of study.

### Student Government Loan Fund

The Student Government of Lansing Community College provides short term loans in amounts up to \$100 to enable students to meet immediate financial obligations. This loan must be repaid within six months. Applicants must have completed six credits with a 2.0.

### Andy Hall Memorial Loan Fund

Funds contributed by students in memory of a former Lansing Community College student are available for short-term loans of a maximum of \$100. Applicants must have completed six credits with a 2.0.

### College Work-Study Program

Lansing Community College participates in this Federal Government Program which provides jobs for students from low income families. Information and applications for these jobs may be obtained from the Financial Aid Office, Lansing Community College.

### Additional Scholarships and Loans

Many other scholarships and loans are available through local clubs and organizations in the Lansing area. Because of the great number of changes in donors each year, it is not possible to keep an up-to-date catalog listing. When a student applies for one scholarship or loan he will be considered for all of the financial aid opportunities available at Lansing Community College.

**Student Personnel Services**      **Scholarships for Lansing Community College Graduates**

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

**State of Michigan Tuition Grants**

These grants are available to students transferring from Lansing Community College to eligible private, non-profit colleges and universities in Michigan. Additional information available in Lansing Community College Financial Aid Office.

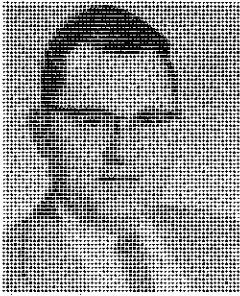
Although the Financial Aid Committee begins processing applications March 1, applications will be accepted and awards made after that date as long as funds are available.

**PLACEMENT OFFICE**

Lansing Community College is now in the process of developing a formal employment placement office on campus, in conjunction with the office of Student Financial Aids. Students and graduates of Lansing Community College who are interested in securing part-time or full-time employment should contact the office of Student Financial Aids and Placement in Room 142 of Unit F (Old Central) or call 489-3751, ext. 293 for information.



## Student Personnel Services



William Zuhl

## STUDENT ACTIVITIES

*Director:* William Zuhl

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

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

### Fine Arts Cultural Program

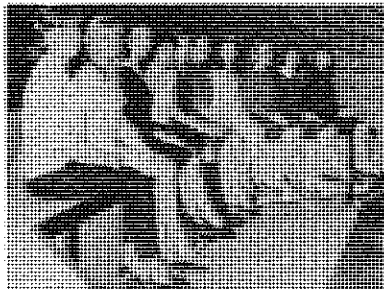
Lansing Community College offers to its students a Fine Arts Program whereby students are encouraged to attend and participate in the productions of the various fine arts groups in the community. This program, cooperating with two of the community theaters, has encouraged many students and faculty members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

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

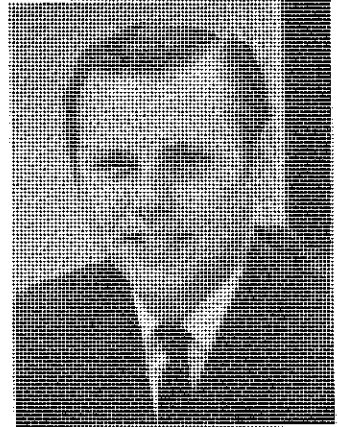
### Student Government and Organizations

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

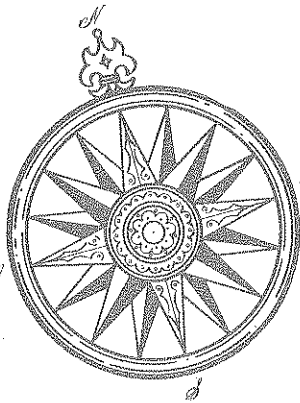
The Student Government initiates consideration of student recommendations working cooperatively with students and administration on all matters of importance to students and the College. Student Government is responsible for the activities and financial needs of student clubs and organizations recognized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



# The Learning Resource Center



*James P. Platte*  
Chairman



The Lansing Community College Learning Resource Center is composed of the libraries, the instructional media centers, and the planetarium. To support the total college program a library and an instructional media center are located in each unit college, providing materials and services relevant to the instructional programs of each unit college.

### The Libraries

The Liberal Arts, Sciences and Health Careers Library and the Dwight Rich Memorial Library (Business, Technology) offer a total of more than 38,000 books and 370 periodicals. These have been selected cooperatively by the faculty and the library staff to present diverse points of view and the latest information to support the curriculums. The libraries also provide a reserve reading system and a microfilm collection of the New York Times and twenty frequently used periodicals dating back to 1960. The books are arranged by the Dewey Decimal Classification on open shelves. Each library has a comprehensive catalog of the entire collection.

Facilities of the libraries include student conference rooms, typing rooms, and carrels designed for individual study.

The staff of the libraries encourage student research by providing reference services and by conducting laboratory sessions in the use of a library. Additional services and materials are provided through cooperation with the State of Michigan Library, the Lansing Public Library and the Michigan State University Library.

Library Technical Services orders, prepares, and indexes all books, periodicals, microforms, pamphlets, and other collection media requested by the libraries. The area, located in a wing of the Business-Technology Library, also receives and distributes all mail for both libraries, serves as a supply center, bindery order and mending center and card duplication center. Central records on the Learning Resource Center total collection are maintained in the Technical Service area.

### The Instructional Media Centers

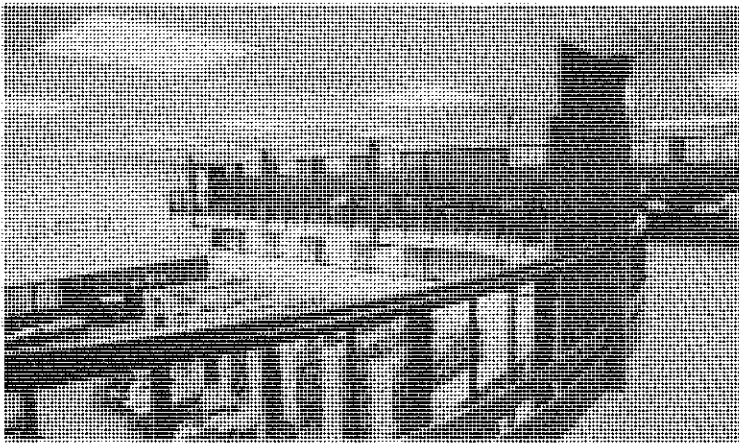
The instructional media centers exist primarily to provide assistance to the instructor, enhancing his classroom effectiveness with audiovisual media. Services of these centers include educational television, graphic production and photography, movie production (8mm, 16mm), and the maintenance of all audiovisual equipment and audiovisual tutorial laboratories within the College.

The instructional media centers also serve the immediate needs and interests of the student body by providing educational programming and culturally stimulating stereophonic programs. These programs originate from an audio distribution center to selected carrels within each library. The carrels equipped with audio listening equipment have several channels available for both monaural and stereophonic sound. Special collections in the instructional media centers include audio and video tapes, and musical and non-musical recordings.

### The Planetarium

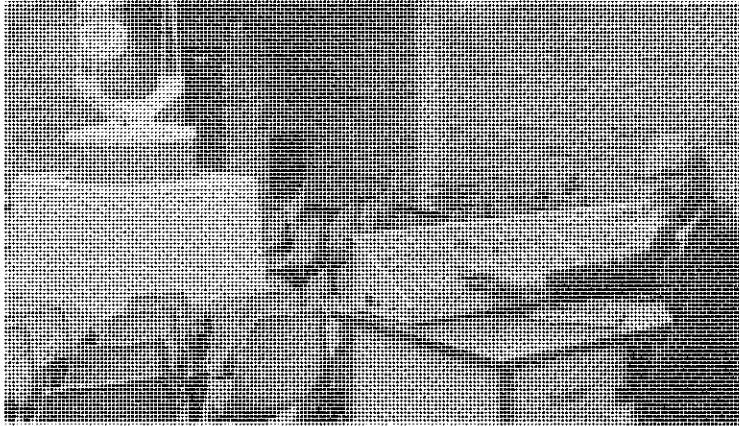
The planetarium is designed to serve classroom instruction. It is one facet of a space-science complex in the Liberal Arts, Sciences and Health Careers College. In addition to the planetarium, the complex has an observation platform and an observatory with a 16' fiberglass dome. The planetarium serves the science department in particular, and all areas of the college in general. The planetarium staff exercises a dual role: (1) assisting faculty in the development of programs and (2) demonstrating, to the total college, the planetarium's capacity for interdisciplinary education.

The basic planetarium facility has a 38' diameter aluminum dome with 103 seats available for planetarium use. When used as lecture hall the facility offers 129 seats, each equipped with an electronic responder unit to assist individual response and evaluation. In addition to the Spitz A-4 planetarium projector, the planetarium has auxiliary devices for horizon and special effects projection.

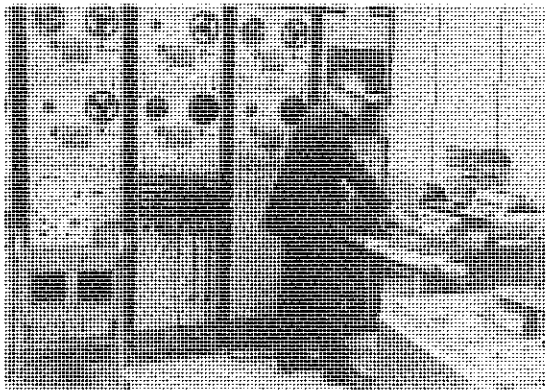
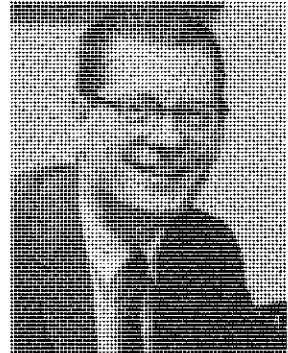
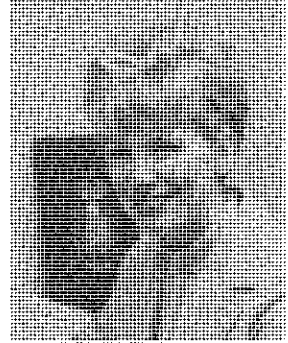
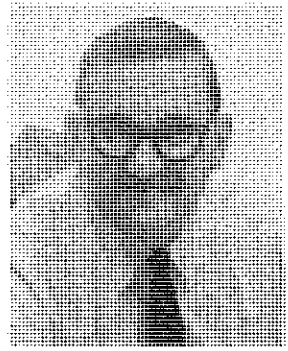


*Old Central*

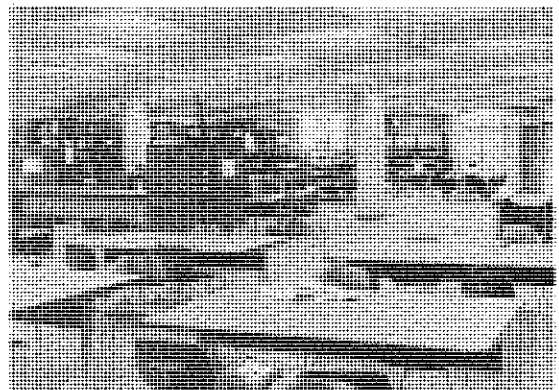
## Learning Resource Center



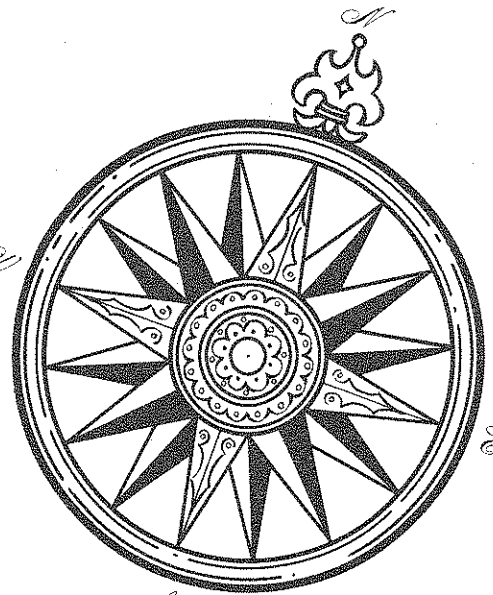
*Planetarium*



*Instructional Media*



*Liberal Arts*



## **COLLEGE OF ARTS, SCIENCES AND HEALTH CAREERS**

**Department of Health Careers**

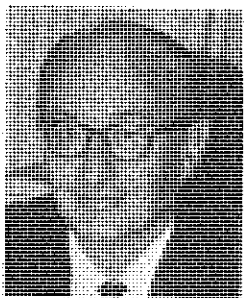
**Department of Humanities**

**Department of Language Arts**

**Department of Mathematics**

**Department of Science**

**Department of Social Sciences**



Dean Kintzer

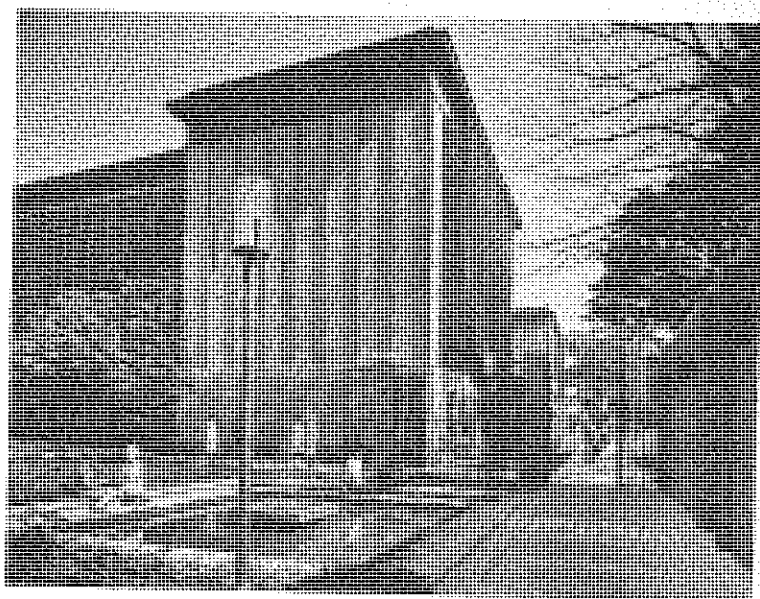
Dean: Sam Kintzer

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.



## 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, humanities and psychology 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 advanced 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.





### Associate in Arts — Humanities Major

### Arts and Sciences

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENC 121	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	ENC 201	Introduction to Literature . . . . .	3
PE 101	Physical Education . . . . .	1		Music or Art Electives . . . . .	3
PSY 101	Orientation . . . . .	1			14-16
		17			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENC 122	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	ENC 202	Introduction to Literature . . . . .	3
PE 102	Physical Education . . . . .	1		Music or Art Electives . . . . .	1-3
		16			14-16
	<b>Spring Term</b>			<b>Spring Term</b>	
ENC 123	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	ENC 203	Introduction to Literature . . . . .	3
PE 103	Physical Education . . . . .	1		Music or Art Electives . . . . .	3
		16			14-16

### Associate in Arts — Language Arts Major with emphasis in English

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENC 121	Composition . . . . .	3	ENC 201	Introduction to Literature . . . . .	3
NS	Natural Science . . . . .	4	HUM 201	Western Civilization . . . . .	4
SS 101	Sociology . . . . .	4		201 Foreign Language . . . . .	4
PE 101	Physical Education . . . . .	1		Elective . . . . .	3
	101 Foreign Language . . . . .	4			14
		16			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENC 122	Composition . . . . .	3	ENC 202	Introduction to Literature . . . . .	3
NS	Natural Science . . . . .	4	ENC 260	Survey of Afro-American Literature . . . . .	3
SS 102	Economics . . . . .	4	HUM 202	Western Civilization . . . . .	4
PE 102	Physical Education . . . . .	1		202 Foreign Language . . . . .	4
	102 Foreign Language . . . . .	4			14
		16			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENC 123	Composition . . . . .	3	ENC 203	Introduction to Literature . . . . .	3
NS	Natural Science . . . . .	4	HUM 203	Western Civilization . . . . .	4
SS 103	Political Science . . . . .	4		203 Foreign Language . . . . .	4
PE 103	Physical Education . . . . .	1		Elective . . . . .	3
	103 Foreign Language . . . . .	4			14
		16			

**Electives:**

1. Highly Recommended: HST 150 Afro-American History (4)
2. Recommended (Required for Pre-Teaching Programs):
  - PSY 201 Introduction to Psychology (4)
  - PSY 204 Educational Psychology (3)
  - SPH 104 Fundamentals of Speech (3)
3. Recommended:
 

SPH 201	PHIL 201, 202, 203
ENC 230	HST 111, 112, 113
ENC 210, 211*	PLS 250, 271
ENG 290	SS 270

\*In the fall and spring terms only one novel course will be offered: ENC 210 or 211. The course not offered during the regular school year will be offered in the summer.

Arts and Sciences

Associate in Arts — Language Arts Major with emphasis in Foreign Language

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENC 121	Composition	3	NS	Natural Science	4
ENC 230	Introduction to English Linguistics	3		201 Foreign Language	4
	101 Foreign Language	4	HUM 201	Western Civilization	4
SS 101	Sociology	4		Elective	3
PE 101	Physical Education	1			15
		15			
	Winter Term				
ENC 122	Composition	3	NS	Natural Science	4
SPH 104	Fundamentals of Speech	3		202 Foreign Language	4
	102 Foreign Language	4	HUM 202	Western Civilization	4
SS 102	Economics	4	ENG 260	Survey of Afro-American Literature	3
PE 102	Physical Education	1			15
		15			
	Spring Term				
ENC 123	Composition	3	NS	Natural Science	4
SPH 105	Voice and Articulation	3		203 Foreign Language	4
	103 Foreign Language	4	HUM 203	Western Civilization	4
SS 103	Political Science	4		Elective	3
PE 103	Physical Education	1			15
		15			

Electives:

- Highly Recommended:
  - HST 150 Afro-American History (4)
  - SS 270 Introduction to Anthropology (3)
- Recommended: (Required for Pre-Teaching Programs):
  - PSY 201 Introduction to Psychology (4)
  - PSY 204 Educational Psychology (3)
- Recommended:
  - ENG 201, 202, 203
  - PHIL 201, 202, 203
  - HST 111, 112, 113

Associate in Arts — Language Arts Major with emphasis in Speech

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENC 121	Composition	3	ENG 230	Introduction to English Linguistics	3
SS 101	Sociology	4	HUM 201	Western Civilization	4
SPH 104	Fundamentals of Speech	3	SPH 202	Discussion and Debate	3
NS	Natural Science	4	ENG 201	Introduction to Literature	3
PE 101	Physical Education	1		Elective	3
		15			16
	Winter Term				
ENC 122	Composition	3	SPH 220	Introduction to Theater Arts	3
SS 102	Economics	4	ENG 202	Introduction to Literature	3
SPH 105	Voice and Articulation	3	ENG 260	Survey of Afro-American Literature	3
NS	Natural Science	4	HUM 202	Western Civilization	4
PE 102	Physical Education	1		Elective	3
		15			16
	Spring Term				
ENC 123	Composition	3	ENG 290	Shakespeare	3
SPH 201	Interpretive Reading	3	SPH 221	Play Production	3
SS 103	Political Science	4	HUM 203	Western Civilization	4
NS	Natural Science	4	ENG 203	Introduction to Literature	3
PE 103	Physical Education	1		Elective	3
		15			16

Electives:

- Highly Recommended:
  - HST 150 Afro-American History (4)
- Recommended (Check individual Transfer Programs):
  - PSY 201 Introduction to Psychology (4)
  - PSY 204 Educational Psychology (3)
- Recommended:
  - HST 111, 112, 113
  - PHIL 201, 202, 203
  - SS 270
  - Foreign Language 101, 102, 103

The prospective Social Science or Psychology 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 student 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 121	Composition	3	HST 150	Afro-American History	3
SS 101	Sociology	4	NS	Natural Science**	4
HUM 201	Western Civilization I	4		Electives***	8
PSY 101	Orientation*	1			15
PE 101	Physical Education*	1			
	Elective***	4			
		17			
	<b>Winter Term</b>				
ENG 122	Composition	3	NS	Natural Science**	4
SS 102	Economics	4		Electives***	11
HUM 202	Western Civilization II	4			15
PE 102	Physical Education*	1			
PSY 201	Introduction to Psychology	4			
		16			
	<b>Spring Term</b>				
ENG 123	Composition	3			
SS 103	Political Science	4			
HUM 203	Western Civilization III	4			
PE 103	Physical Education	1			
	Elective***	4			
		16			15

- \* Optional
- \*\* Natural Science consists of the following three courses and it is not necessary to take these in sequence:
  - NS 101 Botany-Zoology
  - NS 102 Chemistry-Physics
  - NS 103 Astronomy-Geology
- \*\*\* Electives should be selected from the following categories:
  - Geography. Select any one from the following courses: GEO 101, 201, 202, 203.

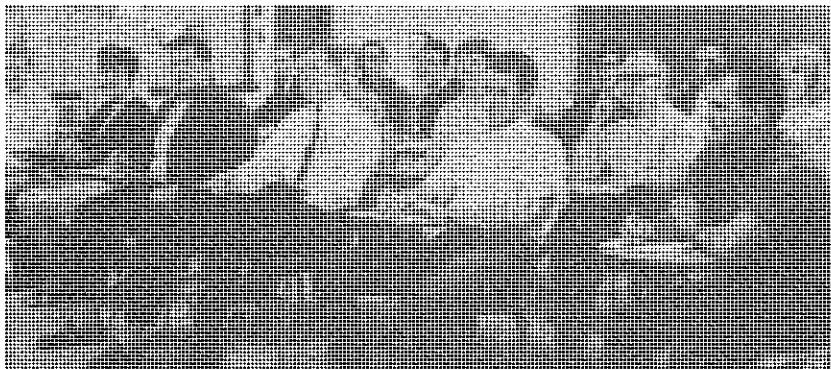
Psychology. Select any one from the following courses: PSY 202, 203, 204, 205.

Social Science. Select at least three courses from one of the following categories and two from the other:

A. Political Science: 200, 210, 260, 271.

B. Sociology and Anthropology: 200, 220, 254, 255, 270, 271.

Optional selection of 15 to 17 hours. Recommend preparation in foreign language or mathematics for students planning a four year program.



Arts and Sciences

Associate in Arts — Psychology Major

Freshman Year	Fall Term	Credit Hours
ENC 121	Composition	3
SS 101	Sociology	4
HUM 201	Western Civilization I	4
PSY 101	Orientation*	1
PE 101	Physical Education*	1
	Elective***	4
		<hr/> 17
<b>Winter Term</b>		
ENC 122	Composition	3
SS 102	Economics	4
HUM 202	Western Civilization II	4
PE 102	Physical Education*	1
PSY 201	Introduction to Psychology	4
		<hr/> 16
<b>Spring Term</b>		
ENG 123	Composition	3
SS 103	Political Science	4
HUM 203	Western Civilization III	4
PE 103	Physical Education*	1
	Elective***	4
		<hr/> 16

\* Optional

\*\* Natural Science consists of the following three courses and it is not necessary to take these in sequence:

- NS 101 Botany-Zoology
- NS 102 Chemistry-Physics
- NS 103 Astronomy-Geology

\*\*\* Electives should be selected from the following categories:

Mathematics. Select option A or B. Students continuing in a four-year program should select option A.

- A
- MTH 164 Coll. Alg. & Trig. I 5
- MTH 165 Coll. Alg. & Trig. II 5

Sophomore Year	Fall Term	Credit Hours
HST 150	Afro-American History	3
NS	Natural Science**	4
	Electives***	8
		<hr/> 15
<b>Winter Term</b>		
NS	Natural Science**	4
	Electives***	11
		<hr/> 15
<b>Spring Term</b>		
NS	Natural Science**	4
	Electives***	11
		<hr/> 15

- B
- MTH 102 Intr. Alg. 5
- MTH 158 Desc. Stat. 5

Psychology. Select three courses from the following:

- PSY 202 Psych. of Personality 3
- PSY 203 Social Psychology 3
- PSY 204 Educ. Psych. 3
- PSY 205 Growth & Dev. 3

Social Science. Select three courses from any of the following: Political Science 200, 210, 260, 270; Sociology and Anthropology 200, 220, 254, 255, 270, 271; Geography 101, 201, 202, 203.

Optional selection of 8 to 10 hours.

Associate in Science Degree

Freshman Year	Fall Term	Credit Hours
ENG 121	Composition	3
MTH 164	College Algebra & Trig. I	5
	Science Electives	4.5
PSY 101	Orientation	1
PE 101	Physical Education	1
		<hr/> 14-15
<b>Winter Term</b>		
ENG 122	Composition	3
MTH 165	College Algebra & Trig. II	5
	Science Elective	4.5
PE 102	Physical Education	1
	Elective	3
		<hr/> 16-17
<b>Spring Term</b>		
ENG 123	Composition	3
	Science Mathematics	9-10
PE 103	Physical Education	1
	Elective	3
		<hr/> 16-17

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
SS 101	Sociology	4
	Science or Math. Elective	8
		<hr/> 16
<b>Winter Term</b>		
HUM 202	Western Civilization	4
SS 102	Economics	4
	Science or Math Elective	8
		<hr/> 16
<b>Spring Term</b>		
HUM 203	Western Civilization	4
SS 103	Political Science	4
	Science or Math Elective	8
		<hr/> 16

## Associate in Science — Biology Major

## Arts and Sciences

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	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			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	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			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	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

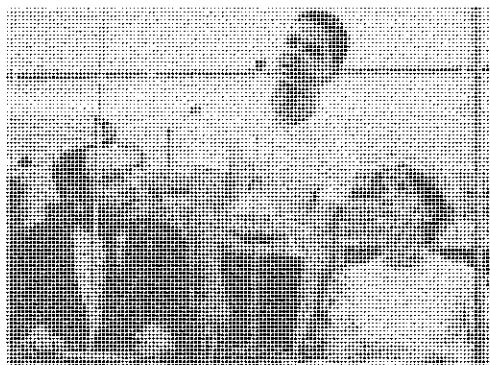
MTH 213	Analytic Geometry & Cal. I	5	PHY 201	Physics*	4
MTH 214	Analytic Geometry & Cal. II	5	PHY 202	Physics	4
BIO 201	Zoology I	4	PHY 203	Physics	4
BIO 202	Zoology II	4	PHY 211	Physics**	4
BIO 203	Botany	4	PHY 212	Physics	4
			PHY 213	Physics	4

\* 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 121	Composition	3	HUM 201	Western Civilization	4
MTH 164	College Algebra & Trig. I	5	SS 101	Sociology	4
CEM 111	General Chemistry	5	CEM 201	Organic Chemistry	5
PSY 101	Orientation	1		Elective	4
PE 101	Physical Education	1			17
		15			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	HUM 202	Western Civilization	4
MTH 165	College Algebra & Trigonometry I	5	SS 102	Economics	4
CEM 112	General Chemistry	5	CEM 202	Organic Chemistry	5
PE 102	Physical Education	1		Elective	4
		14			17
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	HUM 203	Western Civilization	4
CEM 111	General Chemistry	5	SS 103	Political Science	4
PE 103	Physical Education	1	CEM 203	Organic Chemistry	5
	Math or Science Electives	5		Elective	4
		14			17

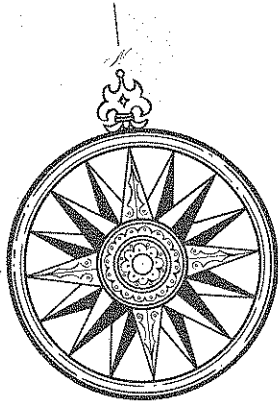


Associate in Science — Mathematics Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	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 122	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 123	Composition	3	HUM 202	Western Civilization	4
SS 103	Political Science	4	MTH 234	Theory of Matrices	4
PE 103	Physical Education	1	NS	Natural Science	4
MTH 214	Anal. Geom. & Calculus II	5		Elective	3
	Elective	3			15
		16			

Associate in Science — Physics Major

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	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 122	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 123	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 234	Theory of Matrices (Recommended)	4
	Elective	3			16
		17			



## Pre-Professional Program

## Arts and Sciences

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
ENG 121	Composition	3
MTH 164	College Algebra & Trig. I	5
CEM 111	Inorganic Chemistry	5
BIO 107	General Biology I	4
		<hr/> 17
	Winter Term	
ENG 122	Composition	3
MTH 165	College Algebra & Trig. II	5
CEM 112	Inorganic Chemistry	5
BIO 108	General Biology II	4
		<hr/> 17
	Spring Term	
ENG 123	Composition	3
CEM 113	Inorganic Chemistry	5
BIO 109	General Biology III	4
PSY 201	Intro. to Psychology	4
		<hr/> 16

Sophomore Year	Fall Term	Credit Hours
CEM 201	Organic Chemistry	5
SS 101	Sociology	4
HUM 201	Western Civilization	4
	Elective	3-4
		<hr/> 16-17
	Winter Term	
CEM 202	Organic Chemistry	5
SS 102	Economics	4
HUM 202	Western Civilization	4
	Elective	3-4
		<hr/> 16-17
	Spring Term	
CEM 203	Organic Chemistry	5
SS 103	Political Science	4
HUM 203	Western Civilization	4
	Elective	3-4
		<hr/> 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**

**Pre-Dentistry**

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	HUM 201	Western Civilization	4
ENG 121	Composition	3	CEM 201	Organic Chemistry	5
BIO 201	Zoology	4	PHY 201	Physics	4
SS 101	Sociology	4		Elective	3
CEM 111	Inorganic Chemistry	5			
PE 101	Physical Education	1			
		<hr/> 18			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	HUM 202	Western Civilization	4
BIO 202	Zoology	4	CEM 202	Organic Chemistry	5
SS 102	Economics	4	PHY 202	Physics	4
CEM 112	Inorganic Chemistry	5		Elective	3
PE 102	Physical Education	1			
		<hr/> 17			<hr/> 16
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	HUM 203	Western Civilization	4
BIO 203	Botany	4	CEM 221	Quantitative Analysis	5
SS 103	Political Science	4	PHY 203	Physics	4
CEM 113	Qualitative Analysis	5		Elective	3
PE 103	Physical Education	1			
		<hr/> 17			<hr/> 16

**Pre-Law**

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	Composition	3	PHL 201	Philosophy	3
HST 111	American History	3	EC 201	Economics	3
SS 101	Sociology	4	HUM 201	Western Civilization	4
	Foreign Language	4	NS	Natural Science	4
PSY 101	Orientation	1		Elective	3
PE 101	Physical Education	1			
		<hr/> 16			<hr/> 17
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	PHL 202	Philosophy	3
HST 112	American History	3	EC 202	Economics	3
SS 102	Economics	4	HUM 202	Western Civilization	4
	Foreign Language	4	NS	Natural Science	4
PE 102	Physical Education	1		Elective	3
		<hr/> 15			<hr/> 17
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	PHL 203	Philosophy	3
HST 113	American History	3	EC 203	Economics	3
SS 103	Political Science	4	HUM 203	Western Civilization	4
	Foreign Language	4	NS	Natural Science	4
PE 103	Physical Education	1		Elective	3
		<hr/> 15			<hr/> 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	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	PHY 201	Physics	4
ENG 121	Composition	3	CEM 201	Organic Chemistry	5
SS 101	Sociology	4	HUM 201	Western Civilization	4
BIO 201	Zoology	4		Foreign Language or Mathematics	4.5
CEM 111	General Chemistry	5			17-18
PE 101	Physical Education	1			
		18			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	PHY 202	Physics	4
SS 102	Economics	4	CEM 202	Organic Chemistry	5
BIO 202	Zoology	4	HUM 202	Western Civilization	4
CEM 112	General Chemistry	5		Language or Math.	4.5
PE 102	Physical Education	1			17-18
		17			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	PHY 203	Physics	4
SS 103	Political Science	4	CEM 221	Quantitative Analysis	5
BIO 203	Botany	4	HUM 203	Western Civilization	4
CEM 113	Qualitative Analysis	5		Language or Math.	4.5
PE 103	Physical Education	1			17-18
		17			
		17			

## 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	Sophomore Year	Fall Term	Credit Hours
PSY 101	Orientation	1	PSY 201	Psychology	4
SS 101	Sociology	4	BIO 201	Zoology	4
CEM 101	Introduction to Chemistry	3		Electives	8
ENG 121	Composition	3			16
PE 101	Physical Education	1			
	Elective	3			
		15			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	PSY 202	Psychology of Personality	3
SS 102	Economics	4	BIO 202	Zoology	4
CEM 102	Introduction to Chemistry	3		Electives	8
MTH 102	Intermediate Algebra	5			15
PE 102	Physical Education	1			
		16			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	ENG 104	Speech	3
SS 103	Political Science	4	PSY 203	Social Psychology	3
CEM 103	Introduction to Chemistry	3		Electives	8
PE 103	Physical Education	1			14
	Electives	4			
		15			
				<b>Recommended Electives:</b>	
				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 121	Composition	3	ENG 122	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			
		18			17

Freshman Year	Spring Term	Credit Hours
ENG 123	Composition	3
CEM 113	Qualitative Analysis	5
SS 103	Political Science	4
	Electives	4
PE 101	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 121	Composition	3	ENG 122	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			
		18			17

Freshman Year	Spring Term	Credit Hours
ENG 123	Composition	3
CEM 113	Qualitative Analysis	5
SS 103	Political Science	4
NS	Natural Science	4
PE 103	Physical Education	1
		17

**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	122 Composition	3
ENG	121 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
		<hr/> 18			

Freshman Year	Spring Term	Credit Hours
ENG	123 Composition	3
CEM	113 Qualitative Analysis	5
SS	103 Political Science	4
PSY	203 Social Psychology	3
PE	103 Physical Education	1
		<hr/> 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	121 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
		<hr/> 15			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG	122 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
		<hr/> 18			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG	123 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
		<hr/> 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 121	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>			<b>Winter Term</b>	
ENG 122	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>			<b>Spring Term</b>	
ENG 123	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	HST	Afro-American History	3
ENG 121	Composition	3	HUM 201	Western Civilization I	4
SS 101	Sociology	4	NS 101	Botany-Zoology	4
	Foreign Language	4		Elective	4
	Elective	4			15
		16			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	SS 255	Social Problems	3
SS 102	Economics	4	HUM 202	Western Civilization II	4
PSY 201	Introduction to Psychology	4	NS 102	Chemistry-Physics	4
	Foreign Language	4		Electives	4
		15			15
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	SS 254	Marriage and Family	3
SS 103	Political Science	4	HUM 203	Western Civilization III	4
PSY 202	Psychology of Personality	4	NS 103	Astronomy-Ceology	4
	Foreign Language	4		Electives	4
		15			15

\* Optional

**Recommended Electives**

Second year of a foreign language; any course in Political Science, Geography or Social Science;

Mathematics 164, 165; Economics 201, 202, 203; History 111, 112, 113, or Philosophy.



Pre-Teaching Curriculum

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. Electives should be determined by one's major and minors (2). The prospective teaching major is urged to consult with the faculty members in the department of Social Science as well as the counseling staff.

Pre-Teaching

Elementary

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	Composition	3	HUM 201	Western Civilization	4
SS 101	Sociology	4	PSY 201	Introduction to Psychology	4
NS	Natural Science	4	ENG 230	Introduction to English Linguistics	3
ED 150	Introduction to Education	3	GEO 201	World Regional Geography	3
PSY 101	Orientation*	1		Electives	2
PE 101	Physical Education*	1			16
		16			
	<b>Winter Term</b>			<b>Winter Term</b>	
ENG 122	Composition	3	HUM 202	Western Civilization	4
SS 102	Economics	4	PSY 204	Education Psychology	3
NS	Natural Science	4	FPS 212	Foundations of Physical Science	4
SPH 104	Fund. of Speech	3		Electives	4
PE 102	Physical Education*	1			15
		15			
	<b>Spring Term</b>			<b>Spring Term</b>	
ENG 123	Composition	3	HUM 203	Western Civilization	4
SS 103	Political Science	4	PSY 205	Human Growth & Development	3
NS	Natural Science	4	FBS 211	Foundations of Biological Science	4
MTH 200	Arith. Foundations	5		Electives	4
PE 103	Physical Education*	1			15
		17			

Recommended Electives

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

- |                      |               |
|----------------------|---------------|
| Biological Sciences  | Humanities    |
| Physical Sciences    | Language Arts |
| Mathematics 201, 202 | Art           |
| Social Sciences      | Music         |

Pre-Teaching

Secondary

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	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>			<b>Winter Term</b>	
ENG 122	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>			<b>Spring Term</b>	
ENG 123	Composition	3	HUM 203	Western Civilization	4
SS 103	Political Science	4	NS	Natural Science	4
PE 103	Physical Education*	1	PSY 205	Human Growth and Development	3
	Electives	8		Electives	4
		16			15
*Optional		16			45

**Arts and Sciences**

**Electives**

The electives should be selected from the following disciplines:

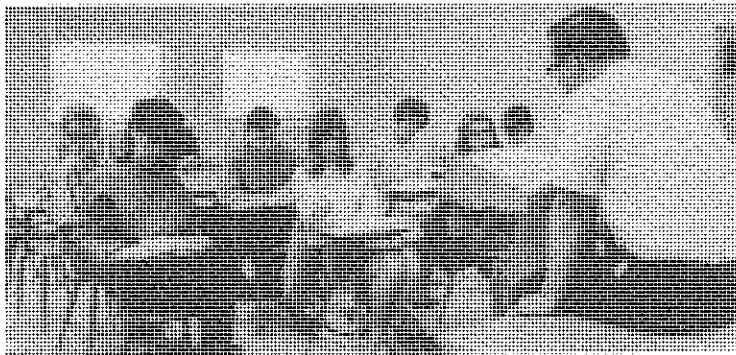
Anthropology	Geography	Philosophy
Biology	History	Physics
Chemistry	Literature	Political Science
Economics	Mathematics	Psychology
English Language	Music	Sociology
Foreign Language		

**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 121	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 122	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 123	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 121	Composition . . . . .	3
SS 101	Sociology . . . . .	4
CEM 111	Inorganic Chemistry . . . . .	5
NS	Natural Science . . . . .	4
PE 101	Physical Education . . . . .	1
PSY 101	Orientation . . . . .	1
		<hr/>
		18
	<b>Winter Term</b>	
ENG 122	Composition . . . . .	3
CEM 112	Inorganic Chemistry . . . . .	5
NS	Natural Science . . . . .	4
PE 102	Physical Education . . . . .	1
MTH 180	College Algebra & Trig. . . . .	5
		<hr/>
		18
	<b>Spring Term</b>	
ENG 123	Composition . . . . .	3
CEM 113	Qualitative Analysis . . . . .	5
NS	Natural Science . . . . .	4
SS 102	Economics . . . . .	4
PE 103	Physical Education . . . . .	1
		<hr/>
		17

**Arts and Sciences**

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

Department Chairman: Michael Lenkowski



Michael Lenkowski

**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.

**Associate Degree Program in Nursing**

**A NEW APPROACH TO NURSING EDUCATION**

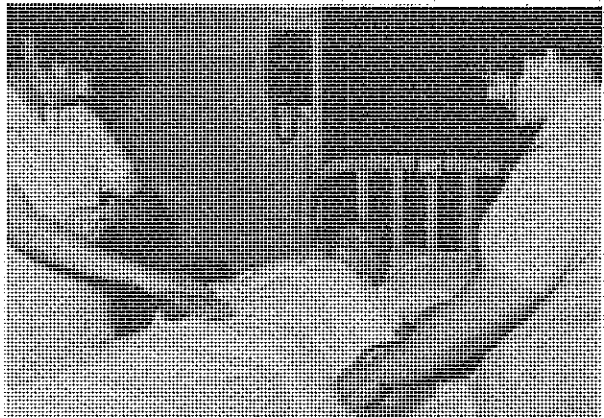
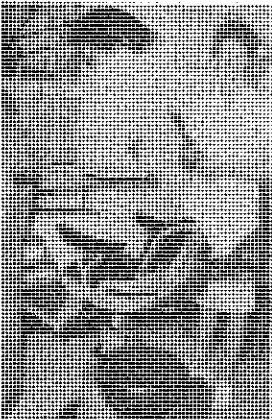
The Associate Degree Program in Nursing at Lansing Community College is a basic nursing program, complete for the purpose of preparing students to write the State Board Testpool Examination for Licensure as registered nurses. It is not equivalent to the first two years of a baccalaureate program in nursing. A graduate of this program may work toward a baccalaureate in nursing but transfer credit and advanced standing are determined by the college or university to which the student makes application.

Courses in natural and social sciences and in English provide an educational background of scientific principles and communication skills. Anatomy-physiology, microbiology, chemistry and psychology are scheduled in the first three quarters; English, social science and speech are scheduled during the fourth through seventh terms. Theory and nursing laboratory sessions are conducted at the College. Clinical experiences are provided in three community hospitals with College faculty conducting the scheduled laboratory sessions in the hospitals. Other community health agencies and programs provide opportunities for observation of related health activities.

Student experiences progress from simple to complex patient care. Emphasis is placed on understanding of principles and the development of skills in the clinical setting. Pertinent activities of patient care, such as pharmacology, nutrition and nurse-patient relationships, are integrated throughout major nursing courses.

Upon completion of the program, the graduate will have had theory and related clinical experiences in medical, surgical, maternal-child and psychiatric nursing. The senior seminar and practicum provide theory and opportunities to apply beginning principles or leadership which relate to the patient care team.

The student is required to meet the College criteria for the Associate Degree, and the criteria for students in the Nursing Program to qualify for graduation.





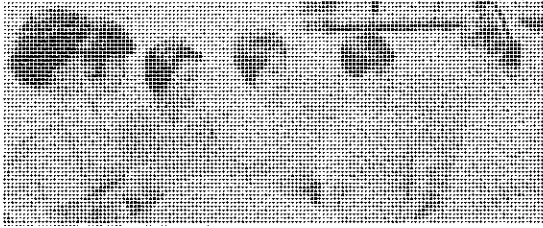
## Health Careers

First Year	Fall Term	Credits	Winter Term	Credits
Nursing Foundations 101		5	Nursing Foundations 102	5
Anatomy/Physiology 201		4	Anatomy/Physiology 202	4
Psychology 201 — General		4	English 121	3
Sociology 101		4	Psychology 202	3
		17		15
Spring Term			Summer Term	
Nursing in Physical-Mental Illness 201		10	English 122	3
Microbiology 203		4	Speech 104	3
Psychiatric Nursing 204*		4	Government 104	4
		18		10
*May be assigned concurrent with NUR 201 or NUR 202.				
Second Year	Fall Term	Credits	Winter Term	Credits
Maternal-Child Nursing 103*		10	Nursing in Physical-Mental Illness 202*	10
Psychology — Growth & Dev. 205		3	English 123	3
		13		13
*Or Winter Term as indicated by enrollment.				
Spring Term			General Education	
Advanced Nursing Skills 203		10		42
			Nursing Major	54
			Total for Graduation	96

## 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	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 121	Composition	3	PSY 201	Introduction to Psychology	4
BIO 201	Zoology	4		Foreign Language	3
	Foreign Language	4	ENG 201	Literature	3
SS 101	Sociology	4	CEM 111	Chemistry (Inorganic)	5
PSY 101	Orientation	1			15
PE 101	Physical Education	1			
		17	Winter Term		
Winter Term			ENG 202	Literature	3
ENG 122	Composition	3	CEM 112	Chemistry (Inorganic)	5
BIO 202	Zoology	4		Foreign Language	3
	Foreign Language	4	SPH 104	Speech Fundamentals	3
SS 102	Economics	4		Elective	3
PE 102	Physical Education	1			17
		16	Spring Term		
Spring Term			ENG 203	Literature	3
ENG 123	Composition	3	CEM 113	Qualitative Analysis	5
BIO 203	Botany	4		Foreign Language	3
SS 103	Political Science	4	PSY 203	Human Relations	3
	Foreign Language	4			14
PE 103	Physical Education	1			
		16			



## Health Careers **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*

Pre-requisite for Bus. 101 is one year of high school typing or Bus. 011.

Fall Term			Spring Term				
BUS	101	Int. Typing . . . . .	3	ENG	112	Communication II . . . . .	3
BUS	117	Bus. Math. . . . .	3	BUS	204	Bus. Correspondence . . . . .	3
MIC	100	Microbiology . . . . .	3	BUS	220	Office Mgt. I . . . . .	3
PSY	151	Psychology . . . . .	3	DS	103	Dental Science III . . . . .	5
DS	101	Dental Science I . . . . .	5				14
			17				
Winter Term							
ENG	111	Communication I . . . . .	3				
BUS	110	Applied Acct. . . . .	4				
SPH	104	Fundamentals of Speech . . . . .	3				
DS	102	Dental Science II . . . . .	5				
			15				

## **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	Credit Hours	Freshman Year	Spring Term	Credit Hours		
ENG	121	Composition . . . . .	3	ENG	123	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	Credit Hours					
ENG	122	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 thirty-three schools in the state of Michigan approved by the Michigan Board of Nursing to prepare men and women for careers in Practical Nursing.

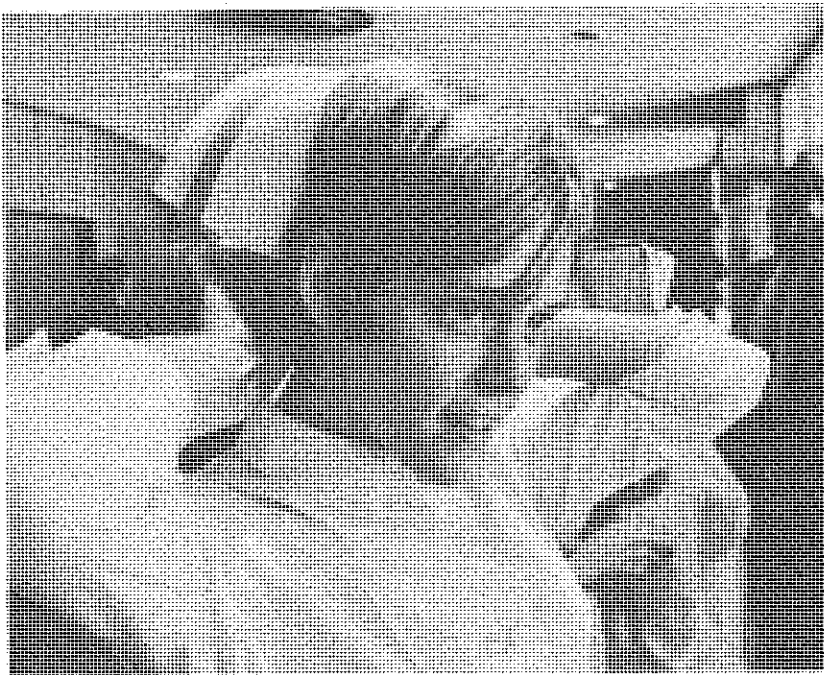
This is a one-year program designed to give the student one term of classroom and laboratory instruction, followed by three terms of clinical experience in affiliated hospitals.

New classes begin in 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 Foundations of Nursing	5	PN	612 Fundamentals of Nursing	3
PN	602 Anatomy & Physiology	4	PN	604 Growth & Development	3
PN	606 Nutrition	2	PN	622 Nursing Skills II	6
PN	608 Community Health	1	3rd Term		
PN	610 Vocational Relations	1	PN	616 Medical-Surgical Nursing	6
PSY	101 Psychology (PN)	1	PN	624 Medical-Surgical Skills	6
PN	618 Nursing Skills I	3	4th Term		
			PN	614 Maternal-Child Nursing	6
			PN	626 Maternal-Child Skills	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. 291. Application should be made as soon as possible since there is usually a waiting list.





legal, and ethical responsibilities of the nurse. Prerequisite: Physical and Mental Illness I and II. 10 (5-15)

## Dental Assistant

**Dental Science I** **Five credits**

Study of dental vocabulary, structure of teeth, mouth tissues and related anatomy. Introduction to dental instruments and equipment. 5 (3-3)

**Dental Science II** **Five credits**

Theory of dental roentgenology, principles of X-ray production techniques of intro oral radiography. Introductory laboratory and practical experience course. Dental materials, with study of physical properties, characteristics and uses.

Study of bacteriology and sterilization; principles and methods of sterilization and disinfection. 5 (3-3)

**Dental Science III** **Five credits**

Clinical experience in exposing, processing and mounting X-rays. Continuation of selected areas in dental laboratory technique.

Chairside assisting; fundamentals, armamentarium procedures, dental assistant duties.

Selected practical experiences in a dental office. 5 (3-3)

## Practical Nursing

**600 Foundations of Nursing** **Five credits**

A course given in conjunction with nursing skills I and designed to acquaint the student with the foundations of nursing practice and the principles underlying them. Includes the physical and emotional effects of illness on the patient. Stresses the special effects of long term illness. 5 (8-0)

**602 Anatomy and Physiology** **Four credits**

A course designed to enable the student to develop an adequate working knowledge of the normal structure and functions of the human body, a realization of the relationship of illness to body functions, and the terminology necessary to communicate with other health team members. 4 (4-0)

**606 Nutrition** **Two credits**

A course designed to acquaint the student with the normal, basic nutritional needs of the individual and how these needs may be met. Includes also the scientific principles on which modification of the diet during illness is based. 2 (1-2)

**608 Community Health** **One credit**

A discussion of the public and volunteer agencies of the community; their relationship to the health field, and how they function to prevent and control disease and promote community health. 1 (1-0)

**610 Vocational Relations** **One credit**

A discussion of the history of nursing; the legal responsibilities of nursing and the social structure and relationships of nursing. 1 (1-0)

**PSY 100 Psychology (PN)** **Two credits**

A sequence of courses designed to introduce the student to the principles of emotional development. Endeavors to prepare the student to understand human behavior and to deal effectively with the patient's behavior. 2 (2-0)

- Health Careers**    **612    Fundamentals of Nursing**    **Three credits**  
 A course designed as an introduction to the characteristics of chronic illness and to planning comprehensive nursing care for the long term patient. 3 (4-0)
- 616    Medical-Surgical Nursing**    **Six credits**  
 A course dealing with the characteristics of acute medical conditions and to the body's response to surgical procedure, and with the special nursing needs of these patients. It is in this course that the students learn the principles of rehabilitation and how to apply these principles to the care of all patients. 6 (9-0)
- 614    Maternal-Child Nursing**    **Six credits**  
 A course dealing with the characteristics of the post-partum patient, the newborn baby and with the special nursing needs of these patients; the course also includes the knowledge necessary to care for the sick child and to recognize his special needs. 6 (9-0)
- 604    Growth and Development**    **Three credits**  
 A course dealing with the principles of physical development and with the characteristics of the normal individual throughout the various periods of his life span. 3(3-0)
- 618    Nursing Skills I**    6 (0-12)    **Six credits**  
**622    Nursing Skills II**    6 (0-26)    **Six credits**  
**624    Medical-Surgical Skills**    6 (0-26)    **Six credits**  
**626    Maternal-Child Skills**    6 (0-26)    **Six credits**
- A sequence of four courses designed to develop in the student the necessary competency to perform nursing care for patients whose state of illness has become relatively stabilized. She should be able to apply the scientific principles of nursing, and related subjects, to make the necessary judgements for meeting the nursing needs of the individual patient.



*Painting by Glennis Peterson*

## *Department of Humanities*

*Department Chairman: Joseph L. Anderson*

### **Art**

**101 Drawing I** **Three credits**

A basic approach to the coordination of mind, eye, and hand with appropriate drawing tools. Life drawing and still life using 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.

**130 Art Appreciation** **Three credits**

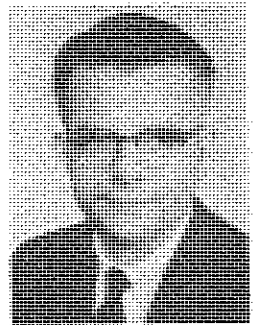
Study of notable examples of art with emphasis on enjoyment and understanding of painting, sculpture, and architecture, designed to increase the student's visual perception and to develop his aesthetic sensibilities. Not open to art majors.

**150 History of Art I** **Three credits**

Study of architecture, painting and sculpture in Egypt, the Middle East, Byzantium, and Europe from prehistoric times to the early Middle Ages. Slide lectures and museum excursions.

**151 History of Art II** **Three credits**

Study of architecture, painting and sculpture in Italy, the Low Countries, France, Germany, Spain and England from the high Middle Ages, through the Renaissance, Baroque and Rococo periods. Slide lectures and museum excursions.



*Dr. Anderson*

<b>Humanities</b>	<b>152 History of Art III</b>	<b>Three credits</b>
	Study of architecture, painting, and sculpture in Italy, France, Germany, England, and the United States, from the late Baroque through the present. Slide lectures and museum excursions. 3 (3-0)	
	<b>201 Painting I</b>	<b>Three credits</b>
	Beginning exercises to instill good work habits and to explore a variety of approaches to painting in oil and water color mediums. Students advance on an individual basis. Required of all students planning to major in the commercial or fine arts field. 3 (0-3)	
	<b>202 Painting II</b>	<b>Three credits</b>
	Continuation of Painting I. Each student advances according to his individual requirements, and works to fuse his developing skills into a mature technique and approach to painting. 3 (0-3)	
	<b>203 Painting III</b>	<b>Three credits</b>
	A polishing of skills and techniques acquired in Painting I and II. 3 (0-3)	
	<b>220 Sculpture I</b>	<b>Three credits</b>
	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. 3 (0-3)	
	<b>221 Sculpture II</b>	<b>Three credits</b>
	Continuation of Art 220 with individual projects which further explore sculpture possibilities. A major emphasis on the human figure and anatomy. 3 (0-3)	
	<b>222 Sculpture III</b>	<b>Three credits</b>
	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. 3 (0-3)	
	<b>250 Advanced Sculpture — Credit arranged.</b>	<b>Variable credit (one to five)</b>
	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. 3 (0-3)	
	<b>240 Advanced Painting — Credit arranged.</b>	<b>Variable credit (one to five)</b>
	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.	
	<b>275 Commercial Art and Design I, II and III</b>	<b>Three credits</b>
	Preparation and design of advertising copy in black and color from initial layout to the final printing. Rendering in such media as pen and ink, pastel, colored pencil and tempera. Portfolio presentation. Consent of the instructor. 3 (0-3)	
	<b>276 Commercial Art and Design</b>	<b>Three credits</b>
	Continuation of Art 275. 3 (0-3)	
	<b>277 Commercial Art and Design</b>	<b>Three credits</b>
	Continuation of Art 276. 3 (0-3)	
	<b>300 Life Drawing</b>	<b>Three credits</b>
	Advanced work to develop skill in understanding, interpreting and drawing the human figure in both two and three dimensional materials. 3 (0-3)	
	<b>301 Life Drawing</b>	<b>Three credits</b>
	Continuation of Art 300. 3 (0-3)	
	<b>302 Life Drawing</b>	<b>Three credits</b>
<b>56</b>	Continuation of Art 301. 3 (0-3)	



## History

## Humanities

**104 Recent European and World History, 1945 to the Present** Three credits  
Study of contemporary European history in its world setting from 1945 to present, stressing most recent political, economic, military, diplomatic and cultural events and trends of significance. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**150 Afro-American History** Three credits  
Traces the history of the black man in America from his African origin to the present, outlining contributions to the American way of life in the fields of medicine, science, education, government, art and literature. 3 (3-0)

**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.

## Humanities

**201 Western Civilization I** Four credits  
First of a series of three courses in the cultural foundations of Western man. Traces the social, intellectual, religious, philosophic, legal, and artistic patterns of Near Eastern, Hellenic, and Roman Civilizations. Surveys the Christian foundations and the Byzantine and Saracenic influences on the feudal culture of Medieval Europe. 4 (4-0)

**202 Western Civilization II** Four credits  
Continuation of Humanities 201. Europe from the late medieval period, Renaissance and Reformation, Commercial Revolution and Expansion Overseas, nation-state buildings, science and secularism, and the crisis of the Ancien Regime. Concerned primarily with the development of ideas and new forms, intellectual revolution of early modern times, absolutism, and the influence of new forces in economics, philosophy, literature, and art. Prerequisite: Humanities 201 or the approval of the department. 4 (4-0)



*Dr. Machtel*

**Humanities 203 Western Civilization III** **Four credits**  
Continuation of Humanities 202. The French Revolution and its aftermath in the nineteenth and twentieth centuries: democracy, nationalism, industrialism, imperialism, the two world wars, and the fusing of Western and World Civilization. Development of contemporary culture in relation to science, philosophy, literature, art, and music. Prerequisite: Humanities 202 or approval of the department. 4 (4-0)

### Music

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

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. 1 (3-0)

**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. 1 (2-0)

**114, 115, 116, 214, 215, 216 Glee Club-Women** **One credit**

Course description same as Glee Club-Men. 1 (2-0)

**120, 121, 122 Tudor Singers****One credit Humanities**

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. 1 (2-0)

**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. 2 (2-0)

**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. 1 (2-0)

**150, 151, 152, 250, 251, 252 The LanSing Lassies  
(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. 1 (2-0)

**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 \$10.00 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. 1 (3-0)

**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. 1 (2-0)

**175 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. 3 (3-0)

## Humanities Applied Music

*All Music Lessons:* Students are registered for the entire term. 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

176, 177, 178

Variable credit

This classification will include the 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.

276, 277, 278

Variable credit

For the voice student who shows 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.

### Piano. Instructor: Wanda Richards

180, 181, 182

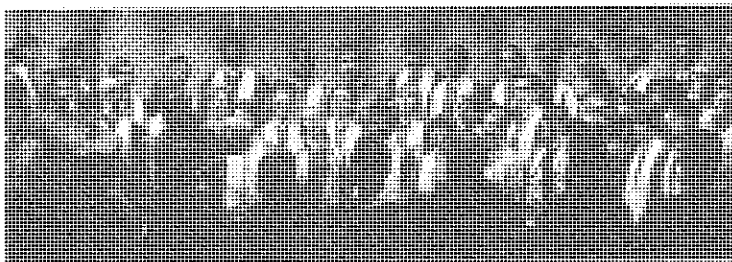
Variable credit

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 classical, romantic, and modern masters.

280, 281, 282

Variable credit

For the student who shows talent for solo performance. Repertoire will include advanced selections from the classic, romantic, and modern masters. Technique will involve scales in rhythms, contrary motion, tenths, sixths, and thirds.



## Philosophy

## Humanities

**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. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**250 Survey of American Philosophy** **Three credits**

American philosophy from its Puritan beginnings through the Enlightenment, Transcendentalism, and the St. Louis Hegelians; the revolt against formalism with emphasis on pragmatism and positivism in a democratic society. 3 (3-0)

## 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. 3 (3-0)

**201 Religion in Non-Western Culture** **Three credits**

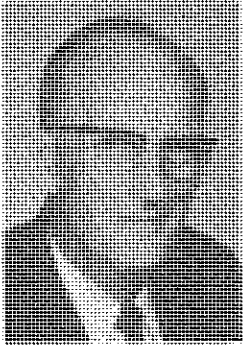
The background of the influence of religion on contemporary events and values in Asia and Africa. Some attention would be given to the "primitive" religious systems which are important today, the religious values affecting the development of the new nations, the involvement of religious traditions in the modernization of southern Asia, and to the distinctive contributions to culture made by particular religions. 3 (3-0)

**202 The Judeo-Christian Tradition** **Three credits**

The main factors in the influence of Judaism and Christianity upon Western culture. Attention would be given to antecedents of monotheism; ancient Hebrew thought and life; influences of Judaism, Greek thought, and Roman thought upon early Christianity; modifications of Judaism and of Christianity; distinct contributions of Judaism and of Christianity in modern times; and major, current issues. 3 (3-0)

**203 Religion in American Life** **Three credits**

The story of religion in the United States, from the early Puritans to modern pluralism. Emphasis upon the main contributions of religion to American culture; church and state relationships; major trends; contemporary issues, and the religious questions being raised in modern American art and literature. 3 (3-0)

*Department Chairman: Hugh Schram**Hugh Schram***English**

Entrance examinations in English are required for all entering students. Any student who scores below predetermined levels on these examinations will be expected to take the appropriate Language Skills course or courses as a prerequisite to entrance into the curriculum of his choice.

**009 Basic Language Skills****Four institutional credits**

For students whose previous academic performance makes admission to college credit courses inadvisable. Concerned with grammar, sentence structure, vocabulary building, and the basic elements of composition. Upon completion of this course, the student may take English 121 only on the recommendation of his instructor. 4 (3-1)

**011 Developmental Language Skills****Four institutional credits**

Designed for the student in need of an English refresher program. Considerably more advanced than Basic Language Skills, this course reviews grammar with concentration on sentence structure, vocabulary building, elements of composition, and selected readings. Special attention is given to problems of individual students. 4 (3-1)

**019 Basic Reading Skills****Four institutional credits**

For students whose previous academic performance makes admission to college credit courses inadvisable. Designed to improve reading proficiency levels, with emphasis on rate and comprehension. Special attention is given to problems of individual students. 4 (3-1)

**021 Developmental Reading Skills****Four institutional credits**

Designed for any student of average reading ability who desires to acquire more efficient reading techniques. Emphasis is upon both theoretical and practical aspects of reading speed and comprehension. Utilization of specialized devices in the Laboratory for Perceptual-Auditory Development is an integral part of the program. 4 (3-1)

**111 Communication I****Three credits**

For students entering the one-year certificate programs, and as a foundation for the one-year English requirement in two-year programs. Develops general knowledge and skills in communication necessary for successful employment. Includes review of English fundamentals, writing short themes, some oral communication, with emphasis on writing for business. 3 (3-0)

**112 Communication II****Three credits**

Continuation of English 111. Special emphasis on writing the research paper or report, the nature and scope of a variety of reports, techniques for locating information sources in the library, and continuing instruction in English fundamentals and usage. Prerequisite: English 111. 3 (3-0)

**113 Communication III****Three credits**

Designed to acquaint the student with the range of verbal and visual communications. Emphasizes analysis of information conveyed through the various media which constitute the major sources of his non-professional experience and influence his decisions as a citizen. Written work consists of several essays or library reports on current events. Prerequisite: English 122. 3 (3-0)

**121 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. 3 (3-0)

**122 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 121. 3 (3-0)

**123 Composition****Three credits**

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 121 and 122. 3 (3-0)

**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. 3 (3-0)

**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 121. 3 (3-0)

**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 121. 3 (3-0)

**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 121 and 122, or approval by the department. 3 (3-0)

**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

**Language Arts**

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 121 and 122, or approval by the department. 3 (3-0)

**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 121 and 122, or approval by the department. 3 (3-0)

**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 121, 122, and 123. Required for most students in pre-elementary teaching. 3 (3-0)

**240 The Film As Art****Three credits**

The importance of the film as an art form capable of making a meaningful and perceptive comment on our civilization. The viewing and analysis of 6-8 films, both foreign and American, of recognized merit. 3 (2-3)

**241 The Film As Art**

Same as 240 above only for continuing education without college credit. 3 (2-3)

**250 Masterpieces of American Literature****Three credits**

Designed to acquaint the student with some of the masterpieces of great American writers. Emphasis on such works as the essays of Emerson and Thoreau, poetry of Whitman and Frost, prose of Hawthorne, Melville, and Hemingway, and plays of O'Neill. The student is expected to write analytical and critical papers and scheduled examinations. Required for most students in pre-elementary teaching. Prerequisite: English 121. 3 (3-0)

**260 Survey of Afro-American Literature****Three credits**

A survey of Afro-American literature from the 17th to the 20th Century. Designed to introduce the student to the various genres in the literature of Black Americans, and to promote an understanding of the human situation through the study of these contributions. The student is expected to write analytical and critical papers and scheduled examinations. Prerequisite: English 121. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

## 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. 4 (5-1)

### 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 201, French 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. 4 (5-1)

### 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. 4 (5-5)

### 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: for Spanish 201, Spanish 101, 102 and 103; for Spanish 202, Spanish 201, etc. Completion of the elementary and intermediate sequences will fulfill the basic language requirements for liberal arts and associated curricula. 4 (5-0)

## 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. 3 (3-0)

- Language Arts 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. 3 (3-0)
- 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. 3 (3-0)
- 202 Discussion and Debate** **Three credits**  
 Examines the dimensions of group speech situations. Range of activities from most informal discussion to 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. 3 (3-0)
- 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. 3 (3-0)
- 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. 3 (3-0)
- 230 Honors Theater Workshop** **Four credits**  
 Offered only in the summer at the Ledges Playhouse, Grand Ledge, on principles of theatrical production. Emphasizes practical experience in design and construction of scenery, lighting, costuming, make-up, and business management, using the actual Ledges productions for laboratory projects. Student is required to attend a formal one-hour lecture and work on laboratory projects at least five hours each week of the summer term. Enrollment limited to twelve students. Prerequisites: Speech 220 and written application to the department. 4 (1-5)

### Special Courses

- 298. Language Arts** **Credits Variable One-Four**  
 Special seminars or workshops on any area within the disciplines of language, literature, communication, the mass media, speech, theater, and foreign languages. There will be a descriptive subtitle each time the course is offered. The course may be repeated for each new subtitle. Prerequisite: department approval.

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

## Department of Mathematics

Department Chairman: Clarence A. Powers

## Mathematics

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

Four Institutional Credits

Review of fundamental processes with integers, common fractions, decimal fractions and percentage. Includes work with word problems designed to promote good reasoning. Four class hours. 4 (4-0)

### 011 Beginning Algebra

Five Institutional Credits

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. Five class hours. 5 (5-0)

### 012 Beginning Algebra Laboratory

Five Institutional Credits

Elementary algebra using contemporary programmed materials, and 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 class hours. 5 (5-0)

### 013 Geometry

Five Institutional Credits

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 class hours. 5 (5-0)

### 102 Intermediate Algebra

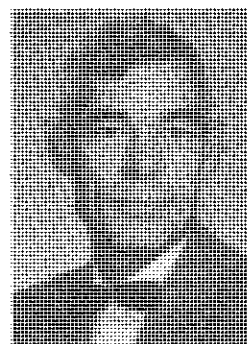
Five credits

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. 5 (5-0)

### 158 Descriptive Statistics

Five credits

Designed for technicians and data-processing majors or as an introductory course for Mathematics 160. Topics include a review of essential mathematical concepts such as absolute values, inequalities, elementary set theory, factorials and combinations; emphasis on terminology; frequency, probability, and normal distributions; measures of spread and location; quality control and sampling. Prerequisite: Mathematics 151 and 152 or Mathematics 102. 5 (5-0)



Clarence Powers

**Mathematics****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 165; Mathematics 158 recommended. 5 (5-0)

**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. 5 (5-0)

**165 College Algebra and Trigonometry II****Five credits**

Continuation of Mathematics 164. Prerequisite: Mathematics 164. 5 (5-0)

**180 College Algebra and Trigonometry****Five credits**

Replaces Mathematics 164 and Mathematics 165 for the student who needs only one term of preparation for the study of 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 1/2 year of high school trigonometry. 5 (5-0)

**200 Arithmetical Foundations Formerly 200A****Five credits**

Required for elementary pre-teachers. Course includes concepts of the "New Math" now being introduced in elementary grades including set theory, algebra, geometry, 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. 5 (5-0)

**201 Algebra for Teachers Formerly 200B****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 200. 5 (5-0)

**202 Geometry for Teachers Formerly 200C****Five credits**

For elementary pre-teachers. Includes the fundamental concepts of two and three dimensional geometric figures with emphasis on proof. Prerequisite: Mathematics

**68** 201. 5 (5-0)

**213 Analytic Geometry and Calculus I** **Five credits** **Mathematics**

The sequence 213, 214, 215, 216 is an integrated course in calculus, analytic geometry and differential equations covering derivatives, curve sketching, definite and indefinite integrals, area, volume, transcendental functions, vector analysis, solid geometry, partial differentiation, multiple integrals, infinite series, power series, and differential equations. Prerequisite: Mathematics 165 or Mathematics 180. 5 (5-0)

**214 Analytic Geometry and Calculus II** **Five credits**

Continuation of Mathematics 213. Prerequisite: Mathematics 213. 5 (5-0)

**215 Analytic Geometry and Calculus III** **Five credits**

Continuation of Mathematics 214. Prerequisite: Mathematics 214. 5 (5-0)

**216 Analytic Geometry and Calculus IV** **Five credits**

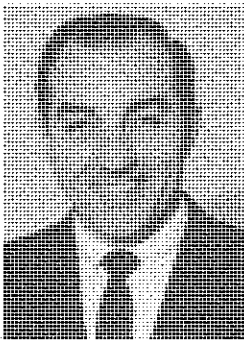
Continuation of Mathematics 215. Prerequisite: Mathematics 215. 5 (5-0)

**234 Theory of Matrices** **Four credits**

Algebra of matrices, rank, inverses, determinants, vector spaces, linear transformations, characteristic values and functions of a matrix. Prerequisite: Mathematics 214. 4 (4-0)

Humanities *Department of Science*

*Department Chairman: David L. Shull*



*Dr. Shull*

**Astronomy**

**201 Astronomy**

**Four credits**

Designed to acquaint the student with the physical universe, using the descriptive rather than the mathematical approach. A study of the solar system, stellar systems, cosmology, and methods employed by astronomers in gathering information. Lecture, laboratory and planetarium. Prerequisite: Natural Science 102 and 103, or permission of instructor. 4 (2-4)

**Biological Science**

**100 Microbiology**

**Three credits**

A non-transfer, introductory course emphasizing bacteriology, with some virology. This course gives the student knowledge of what microbes are, what they do, where they are found, what they need for life, how they are controlled and how they are passed from one environment to another. One two-hour laboratory per week allows the student to work with microbes performing exercises designed to teach skills in sterile technique, microscopy, isolation of pure cultures, straining and sterilization. 3 (2-2)

**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 taxonomy of the plant and animal kingdoms. 4 (2-4)

**108 General Biology**

**Four credits**

Continuation of Biology 107 with primary consideration of the animal kingdom. Prerequisite: Biology 107 or consent of department. 4 (2-4)

**109 General Biology**

**Four credits**

Continuation of Biology 108 with primary consideration of the plant kingdom. Prerequisite: Biology 108 or consent of department. 4 (2-4)

**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 anatomy and physiology of the skeletal, muscular, nervous, and sensory systems. 4 (2-4)

**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. Prerequisite: Anatomy 201 or approval of department. 4 (2-4)

**203 Microbiology**

**Four credits**     **Science**

Introduction to basic bacteriology, with emphasis on the most important communicable disease agents. A study of yeasts, fungi, and protozoa of medical importance, and immunology also of culture media, isolation of pure culture, identification of unknown bacteria, staining methods, practical sterilization, and the collection and handling of specimens. 4 (2-4)

**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. 4 (2-4)

**202 Zoology II**

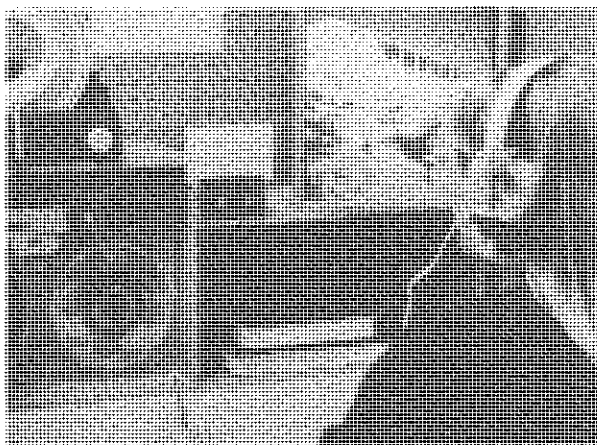
**Four credits**

Continuation of Zoology 201. Deals principally with echinoderms and chordates with emphasis on vertebrate animals. Includes principles of anatomy, physiology, taxonomy, ecology and evolution. 4 (2-4)

**203 Botany**

**Four credits**

A basic morphological study of the plant kingdom. Structure and life cycles of representative plant groups showing progressive evolutionary developments. 4 (2-4)



*Natural Science Audio-Visual Tutorial Program*



## Science Chemistry

### 010 Basic Chemistry

Four institutional credits

A fundamental chemistry course. Designed specifically for those students deciding on a program of study which will require chemistry at the freshman level or above but without previous experience in chemistry. The course also serves as a review or to strengthen the student's background of experience so that he can then enter a College Chemistry series of courses with a feeling of self-confidence and academic readiness. No prerequisite. 4 (0-5)

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

Four 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. Three hours lecture, three hours laboratory. 4 (3-3)

### 102 An Introduction to Inorganic Chemistry II

Four 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. 4 (3-3)

### 103 Introduction to Organic Chemistry

Four 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. 4 (3-3)

### 110 Industrial Chemistry (Inorganic)

Four credits

A basic course in general chemistry designed for the technician. Topics include atomic and molecular theory, bonding, and properties of the elements. Also discussed are oxidation-reduction reactions, kinetic-molecular theory, phase diagrams, solutions and electrochemistry. Open only to technology students. 4 (3-3)

### 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. 5 (3-6)

### 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. Prerequisite: Chemistry 111 or approval of the department. 5 (3-6)

72



**113 Qualitative Analysis****Five credits** **Science**

Continuation of the general principles of chemistry introduced in Chemistry 111 and 112, with emphasis on the systematic separation and identification of the 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. Prerequisite: Chemistry 111 and 112 or approval of the department. 5 (3-6)

**200 An Introduction to Biochemistry****Four 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, or approval of department. 5 (3-3)

**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. Prerequisite: Chemistry 111 and 112 or approval of department. 5 (2-6)

**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. Prerequisite: Chemistry 201, or approval of department. 5 (2-6)

**203 Organic Chemistry III****Five credits**

Continuation of Chemistry 202. 5 (2-6)

**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. 5 (2-6)

**Science Foundation Courses for Teachers****210 Foundations of Conservation****Four credits**

Study of natural resources and the principles of utilization through management and conservation. Topics include history of conservation, ecology, soils, minerals, water, forests, wild life, human populations and man's effect on the natural resources of the earth. The laboratory consists of two parts (1) field investigations (2) conservation majors, education majors and others are guided in a second laboratory session according to their specific interests or declared vocations. 4 (2-4)

**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. 4 (2-4)

**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

**73**

**Science** 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. 4 (2-4)

## Geology

### 210 Physical Geology

Four credits

Minerals and rocks of the earth's crust; constructive and destructive forces including volcanism, erosion by water, ice, gravity, wind and waves; mountain building; rock deformation; concepts of the earth's structure, origin and age; history of geology and geologic history; physiographic areas of the United States. Laboratory will consist of field investigations to nearby areas as well as a one-weekend extended field trip. Prerequisite: Natural Science 102 and 103 or permission of Instructor. 4 (2-4)

### 211 Historical Geology

Four credits

Historical development of the earth from its inception to the present including changes in elevation, size and shape of the continents. Mountain building, marine inundation, formation of mineral deposits and fuels, and the evolution of plant and animal life throughout geologic time. The development of the North American Continent will be emphasized. Prerequisite: N.S. 103 or approval of the department. 4 (3-3)

## Natural 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

123 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 kingdom, common aspects of each, such as the modern concept of the cell and the gene theory, are studied. *No prerequisite.* 4 (2-4)

### 102 Natural Science (Chemistry-Physics)

Four credits

121 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. *No prerequisite.* One year of high school algebra or Mathematics 011 is recommended. 4 (2-4)

### 103 Natural Science (Astronomy-Geology)

Four credits

122 Topics include rocks and minerals, geological processes, formations, earth history past and present, the solar system, and the universe. *No prerequisite.* 4 (2-4)

## Meteorology

### 212 Introduction to Meteorology

Four credits

Introductory study and observations of the atmosphere designed to acquaint the student with the elements of weather, their interrelationships, meteorological instruments and weather maps. General and specific weather phenomena and the

climatology of the United States will be considered. Prerequisite: N.S. 102 or approval of the Department. 3 (3-6)

Science

## 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 they are applied to solids and fluids. Also includes the principles of heat and thermodynamics and their relationship to the operation of engines. Prerequisite: Trigonometry or approval of department. 4 (2-4)

### 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. Prerequisite: Physics 201 or approval of department. 4 (2-4)

### 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. Prerequisite: Physics 202 or approval of department. 4 (2-4)

### 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. Prerequisite: Calculus I or its equivalent, or approval of department. 4 (2-4)

### 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. Prerequisite: Physics 211, or approval of department. 4 (2-4)

### 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, relatively, solid state physics, and quantum physics phenomena. Prerequisite: Physics 212, or approval of department. 4 (2-4)

## SEMINARS IN SCIENCE

### 298 Seminars in Special Subjects in Science Variable credit

Special seminars are developed from many areas within the disciplines of Biology, Astronomy, Anatomy, Physiology, Heredity, Ecology, Chemistry, Physics, and the other Natural Sciences. There will be a published descriptive sub-title each time a seminar is offered. Prerequisite: Department Approval. (Variable)

### 299 Independent Study in Science Subjects Variable credit

Special studies, research projects or individual readings. Prerequisite: Arrangement with an individual instructor and approval of the department chairman. A detailed plan for the study will be submitted prior to approval. (Variable)

75

**Social Science** *Department of Social Science*

*Department Chairman: William Heater*

**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. Students in curriculums that permit only two courses in social science should take Social Science 101 and 104. Social Science 103 or 104 satisfy the State of Michigan requirement for a course in government.

**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. No prerequisite. 4 (4-0)

**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. 4 (4-0)

**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. 4 (4-0)

**104 American Government** **Four credits**

An analysis of the American political system. Emphasizes Federal and State systems, with special attention given to American democracy from local to national levels. No prerequisite. 4 (4-0)

**112, 113 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. 4 (4-0)

**Education**

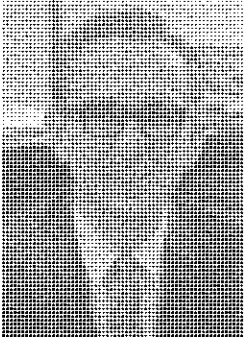
**150 Introduction to Education** **Three credits**

A review and analysis of the profession of teaching as a career field, an overview of the philosophy of education and its consequences for a democratic society, and an examination of current issues and future trends in education. No prerequisite. 3 (3-0)

**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. No prerequisite. 3 (3-0)



*Dr. Heater*

**201 World Regional Geography**

**Four credits**

**Social Science**

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. *No prerequisite.* 4 (4-0)

**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. *No prerequisite.* 3 (3-0)

**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. *No prerequisite.* 3 (3-0)

**Political Science**

**200 Introduction to Political Behavior**

**Four credits**

Introduction to theories, concepts and methods of political science with emphasis on the functions of political institutions and behavior of political actors. Prerequisite: Social Science 101. 4 (4-0)

**210 Contemporary Political Affairs**

**Three credits**

Analysis of current domestic and international political problems utilizing theoretical background and current reading to understand the ideologies, forces and interests shaping today's politics. Prerequisite: Social Science 103. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**Psychology**

**101-102 Psychology for Practical Nurses**

**Two credits**

A course designed to introduce the student to the principles of emotional development. Endeavors to prepare the student to understand human behavior and to deal with patient's behavior effectively. Prerequisite: enrollment in Practical Nursing curriculum. 2 (2-0)

**151 Psychology of Personal Adjustment**

**Three credits**

Psychological principles applied to personal and social relations. Designed for students who desire a practical understanding of psychology but do not intend to enroll for advanced courses in the field. (Not eligible for credit after taking Psychology 202.) *No prerequisite.* 3 (3-0)

77

- Social Science**    **152 Applied Psychology**    **Three credits**  
 Psychological principles applied to production, distribution and use of goods and services. Psychology as it relates to personnel, management, human relations on the job, work setting, marketing and law enforcement. Designed for students desiring practical understanding of psychological principles who do not intend to enroll for advanced courses in the field. (Not eligible for credit after taking Psychology 150). *No prerequisite.* 3 (3-0)
- 201 Introduction to Psychology**    **Four credits**  
 Designed to give the student a general understanding of the science of psychology and its methods. Intelligence, motivation, emotion, perception, learning and group processes are discussed. An Audio-Visual-Tutorial presentation utilizing a variety of media is provided as an aid in developing experiences and concepts in psychology. *No prerequisite.* 4 (2-2½)
- 202 Psychology of Personality**    **Three credits**  
 Discussion of concepts of adjustment, conflict, mental hygiene and behavior modification. Survey of leading theories of personality development and their applications. Prerequisite: Psychology 201. 3 (3-0)
- 203 Introduction to Social Psychology**    **Three credits**  
 Designed to give the 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. 3 (3-0)
- 204 Educational Psychology**    **Three credits**  
 An investigation of the contribution of psychology to education. It is concerned with child growth and development, learning, measurement, and group dynamics in the classroom. Observation of a classroom situation in the student's major field of interest is required. Prerequisite: Psychology 201. 3 (3-0)
- 205 Human Growth and Development**    **Three credits**  
 Study of human growth and development from conception to senescence. Individual psychological development from birth through young adulthood stressed, with emphasis on biological and sociological factors. Prerequisite: Psychology 201. 3 (3-0)

### **Sociology and Anthropology**

- 200 Principles of Sociology**    **Four credits**  
 Introductory analysis and description of the structure of human society, with emphasis on social norms, groups, social stratification and institutions as they are analyzed by modern sociological methodology. Prerequisite: Social Science 101. 4 (4-0)
- 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. 3 (3-0)
- 254 Marriage and the Family**    **Three credits**  
 A cross-cultural survey of patterns of family organization, courtship, kinship, and sexual behavior. Special attention to an analysis of these behavior patterns in the United States. Prerequisite: Social Science 101 and Psychology 201. 3 (3-0)

78

**255 Contemporary Social Problems****Three credits****Social Science**

Consideration of current social problems from a framework of sociological theory with special regard for current hypotheses and recent empirical studies relevant to particular problems, i.e., family stability, racism, urbanism, etc. Prerequisite: Social Science 103. 3 (3-0)

**270 Introduction to Cultural 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 101. 3 (3-0)

**275 Introduction to Physical Anthropology and Archaeology****Three credits**

Review of the biological and cultural evolution of man with emphasis on human paleontology, ethnology, cultural ecology, genetics, prehistory and the development of civilization. Prerequisite: SS 101. 3 (3-0)

**Special Social Science****SS 298 Seminar in Special Subjects****Credits Variable**

Special seminars drawn from any area within the disciplines of anthropology, economics, education, geography, political science, psychology, or sociology. There will be a descriptive sub-title each time the course is offered. The course may be repeated with additional credit for each new sub-title. Prerequisite: As determined by each individual offering (Credits Variable from 1 to 6).

**SA 299 Independent Study****Credits Variable**

Special research project and/or individual readings. Prerequisite: Permission of faculty member and departmental chairman. (Credits variable from 1 to 4).

**Physical Education**

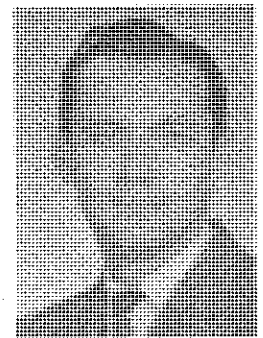
The Physical Education 100 series of classes is designed to provide an understanding of human physiology and psychology as it relates to exercise and relaxation. Physical fitness for adult members of society is maintained through conditioning. The program offers students an opportunity to establish exercise habits that can be continued through life with a limited amount of equipment and facilities. The instruction in the several activities is offered as an elective feature of the program. Co-educational lectures and activity sessions, designated as P.E. 110, award two of the three credits usually required. The student may select any other activity another term for the remaining one credit.

The Physical Education 200 series of classes provides an opportunity for students to continue their study of Health, Physical Education and Recreation by means of library research, special lectures, movies and selected physical activities. These classes are open to students who have completed three credits in the 100 series. Students enrolled in the 200 series are required to participate in an elected activity (100 series) concurrently.

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

**MEN'S PHYSICAL EDUCATION****110 Physical Education****Two credits**

Introduction to nervous, muscular and circulatory systems, heart diseases and heart research as they relate to regular exercise, health and physical education.

**Physical Education***Janos Ncvai*

**Physical Education** Other topics include nutrition and metabolism with emphasis on weight control. Regularly scheduled conditioning and activities are also a part of this course. 2 (1-2)

**Men's Activity Sessions**

**One credit**

- |   |   |
|---|---|
| PE 150 Conditioning & Weight Training       | PE 157 Conditioning & Indoor Sports       |
| PE 151 Conditioning & Basketball            | PE 158 Conditioning & Outdoor Sports      |
| PE 152 Conditioning & Beginning<br>Swimming | PE 159 General Conditioning               |
| PE 153 Conditioning & Swimming              | PE 160 Conditioning & Touch Football      |
| PE 154 Conditioning & Soccer                | PE 161 Conditioning & Self Defense        |
| PE 155 Hunting                              | PE 162 Conditioning & Beginning<br>Tennis |
| PE 156 Social & Square Dancing              | PE 163 Conditioning & Advanced Tennis     |

**201, 202, 203 Physical Education**

**One credit**

Open for students who have completed three credits of the 100 series of courses. Limited reading of selected topics. Physical fitness instruction and two individual conditioning activities weekly. 1 (1-2)

**221, 222, 223 Physical Education**

**One credit**

Special projects involving experiments or reading in selected area. Hours and projects arranged. 1 (1-2)

**WOMEN'S PHYSICAL EDUCATION**

**III Physical Education**

**Two credits**

Introduction to nervous, muscular and circulatory systems, heart diseases and heart research as they relate to regular exercise, health and physical education. Other topics include nutrition and metabolism with emphasis on weight control. Regularly scheduled conditioning and activities are also a part of this course. 2 (1-2)

**Women's Activity Sessions**

- |   |   |
|---|---|
| PE 120 Conditioning & Gymnastics            | PE 127 Conditioning & Beginning<br>Tennis |
| PE 121 Conditioning & Ball Games            | PE 128 Conditioning & Advanced Tennis     |
| PE 122 Conditioning & Badminton             | PE 129 Social & Square Dancing            |
| PE 123 Conditioning & Beginning<br>Swimming | PE 130 Conditioning & Indoor Sports       |
| PE 124 Conditioning & Swimming              | PE 131 Conditioning & Outdoor Sports      |
| PE 125 Conditioning & Sports                | PE 132 Conditioning & Self Defense        |
| PE 126 Conditioning & Volleyball            |   |

**201, 202, 203, and 204**

**One credit**

Open for students who have completed three credits of the 100 series of courses. Limited reading on selected topics. Physical fitness instruction and two individual conditioning activities weekly. 1 (1-2)

**221, 222, 223, and 224**

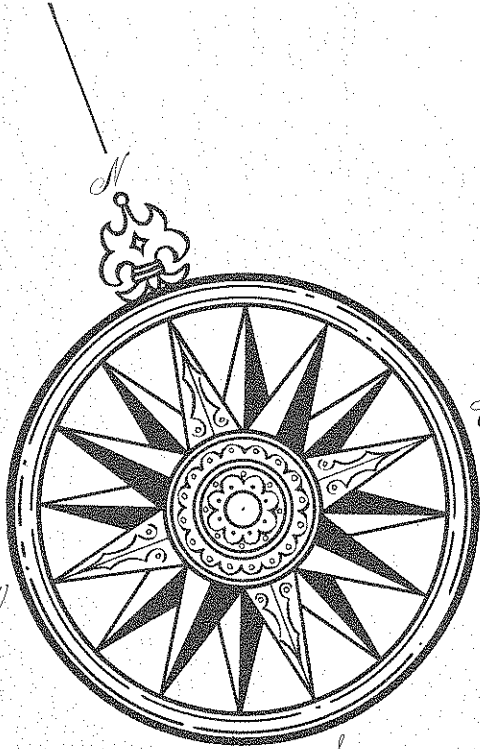
**One credit**

Special projects involving experiments or reading in selected area. Hours and projects arranged. 1 (1-2)

**COEDUCATIONAL ACTIVITY SESSIONS One credit**

- |  |                                      |
|--|--------------------------------------|
| PE 180 Conditioning & Skiing           | PE 186 General Conditioning          |
| PE 181 Bowling                         | PE 187 Conditioning & Fencing        |
| PE 182 Conditioning & Beginning Tennis | PE 189 Conditioning & Indoor Sports  |
| PE 183 Conditioning & Advanced Tennis  | PE 190 Conditioning & Outdoor Sports |
| PE 184 Conditioning & Self Defense     | PE 191 Trap & Skeet                  |
| PE 185 Conditioning & Winter Sports    |                                      |





## **COLLEGE OF BUSINESS**

**Department of Accounting  
and Office Programs**

**Department of Management  
and Marketing**



*George Hopkins*

## *College of Business*

*Dean: 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. A minimum of ninety credit hours is required for an Associate Degree.

The Curriculums offered by the Business College 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

82 business.

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

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

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

### **Cooperative Internship**

#### **Lansing Community College**

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

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

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

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

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. Students desiring employment are invited to register with the Placement Office and should maintain an active file of their credentials.

Accounting and Office Programs

Department of Accounting and Office Programs

Department Chairman: Ronald Edwards

Audio-Visual-Tutorial Instruction

The Department of Accounting and Office Programs has developed a system of instruction which provides the opportunity for learning on an individual basis with continuous supervision. The flexibility of this system allows enrollment in the course at any time during the year; instruction and practice periods any time between the hours of 8:00 a.m. and 10:00 p.m. (and not necessarily the same hours each day), and the opportunity to complete courses as fast or as slowly as one's capabilities and/or time commitments will allow. It also provides academic advisors with the ability to construct individual courses to remedy specific deficiencies or to upgrade in special areas.

This system, called Audio-Visual-Tutorial, was designed to replace the traditional classroom situation by programming instruction and demonstrations on audio-visual media such as films, slides, and tapes. These individual learning units are made available to students in carrels, and practice work is completed within the same area. Courses include the same instruction as their classroom-type predecessors and are indicated in the Course Description section by the letters A.V.T. following the course name.

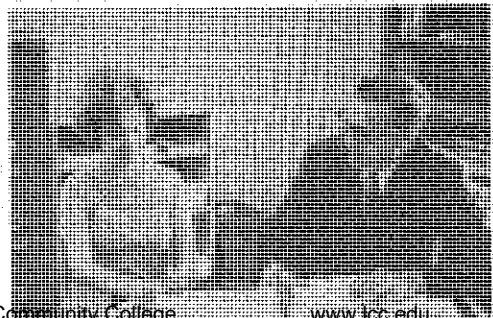


Ronald Edwards

Accounting

One-Year Certificate Program

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



## Accounting and Office Programs

Fall Term			Spring Term		
Course Number	Course Title	Credit Hours	Course Number	Course Title	Credit Hours
BUS 117	Business Mathematics	3	BUS 212	Principles of Accounting III	4
BUS 118	Introduction to Business	4	BUS 113	Applied Business Law	3
BUS 210	Principles of Accounting I	4	BUS 108	Business Machines II	3
PSY 150	Psychology of Human Relations	4	EC 101	Applied Economics	3
		15		Elective	3
					16
Winter Term:			Recommended Electives		
BUS 107	Business Machines I (AVT*)	3	SS 101	Sociology	
BUS 211	Principles of Accounting II	4	BUS 220	Office Management I	
DP 120	Survey of Data Processing	3	BUS 204	Business Correspondence	
BUS 101	Intermediate Typing (AVT*) or Elective	3	BUS 130	Introduction to Marketing	
ENG 100	or 101 Communications	3			
		16			

## Accounting

### Two-Year Associate Degree Program

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

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
DP 120	Survey of Data Processing	3	BUS 250	Intermediate Accounting I	4
BUS 118	Introduction to Business	3	BUS 215	Business Law I	3
BUS 117	Business Mathematics	3	EC 201	Principles of Economics I	4
BUS 210	Principles of Accounting I	4	BUS 240	Accounting Internship, or	3
	Elective	3	BUS 257	Federal Income Tax	4
		16			14-15
Winter Term			Winter Term		
DP 104	Computer Programming I	5	BUS 251	Intermediate Accounting II	4
BUS 107	Business Machines I (AVT*)	3	BUS 216	Business Law II	3
ENG 101	Composition I	3	EC 202	Principles of Economics II	4
BUS 211	Principles of Accounting II	4	BUS 241	Accounting Internship, or	3
		15	BUS 253	Cost Accounting I	4
					14-15
Spring Term			Spring Term		
BUS 101	Intermediate Typewriting	3	SS 250	American Government	4
BUS 212	Principles of Accounting III	4	BUS 252	Intermediate Accounting III	4
PSY 150	Psychology of Human Relations	4	BUS	Elective	4
	Elective	4	BUS 242	Accounting Internship, or	3
		15	BUS 254	Cost Accounting II	4
					15-16

#### Recommended Electives:

BUS 204	Business Correspondence	BUS 130	Introduction to Marketing
BUS 220	Office Management I	SS 101	Sociology**
DP 130	Systems & Applications	ENG 102	Composition**
ENG 103	Composition**	SS 102	Economics**

\*Audio-Visual-Tutorial Instruction, see page 84.

\*\*Strongly recommended for those students who anticipate transfer to a four-year college.

## Accounting and Office Programs

## Court and Conference Reporting

### Two-Year Associate Degree Program

The two-year Court and Conference Reporting curriculum, which includes the summer between the two regular school years, is an associate degree program designed to prepare students for the many interesting positions open to shorthand reporters. Some of the occupations for which graduates will be qualified are court reporters, conference reporters, hearing reporters, legislative reporters and general free-lance reporters. The program teaches machine shorthand and develops the skill necessary for verbatim reporting. In addition, it teaches the legal, medical, and other technical vocabularies and essential information for success on the job.

Freshman Year	Fall Term	Credit Hours
ENG 100	Communications	3
BUS 101	Intermediate Typewriting (AVT*)	3
CCR 101	Machine Shorthand I	6
PSY 101	Orientation	1
		<hr/>
		13
Winter Term		
SS 101	Sociology	4
CCR 102	Machine Shorthand II	6
BUS 102	Typewriting III (AVT*)	3
		<hr/>
		13
Spring Term		
SS 250	American Government	4
CCR 103	Machine Shorthand III	6
BUS 215	Business Law I	3
		<hr/>
		13
Summer Term		
CCR 104	Machine Shorthand IV	6
BUS 216	Business Law II	3
		<hr/>
		9

Sophomore Year	Fall Term	Credit Hours
CCR 201	Court Reporting I	10
BUS 210	Principles of Accounting I	4
		<hr/>
		14
Winter Term		
CCR 202	Court Reporting II	10
EC 101	Applied Economics	3
		<hr/>
		13
Spring Term		
CCR 203	Court Reporting III	10
CCR 240	Court Practice	5
		<hr/>
		15
**Summer Term		
CCR 204	Machine Shorthand Speed Building	4
CCR 241	Court Practice	4
		<hr/>
		8

\*\*If speed requirements are met at the end of the second year spring term, then summer term will not be necessary.

## 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.

	Fall Term	Credit Hours
ENG 100	Communications	3
BUS 118	Introduction to Business	4
BUS 210	Principles of Accounting I	4
BUS 117	Business Mathematics	3
		<hr/>
		14
Winter Term		
EC 101	Applied Economics	3
BUS 211	Principles of Accounting II	4
BUS 107	Business Machines I (AVT*)	3
BUS 101	Intermediate Typewriting (AVT*)	3
PSY 150	Psychology of Human Relations	4
		<hr/>
		17

	Spring Term	Credit Hours
BUS 113	Applied Business Law	3
BUS 119	Office Methods	3
BUS 108	Business Machines II (AVT*)	3
BUS 102	Advanced Typewriting	3
BUS 242	Office Internship or Elective	3
		<hr/>
		15
Electives:		
BUS 220	Office Management I	
BUS 204	Business Correspondence	
BUS 229	Public Relations	

\*Audio-Visual-Tutorial Instruction, see page 84.

# Office Management

# Accounting and Office Programs

## Two-Year Associate Degree Program

The Office Management curriculum is designed for those persons who wish responsible office positions in other than the stenographic areas. Successful graduates of the program are equipped to handle the functions in most offices with efficiency. The program provides for adequate skills to succeed in entry-level positions and adds the business understanding and management training necessary for rapid advancement to supervisory positions.

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
SS 101	Sociology	4	DP 120	Survey of Data Processing	3
ENG 101	Composition I	3	EC 201	Principles of Economics	4
BUS 117	Business Mathematics	3	BUS 240	Office Internship or Elective	3
BUS 210	Principles of Accounting I	4	BUS 223	Management and Supervisory Development	3
		14		Elective	3
					16
	Winter Term			Winter Term	
BUS 212	Principles of Accounting II	4	BUS 215	Business Law I	3
BUS 118	Introduction to Business	4	BUS 221	Office Management I	3
BUS 107	Business Machines I (AVT*)	3	EC 201	Principles of Economics II	4
BUS 101	Intermediate Typing (AVT*)	3	BUS 241	Office Internship and/or Elective	3
		14	BUS 224	Personnel Management	3
					16
	Spring Term			Spring Term	
BUS 212	Principles of Accounting III	4	BUS 216	Business Law II	3
BUS 108	Business Machines II (AVT*)	3	BUS 204	Business Correspondence	3
PSY 150	Psychology of Human Relations	4	BUS 242	Office Internship or Elective	3
BUS 202	Advanced Typewriting (AVT*)	3	BUS 221	Office Management II	3
BUS 109	Secretarial Machines	2	PLS 250	American Government	4
		16			16

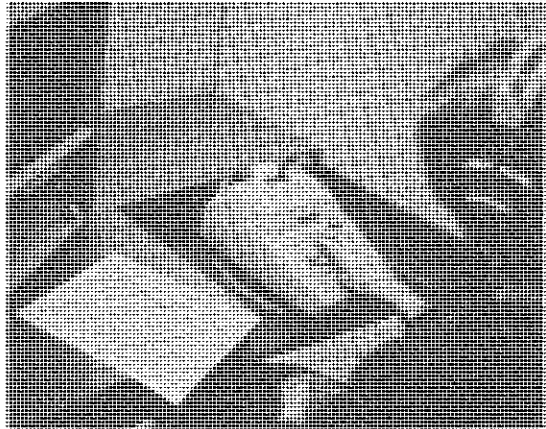
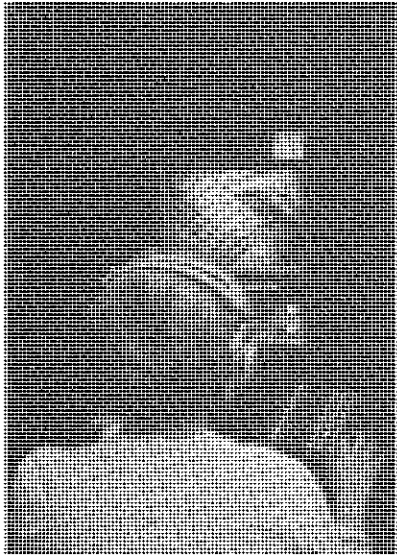
**Recommended Electives:**

- |                                  |                              |
|----------------------------------|------------------------------|
| BUS 119 Office Methods           | SPH 104 Principles of Speech |
| BUS 225 Principles of Management | CEO 101 Economic Geography   |
| ENG 102 Composition**            | ENC 103 Composition**        |
| SS 101 Sociology**               | SS 102 Economics**           |

\*Audio-Visual-Tutorial Instruction, see page 54.

\*\*Strongly recommended for those students who anticipate transfer to a four-year college.

*Audio-Visual Tutorial Laboratory in Business.*



**Accounting and Office Programs**

**Legal Secretary**

**Two-Year Associate Degree Program**

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition I	3	EC 201	Principles of Economics I	4
SS 101	Sociology	4	BUS 201	Transcription	4
BUS**104	Beginning Shorthand***	4	BUS 215	Business Law I	3
BUS 117	Business Mathematics	3	PSY 150	Psychology of Human Relations	4
		14	BUS 240	Office Internship	3
				or	
				14-15	
	<b>Winter Term</b>			<b>Winter Term</b>	
BUS 118	Introduction to Business	4	BUS 202	Shorthand Speed Building	4
BUS 101	Intermediate Typing (AVT*)	3	BUS 216	Business Law II	3
BUS 105	Intermediate Shorthand***	4	EC 202	Principles of Economics II	4
BUS 107	Business Machines I (AVT*)	3	SPH 104	Principles of Speech	3
		14	BUS 241	Office Internship or Elective	3
				17	
	<b>Spring Term</b>			<b>Spring Term</b>	
BUS 102	Advanced Typing (AVT*)	3	SS 250	American Government	4
BUS 106	Advanced Shorthand***	4	BUS 203	Secretarial Training	3
BUS 110	Applied Accounting	4	BUS 205	Legal Shorthand	2
BUS 109	Secretarial Machines	2	BUS 204	Business Correspondence	3
	Elective	3		Elective or	
		16	BUS 242	Office Internship	3
				15	
	<b>Recommended Electives:</b>				
BUS 108	Business Machines II (AVT*)				
ENG 102	Composition**				
ENG 103	Composition**				
BUS 230	Office Management				
SS 102	Economics**				

\*Audio-Visual-Tutorial Instruction, see page 84.

\*\*Strongly recommended for those students who anticipate transfer to a four-year college.

\*\*\*If the student has completed shorthand in high school, one term of Advanced Shorthand may be sufficient. Placement in advanced courses requires departmental approval.





# Medical Secretary

# Accounting and Office Programs

## Two-Year Associate Degree Program

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition I	3	BUS 201	Transcription	4
NS 101	Botany-Zoology	4	BUS 215	Business Law I	3
BUS 104	Beginning Shorthand**	4	PSY 150	Psychology of Human Relations	4
BUS 117	Business Mathematics	3		Elective or	
PE 101	Physical Education	1		Office Internship	3
		<hr/> 15			<hr/> 14

Winter Term			Winter Term		
NS 102	Chemistry-Physics	4	BUS 202	Shorthand Speed Building	4
BUS 101	Intermediate Typing (AVT*)	3	BUS 216	Business Law II	3
BUS 105	Intermediate Shorthand***	4	BUS 109	Secretarial Machines	2
BUS 107	Business Machines I (AVT*)	3	EC 101	Applied Economics	3
PE 102	Physical Education	1		Elective or	
		<hr/> 15		Office Internship	3
					<hr/> 15

Spring Term			Spring Term		
BUS 102	Advanced Typing (AVT*)	3	BUS 203	Secretarial Training	3
BUS 106	Advanced Shorthand***	4	BUS 204	Business Correspondence	3
PE 103	Physical Education	1	BUS 207	Medical Shorthand	2
SS 250	American Government	4	SPH 104	Principles of Speech	3
BUS 110	Applied Accounting	4		Elective or	
		<hr/> 16		Office Internship	3
					<hr/> 14

**Recommended Electives:**

- BUS 118 Introduction to Business
- BUS 220 Office Management I
- ENG 103 Composition\*\*
- SS 102 Economics\*\*
- ENG 102 Composition\*\*
- SS 101 Sociology\*\*

\*Audio-Visual-Tutorial Instruction, see page 84.

\*\*Strongly recommended for those students who anticipate transfer to a 4-year college.

\*\*\*If the student has completed shorthand in high school, one term of Advanced Shorthand may be sufficient. Placement in advanced courses requires departmental approval.



**Accounting and  
Office Programs**

**Secretarial Science**

**Two-Year Associate Degree Program**

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
ENG 101	Composition	3	BUS 201	Transcription	4
BUS 118	Introduction to Business	4	BUS 210	Principles of Accounting I	4
BUS 104	Beginning Shorthand***	4	EC 201	Principles of Economics I	4
BUS 117	Business Mathematics	3		Elective or	
		14	BUS 240	Internship	3
					15
	Winter Term			Winter Term	
BUS 105	Intermediate Shorthand***	4	BUS 202	Shorthand Speed Building	4
BUS 101	Intermediate Typewriting (AVT*)	3	BUS 211	Principles of Accounting II	4
BUS 107	Business Machines I (AVT*)	3	EC 202	Principles of Economics II	4
SPH 104	Principles of Speech	3	BUS 215	Business Law I or	
	Elective	3	BUS 241	Internship	3
		16			15
	Spring Term			Spring Term	
BUS 106	Advanced Shorthand***	4	BUS 204	Business Correspondence	3
BUS 102	Advanced Typewriting (AVT*)	3	BUS 216	Business Law II or	
BUS 109	Secretarial Machines	2	BUS 113	Applied Business Law	3
PSY 150	Psychology of Human Relations	4	SS 250	American Government	4
	Elective	3	BUS 203	Secretarial Training	3
		16	BUS 220	Office Management I or	
			BUS 242	Office Internship	3
					16

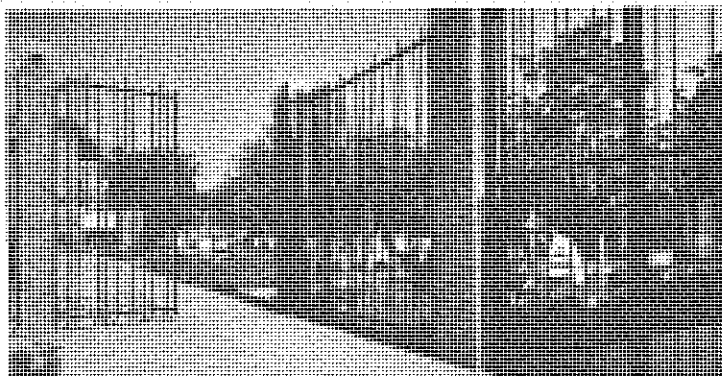
**Recommended Electives:**

- BUS 212 Principles of Accounting III
- DP 120 Survey of Data Processing
- ENG 102 Composition\*\*
- SS 101 Sociology\*\*
- BUS 258 Federal Income Taxes
- BUS 130 Introduction to Marketing
- ENG 103 Composition\*\*
- SS 102 Economics\*\*

\*Audio-Visual-Tutorial Instruction, see page 84.

\*\*Strongly recommended for those students who anticipate transfer to a four-year college.

\*\*\*Students who have completed one or more years of shorthand in high school should see departmental advisor for proper placement.



## 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.

Fall Term		Credit Hours	Spring Term		Credit Hours
ENG 100	Communications	3	BUS 113	Applied Business Law	3
BUS 118	Introduction to Business	4	BUS 102	Intermediate Typewriting (AVT*)	3
BUS 117	Business Mathematics	3	BUS 106	Intermediate Shorthand**	4
BUS 104	Beginning Shorthand**	4	BUS 119	Office Methods	3
PSY 101	Orientation	1	BUS 109	Secretarial Machines	2
		15			15

Winter Term		Credit Hours
BUS 210	Principles of Accounting I	4
EC 101	Applied Economics	3
BUS 101	Intermediate Typewriting (AVT*)	3
BUS 105	Intermediate Shorthand**	4
BUS 107	Business Machines I (AVT*)	3
		17

#### Recommended Electives:

PSY 150	Psychology of Human Relations
BUS 201	Transcription
SS 101	Sociology

\*Audio-Visual-Tutorial Instruction, see page 84.

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





## *Department of Management and Marketing*

*Department Chairman: James Person*

### Management and Marketing

### Management Certificate Program

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

Fall Term	Credit Hours	Spring Term	Credit Hours
BUS 118 Introduction to Business . . . . .	4	BUS 225 Principles of Management . . . . .	3
BUS 223 Management & Supervisory Development . . . . .	3	BUS 210 Principles of Accounting I . . . . .	4
BUS 117 Business Mathematics or equivalent . . . . .	3	Electives . . . . .	8
DP 131 Survey of Data Processing . . . . .	3		
ENG 121 Composition or Communications . . . . .	3		
	16		15
<b>Winter Term</b>			
BUS 130 Introduction to Marketing . . . . .	4		
BUS 224 Personnel Management . . . . .	3		
BUS 229 Public Relations . . . . .	3		
EC 201 Principles of Economics . . . . .	4		
	14		

**Recommended Electives:**

BUS 120 Sales	BUS 271 Real Estate Essentials
BUS 121 Retailing	BUS 275 Life Insurance Essentials
BUS 131 Advertising	BUS 211 Principles of Accounting II
BUS 222 Small Business Management	BUS 212 Principles of Accounting III
BUS 232 Sales Management	BUS 215 Business Law
BUS 235 Managerial Marketing	BUS 220 Office Management
BUS 246 Managerial Internship	DP 133 Systems and Applications
BUS 260 Trans. & Traffic Mgmt. (All)	EC 202 Principles of Economics II

92 (Industrial Supervision electives may be offered as needed.)



*James Person*

## Management

### Associate Degree Program

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

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
BUS 118	Introduction to Business . . . . .	4	BUS 223	Management and Supervisory Development . . . . .	3
DP 131	Survey of Data Processing . . . . .	3	BUS 246	Management Internship or Elective . . . . .	3
ENG 121	Composition . . . . .	3	BUS 210	Principles of Accounting I . . . . .	4
SO 101	Orientation . . . . .	1	EC 201	Principles of Economics . . . . .	4
	Elective . . . . .	3		Elective . . . . .	3
		14			17
Winter Term			Winter Term		
BUS 120	Sales . . . . .	3	BUS 224	Personnel Management . . . . .	3
BUS 130	Introduction to Marketing . . . . .	4	BUS 247	Management Internship or Elective . . . . .	3
BUS 229	Public Relations . . . . .	3	BUS 211	Principles of Accounting II . . . . .	4
	Electives . . . . .	6	EC 202	Principles of Economics . . . . .	4
		16			14
Spring Term			Spring Term		
BUS 232	Sales Management . . . . .	3	BUS 225	Principles of Management . . . . .	3
BUS 235	Managerial Marketing . . . . .	4	BUS 248	Management Internship or Elective . . . . .	3
SS 104	American Government or		BUS 212	Principles of Accounting III . . . . .	4
SS 103	Political Science* . . . . .	4		Elective . . . . .	4
	Elective . . . . .	4			14
		15			14

#### Recommended Electives:

- BUS 121 Retailing
- BUS 131 Advertising
- BUS 222 Small Business Management
- BUS 260 Trans. & Traffic Mgmt. (All)
- BUS 271 Real Estate Essentials
- BUS 275 Life Insurance Essentials
- BUS 215 Business Law
- BUS 220 Office Management
- DP 110 Fortran

- DP 132 Cobol
- DP 133 Systems and Applications
- ENG 122 Composition\*
- ENG 123 Composition\*
- PSY 201 Introduction to Psychology
- SPH 104 Fundamentals of Speech
- SS 101 Sociology\*
- SS 102 Economics\*

\*Strongly recommended for those students who anticipate transfer to a four-year college.

## Management and Marketing

## Marketing

### Certificate Program

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

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

## Management and Marketing

	First Term	Credit Hours	Spring Term	Credit Hours	
BUS 118	Introduction to Business	4	BUS 131	Advertising	3
BUS 223	Management and Supervisory Development	3	BUS 235	Managerial Marketing	4
BUS 117	Business Mathematics or equivalent	3	BUS 246	Marketing Internship or	
DP 131	Survey of Data Processing	3	BUS 232	Sales Management	3
ENG 121	Composition or Communications	3	EC 201	Principles of Economics or	4
			BUS 222	Small Business Management	3
		16			13-14
	<b>Winter Term</b>				
BUS 120	Sales	3			
BUS 121	Retailing	3			
BUS 130	Introduction to Marketing	4			
BUS 229	Public Relations	3			
BUS 210	Principles of Accounting I	4			
		17			

## Marketing

### Associate Degree Program

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
BUS 118	Introduction to Business	4	BUS 223	Management and Supervisory Development	3
BUS 117	Business Mathematics or equivalent	3	BUS 246	Marketing Internship or Elective	3
DP 131	Survey of Data Processing	3	BUS 210	Principles of Accounting I	4
ENG 121	Composition	3	EC 201	Principles of Economics	4
SO 101	Orientation	1		Elective	3
		14			17
	<b>Winter Term</b>				
BUS 120	Sales	3	BUS 224	Personnel Management	3
BUS 121	Retailing	3	BUS 247	Marketing Internship or Elective	3
BUS 130	Introduction to Marketing	4	BUS 211	Principles of Accounting II	4
BUS 229	Public Relations	3	EC 202	Principles of Economics II	4
	Elective	3			
		16			14
	<b>Spring Term</b>				
BUS 131	Advertising	3	BUS 225	Principles of Management	3
BUS 235	Managerial Marketing	4	BUS 232	Sales Management	3
SS 104	American Government or		BUS 248	Marketing Internship or Elective	3
SS 103	Political Science*	4	BUS 212	Principles of Accounting III	4
	Elective	3		Elective	3
		14			16

#### Recommended Electives:

BUS 222	Small Business Management
BUS 271	Real Estate Essentials
BUS 275	Life Insurance Essentials
DP 110	Fortran
DP 133	Systems and Applications
ENG 122	Composition*
ENG 123	Composition*

PSY 201	Introduction to Psychology
SS 101	Sociology*
SS 102	Economics*

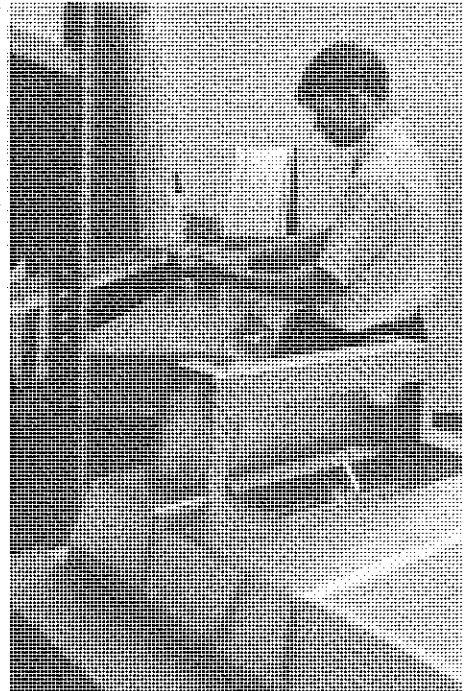
\*Strongly recommended for those students who anticipate transfer to a four-year college.

## Data Processing Certificate Program

## Management and Marketing

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 Term		Credit Hours	Spring Term		Credit Hours
DP 151	Introduction to Data Processing	5	DP 153	Cobol II	5
BUS 233	Management and Supervisory Development	3	BUS 130	Introduction to Marketing	4
ENG 121	Composition	3	BUS 210	Principles of Accounting I	4
MTH 102	Intermediate Algebra or equivalent	5		Elective	3
		16			16
<b>Recommended Electives:</b>					
			DP 110	Fortran	3
			DP 133	Systems and Applications	3
			BUS 222	Small Business Management	3
			BUS 224	Personnel Management	3
			BUS 225	Principles of Management	3
			MTH 158	Descriptive Statistics	5
				or	
			MTH 160	Statistics (prerequisite MTH 164 and MTH 164)	5
<b>Winter Term</b>					
DP 152	Cobol I	5			
BUS 118	Introduction to Business	4			
MTH 155	Data Processing Math	5			
	Elective	3			
		17			



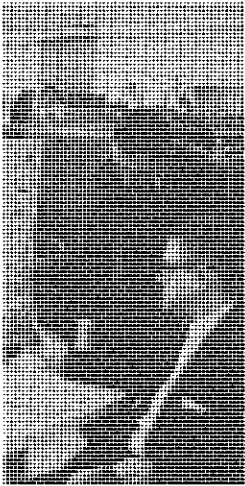
**Management and  
Marketing**

**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.



Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
DP 151	Introduction to Data Processing	5	DP 251	Business Systems	5
BUS 223	Management and Supervisory Development	3	BUS 210	Principles of Accounting I	4
ENG 121	Composition	3	EC 201	Principles of Economics I	4
MTH 102	Intermediate Algebra or equivalent	5		or Elective	4
SO 101	Orientation	1			13
		17			
	<b>Winter Term</b>			<b>Winter Term</b>	
DP 152	Cobol I	5	DP 252	Computer Systems	5
BUS 118	Introduction to Business	4	BUS 211	Principles of Accounting II	4
MTH 155	Data Processing Math	5	BUS 224	Personnel Management	3
	Elective	3	EC 202	Principles of Economics II	4
		17		or Elective	4
					16
	<b>Spring Term</b>			<b>Spring Term</b>	
DP 153	Cobol II	5	DP 253	Assembly Language and Software	5
BUS 130	Introduction to Marketing	4	BUS 212	Principles of Accounting III	4
MTH 158	Descriptive Statistics	5	SS 104	American Government	4
	or				13
MTH 160	Statistics*	5			
	Elective	3			
		17			

**Recommended Electives:**

DP 110	Fortran	3	MTH 165	College Algebra & Trigonometry II	5
DP 246	DP Internship and Field Project	3	PSY 201	Introduction to Psychology	4
BUS 120	Sales	3	ENG 122	Composition**	3
BUS 121	Retailing	3	ENG 123	Composition**	3
BUS 131	Advertising	3	SS 101	Sociology**	4
BUS 220	Office Management I	3	SS 102	Economics**	4
BUS 221	Office Management II	3	SS 103	Political Science**	4
BUS 222	Small Business Management	3			
BUS 224	Personnel Management	3			
BUS 225	Principles of Management	3			
MTH 164	College Algebra & Trigonometry I	5			

\*Prerequisite is MTH 164 and MTH 165.

\*\*Strongly recommended for those students who anticipate transfer to a four-year college.



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

## Management and Marketing

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

### Food Specialist Certificate Program

Freshman Year	Fall Term	Credit Hours	Spring Term	Credit Hours	
HMF 101	Introduction to Hospitality Industry	4	HMF 123	Food Production & Practice	5
HMF 201	Food Service Operation	3	HMF 221	Hospitality Management	3
BUS 117	Business Mathematics or equivalent	3	HMF 222*	Food & Labor Cost Control	3
HMF 203	Food Science	4	HMF 224	Catering & Beverage Operation	3
ENG 121	Composition I or equivalent	3			14
		17	*HMF 214	Law as Related to Innkeeping	3
				(May be taken as an alternate)	
	<b>Winter Term</b>				
HMF 112	Basic Food Management	5			
HMF 213*	Merchandising for the Hospitality Industry	3			
	Elective (Recommend Communications)	3			
HMF 215	Advanced Food Production	3			
		14			

### Food Specialist Associate Degree Program

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
HMF 101	Introduction to Hospitality Industry	4	HMF 201	Food Service Operation	3
BUS 117	Business Mathematics or equivalent	3	HMF 203	Food Science	4
ENG 121	Composition I	3	BUS 223	Management and Supervisory Development	3
SO 101	Orientation	1	BUS 210	Principles of Accounting	4
SS 101	Sociology	4			14
		15		<b>Winter Term</b>	
	<b>Winter Term</b>		HMF 212	Maintenance and Equipment	4
HMF 112	Basic Food Management	5	HMF 213	Merchandising for Hospitality Industry	3
BUS 118	Introduction to Business	4	HMF 215	Advanced Food Production	3
DP 131	Survey of Data Processing	3	BUS 211	Principles of Accounting II	4
ENG 122	Composition or Communications	3	SPH 104	Principles of Speech	3
		15			17
	<b>Spring Term</b>			<b>Spring Term</b>	
HMF 123	Food Production & Practice	5	HMF 221*	Hospitality Management	3
BUS 130	Introduction to Marketing	3	HMF 222	Food and Labor Cost Control	3
BUS 131	Advertising	3	HMF 224	Catering and Beverage Operation	3
SS 104	American Government	4	EC 201	Principles of Economics	4
		15			13-14
HMF 134	Internship & Seminar	3	*BUS 212	Accounting III may be substituted by students anticipating transfer to a four-year college.	

#### Recommended Electives for Transfer Student:

ENG 123 Composition III  
 PSY 201 Introduction to Psychology  
 SS 102 Economics  
 SS 103 Political Science

Any time a student determines that a transfer to a four-year college is desired he should consult the HMF Advisor for recommendations of proper courses.

**Management and Marketing**

**Hotel-Motel Management Specialist Certificate Program**

Fall Term		Credit Hours	Spring Term		Credit Hours
HMF 101	Introduction to Hospitality Industry	4	HMF 123	Food Preparation and Practice	5
HMF 201	Food Service Operation	3	HMF 221	Hospitality Management	3
HMF 202	Hotel-Motel Housekeeping	4	HMF 222*	Food and Labor Cost Control	3
BUS 117	Business Mathematics or equivalent	3	HMF 223	Front Office Procedure	4
ENG 121	Composition I	3			15
		17	*HMF 214	Law as Related to Innkeeping (May be taken as an alternate)	3
<b>Winter Term</b>					
HMF 112	Basic Food Management	5			
HMF 212	Maintenance and Equipment	4			
HMF 213*	Merchandising for the Hospitality Industry	3			
	Elective (Recommend Communications)	3			
		15			

**Hotel-Motel Management Specialist Associate Degree Program**

Freshmen Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
HMF 101	Introduction to Hospitality Industry	4	HMF 201	Food Service Operation	3
BUS 117	Business Mathematics or equivalent	3	HMF 202	Hotel-Motel Housekeeping	4
ENG 121	Composition I	3	BUS 223	Management and Supervisory Development	3
SO 101	Orientation	1	BUS 210	Principles of Accounting	4
SS 101	Sociology	4			14
		15	<b>Winter Term</b>		
<b>Winter Term</b>					
HMF 112	Basic Food Management	5	HMF 212	Maintenance and Equipment	4
BUS 118	Introduction to Business	4	HMF 213	Merchandising for Hospitality Industry	3
DP 131	Survey of Data Processing	3	HMF 214	Law as Related to Innkeeping	3
ENG 122	Composition or Communications	3	BUS 211	Principles of Accounting II	4
		15	SPH 104	Principles of Speech	3
					17
<b>Spring Term</b>					
<b>Spring Term</b>					
HMF 123	Food Production and Practice	5	HMF 221*	Hospitality Management	3
BUS 130	Introduction to Marketing	3	HMF 222	Food and Labor Cost Control	3
BUS 131	Advertising	3	HMF 223	Front Office Procedure	4
SS 104	American Government	4	EC 201	Principles of Economics	4
		15			14-15
HMF 134	Internship & Seminar	3			

**Recommended Electives for Transfer Students:**

ENG 123	Composition III
PSY 201	Introduction to Psychology
SS 102	Economics
SS 103	Political Science

\*BUS 212 Accounting III may be substituted by students anticipating transfer to a four-year college.

Any time a student determines that a transfer to a four-year college is desired he should consult the HMF Advisor for recommendations of proper courses.



## Law Enforcement

### Associate Degree

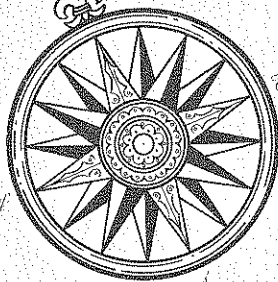
This program is designed to prepare young men or women for police work, and to assist those now in the field to secure the general and technical information necessary for promotion. Modern law enforcement agencies need people with ability and training for police work at local, state or federal levels,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

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

#### Basic Program

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
LE 101	Introduction to Law Enforcement . . .	4	LE 201	Introduction to Criminal Investigation . . . . .	4
BUS 101	Intermediate Typewriting . . . . .	3	BUS 210	Principles of Accounting I . . . . .	4
ENG 121	Composition I . . . . .	3		(or approved elective)*	
PE 101	Physical Education . . . . .	1	BUS 215	Business Law . . . . .	3
SO 101	Orientation . . . . .	1	SS 220	Juvenile Delinquency . . . . .	3
SS 101	Sociology . . . . .	4			
		16			14
	<b>Winter Term</b>			<b>Winter Term</b>	
LE 102	Police Organization & Admin. . . . .	4	LE 202	Criminal Law & Procedures . . . . .	4
ENG 122	Composition II . . . . .	3	BUS 211	Principles of Accounting II . . . . .	4
PE 102	Physical Education (Judo) . . . . .	1		(or approved elective)*	
SPH 104	Fundamentals of Speech . . . . .	3	BUS 216	Business Law . . . . .	3
SS 102	Economics . . . . .	4		(or approved elective)*	
		15	NS 102	Chemistry-Physics . . . . .	4
					15
	<b>Spring Term</b>			<b>Spring Term</b>	
LE 103	Theory of Patrol . . . . .	3	LE 203	Crime Prevention . . . . .	3
ENG 123	Composition III . . . . .	3	LE 204	Traffic Law & Accident Investigation . . . . .	3
PE 103	Physical Education . . . . .	1	BUS 212	Principles of Accounting III . . . . .	4
PSY 201	Introduction to Psychology . . . . .	4		(or approved electives)*	
SS 103	Political Science . . . . .	4		Approved Electives* . . . . .	6
		15			16
<b>Recommended Electives:</b>					
LE 205	Legal and Criminal Behavior . . . . .	3	<b>FOOTNOTE:</b> Students intending to transfer to Michigan State University should take in the sophomore year NS 101 Botany-Zoology, NS 103 Astronomy-Geology, HUM 201, 202, 203 (Western Civilization) instead of other recommended electives.		
LE 206	Police Interviewing and Interrogation . . . . .	3			
LE 246	Law Enforcement Internship . . . . .	3			
*Electives are approved by the Law Enforcement Coordinator.					

## Management and Marketing



**Management and Marketing**      **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.

LE 101 Introduction to Law Enforcement . . . . .	4	SS 220 Juvenile Delinquency . . . . .	3
LE 102 Police Organization and Administration . . . . .		LE 204 Traffic Law and Accident Investigation . . . . .	3
LE 103 Theory of Patrol . . . . .	3		
LE 201 Introduction to Criminal Investigation . . . . .	4	<b>Recommended Electives:</b>	
LE 202 Criminal Law and Procedures . . . . .	4	LE 205 Legal and Criminal Behavior . . . . .	3
LE 203 Crime Prevention . . . . .	3	LE 206 Police Interviewing and Interrogation . . . . .	3
		LE 246 Law Enforcement Internship . . . . .	3

## Library Technology

## Management and Marketing

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

Fall Term		Credit Hours
LT 101	Introduction to and Use of Library	3
LT 201	Technical Services	3
BUS 011	Typewriting I, OR	3
BUS 101	Typewriting II	3
ENC 121	Composition I	3
SS 101	Sociology	4

Winter Term		Credit Hours
LT 102	Ordering, Circulation, Maintenance, and Preparation of Materials	3
LT 246	LT Internship & Seminar OR Recommended Elective	3
ENC 122	Composition II	3
PSY 201	Introduction to Psychology OR	4
BUS 223	Management and Supervisory Development	3
SPH 104	Principles of Speech OR Recommended Elective	3

Spring Term		Credit Hours
LT 103	Reference	3
LT 205	Library Problems	3
BUS 210	Principles of Accounting I OR	4
BUS 107	Business Machines I	3
ENC 123	Composition III	3
	Recommended Elective	3

#### Recommended Electives:

BUS 224	Personnel Management
DP 131	Survey of Data Processing
DP 133	Systems and Applications
ENC 201	Introduction to Literature: Poetry
ENC 202	Introduction to Literature: Drama
ENC 203	Introduction to Literature: Prose
ENC 250	Masterpieces of American Literature

### Associate Degree Program

Freshman Year	Fall Term	Credit Hours
LT 101	Introduction to and Use of Library	3
ENC 121	Composition	3
NS 101	Botany-Zoology OR Recommended Elective	4
SO 101	Orientation	1
SS 101	Sociology	4

Winter Term		Credit Hours
LT 102	Ordering, Circulation, Maintenance, and Preparation of Materials	3
BUS 101	Intermediate Typewriting II	3
ENC 122	Composition	3
NS 102	Chemistry-Physics OR Recommended Elective	4
SS 102	Economics	4

Spring Term		Credit Hours
LT 103	Reference	3
ENC 123	Composition	3
NS 103	Astronomy-Geology OR Recommended Elective	4
SS 103	Political Science OR	4
SS 104	American Government	4

#### Recommended Electives:

BUS 118	Introduction to Business
BUS 223	Management and Supervisory Development
BUS 224	Personnel Management
BUS 105	Business Machines II

Sophomore Year	Fall Term	Credit Hours
LT 201	Technical Services	3
BUS 210	Principles of Accounting I	4

Sophomore Year	Fall Term	Credit Hours
LT 201	Technical Services	3
BUS 210	Principles of Accounting I OR Recommended Elective	4
HUM 201	Western Civilization	4
	Recommended Elective	3

Winter Term		Credit Hours
LT 246	LT Internship OR Recommended Elective	3
BUS 107	Business Machines I	3
BUS 229	Public Relations	3
HUM 202	Western Civilization	4
	Recommended Elective	3

Spring Term		Credit Hours
LT 205	Library Problems	3
BUS	Business Elective	3
HUM 203	Western Civilization	4
SPH 104	Principles of Speech	3
	Recommended Elective	3

DP 131	Survey of Data Processing
DP 133	Systems and Applications
ENC 201	Introduction to Literature: Poetry
ENC 202	Introduction to Literature: Drama
ENC 203	Introduction to Literature: Prose
ENC 250	Masterpieces of American Literature

## Management and Marketing Pre-Business Administration

### Associate Degree Program

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

Freshman Year	Fall Term	Credit Hours	Sophomore Year	Fall Term	Credit Hours
BUS 118	Introduction to Business	4	BUS 210	Principles of Accounting I	4
ENG 121	Composition	3	EC 201	Principles of Economics I	4
MTH 164*	College Algebra and Trigonometry I	5	HUM 201	Western Civilization I	4
PE 101	Physical Education or Elective	1	NS 101	Botany-Zoology	4
SO 101	Orientation	1			16
SS 101	Sociology	4			
		18			
	Winter Term				
ENG 122	Composition	3	BUS 211	Principles of Accounting II	4
MTH 165*	College Algebra and Trigonometry II	5	EC 202	Principles of Economics II	4
PE 102	Physical Education or Elective	1	HUM 202	Western Civilization II	4
SS 102	Economics	4	NS 102	Chemistry-Physics	4
BUS 130	Introduction to Marketing	4			16
		17			
	Spring Term				
DP 110	Fortran	3	BUS 212	Principles of Accounting III	4
ENG 123	Composition	3	HUM 203	Western Civilization III	4
MTH 160	Statistics or Elective	5	NS 103	Astronomy-Geology	4
PE 103	Physical Education or Elective	1			12
SS 103	Political Science	4			
		16			

\*MTH 180 College Algebra and Trigonometry (replaces 164 and 165)

#### Recommended Electives:

BUS 120	Sales	BUS 223	Management and Supervisory Dev.
BUS 121	Retailing	BUS 224	Personnel Management
BUS 131	Advertising	BUS 225	Principles of Management
		PSY 201	Introduction to Psychology

### Evening Courses in Transportation and Traffic Management

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

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

## Property Valuation and Assessment Administration

Business

This series of six courses is sponsored by Lansing Community College in cooperation with the Michigan Association of Equalization Directors. Designed for the student who is relatively new to the field of property appraisal, the technical and procedural material presented during the course is planned to serve as an effective base for intensive on-the-job training. The class encompasses legal as well as procedural aspects of property appraisal for governmental jurisdictions. Successful completion results in a Certificate in Assessment Administration.

The curriculum is designed to provide adequate preparation for employment, either in an Assessor's Office or an Equalization Department, and also to improve competence and income of those already in the field. Course objectives are:

- A. To increase the knowledge and ability of the student relative to property appraisal procedures.
- B. To provide for a more cooperative working relationship between appraisers in adjacent areas.
- C. To acquaint the student with the various sources of information available to appraisal personnel.
- D. To provide an effective and organized training vehicle for professional advancement of personnel in property valuation and assessment administration.
- E. To serve as a basis for certification of personnel in the appraisal field.
- F. To promote standardization of procedures, forms, reports, etc.

## 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 (AVT) Three credits

A beginning course in typewriting designed for students with no previous typing experience. Primary emphasis is placed on mastery of the keyboard and building speed and accuracy on straight copy. Personal and business letters, postcards, and manuscript typing are included. 3 (0-4)

### 101 Intermediate Typewriting (AVT) Three credits

Intermediate typewriting serves as a refresher typewriting course and as a continuation of Business 011. Special emphasis is placed on improving speed, accuracy and manipulation. The course covers business letters, special communication forms, technical papers, business reports, tabulated reports, business forms and special reports for executives. Prerequisite: Business 011 or department approval. 3 (0-4)

### 102 Advanced Typewriting (AVT) Three credits

A continuation of Business 101. It is designed to improve judgment, skill and accuracy on straight copy as well as tables with special problems, duplicating processes, reports, legal papers, accounting reports, governmental papers, medical papers and other technical reports. Prerequisite: Business 101. 3 (0-4)

### 104 Beginning Shorthand I Four credits

Designed to teach the basic principles of shorthand and build an elementary vocabulary. 4 (4-0)

103

- Business 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. 4 (4-0)
- 106 Advanced Shorthand III** **Four credits**  
 Continuation of Business 105. Develops high speed in dictation. Prerequisite: Business 105. 4 (4-0)
- 107 Business Machines I (AVT)** **Three credits**  
 A beginning course in business machines, which teaches the basic operations of adding and calculating machines. It includes instruction in the use of the 10-key adding-listing machine, the rotary calculator, and the key-driven calculator. Prerequisite: Business 117. 3 (0-3)
- 108 Business Machines II (AVT)** **Three credits**  
 This course is designed to develop a greater degree of skill in the use of business machines introduced in Business 107. In addition, instruction is provided on the bookkeeping machine, full-keyboard adding machine, and the 10-key printing calculator. Prerequisite: Business 107. 3 (0-3)
- 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. 2 (0-2)
- 110, 111, 112 Applied Accounting I, II, III** **(Each) Four credits**  
 These courses are or will be designed to meet the separate needs of particular curriculums in technical areas where a basic course in Accounting Principles is neither necessary nor desired. Accounting theory is presented in general terms and applications are designed to meet the requirements of specific technical areas. One, two and three-term sequences are developed, depending on the extent of training demanded by the curriculum. Prerequisite: Approval by the student's academic advisor. 4 (4-0)
- 113 Applied 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. 3 (3-0)
- 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. 3 (3-0)
- 118 Introduction to Business** **Four credits**  
 Survey of business activities, covering principles, problems and practices related to our economic framework. Includes topics such as organization, production, marketing, personnel administration, finance, and economics. 4 (2-2)

104



- 119 Office Methods** **Three credits** **Business**  
 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. 3 (3-0)
- 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. 3 (3-0)
- 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. 3 (3-0)
- 130 Introduction to Marketing** **Four credits**  
 Study of problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of marketing, customer relations, functions of sales departments, price policies and communications are included. 4 (2-2)
- 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. 3 (3-0)
- 201 Transcription** **Four credits**  
 Designed to teach how to type mailable transcripts from shorthand notes. Prerequisite: Business 106 and Business 102. 4 (4-0)
- 202 Shorthand Speed Building** **Four credits**  
 Continuation of Business 201. Attention given to specialized vocabulary and high speed writing. Prerequisite: Business 201. 4 (4-0)
- 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 102 and Business 106. 3 (3-0)
- 204 Business Correspondence** **Three credits**  
 The principles of written business communications are taught by illustration and application. The most effective techniques for formulating the various types of letters to get the desired results are emphasized. 3 (3-0)
- 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. 2 (2-0)
- 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. 2 (2-0)

- Business 210 Principles of Accounting** **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. 4 (4-0)
- 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. 4 (4-0)
- 212 Principles of Accounting III** **Four credits**  
 Continuation of Business 211 involving the study of income and valuation determination, and analysis and comparison of financial statements. Accounting principles related to mercantile businesses, branch accounts, manufacturing companies, cost accounting, budgeting and sources and application of funds. Prerequisite: Business 211. 4 (4-0)
- 215 Business Law 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. 3 (3-0)
- 216 Business Law 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. 3 (3-0)
- 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. 3 (3-0)
- 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. 3 (3-0)
- 222 Small Business Management** **Three credits**  
 Complete coverage of small business operation, including business and managerial functions. Emphasis on basic principles of management for various kinds of small business concerns. Includes environment of small business, financial, marketing, and production management of the "going concern." Legal and governmental relationships are covered, with actual case studies relevant to those involved in the smaller businesses. 3 (3-0)

**223 Management and Supervisory Development****Three credits Business**

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. 3 (3-0)

**224 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. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**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. 3 (3-0)

**235 Managerial Marketing****Four credits**

Study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Concerns allocation of funds to various means of market cultivation, development of promotional strategy, price policy, and management of field selling effort. 4 (4-0)

**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. 3 (0-3)

107

**Business 246, 247, 248, and 249 (Arranged) Management and Marketing Internship — 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. 3 (3-0)

**250 Intermediate Accounting I**

**Four credits**

Balance sheet; income and retained earnings statements; the accounting process (bookkeeping systems, voucher system, adjustments, deferrals and accruals, inventories, depreciation, closing entries, cash versus accrual methods); the accounting process illustrated; cash and temporary investments; receivables; inventories (cost procedures and special valuation procedures); estimating procedures in inventory valuation; current liabilities (nature and various types of current liabilities). Prerequisite: Business 212. 4 (4-0)

**251 Intermediate Accounting II**

**Four credits**

Investments in stocks (types of dividends, rights of various stockholders, exchange of stocks, and investments and tax accounting); investments in bonds (kinds of bonds, amortization, redemption, conversion, U. S. bonds, and long-term notes and mortgages); investments in funds and miscellaneous items; plant equipment (acquisition, use, retirement, depreciation and depletion, and revaluation); intangible assets (kinds and goodwill); long-term liabilities. Prerequisite: Business 250. 4 (4-0)

**252 Intermediate Accounting III**

**Four credits**

Stockholders' equity from paid-in capital (capital upon corporate formation and subsequent changes in paid in capital); stockholders' equity from retained earnings (source of retained earnings and types of dividends); statements from incomplete records (single-entry systems); errors and correcting entries; financial statement analysis (use of comparative data and special ratios and measurement); funds-flow and cash-flow reporting; price-level adjustments in financial reporting. Prerequisite: Business 251. 4 (4-0)

**253 Cost Accounting I**

**Four credits**

The basic principles of cost accounting are discussed including its contribution to management. Cost concepts, classifications and systems are presented to build vocabulary and understanding. Skill is developed in costing techniques and using cost records. The elements of cost-materials, labor, and overhead are treated in depth. Prerequisite: Business 212. 4 (4-0)

**254 Cost Accounting II**

**Four credits**

This course is a continuation of Cost Accounting I with emphasis on cost systems. Considerable practice is provided in process cost accounting, estimated cost procedures, standard costs, budgetary control, and management reports. Prerequisite: Business 253. 4 (4-0)

**257 Federal Income Tax****Four credits Business**

Course includes all aspects of Federal Income Tax as it concerns individuals. Fundamentals are emphasized, pertaining to income inclusions and exclusions, deductions allowable and not allowable, types of returns to be filed based on individual circumstances, dependents, exemptions, medical expenses, etc. With respect to a person operating a business as sole proprietor, the course includes reporting methods of business income, net operating loss carryforward and carry-back, self-employment tax, investment credit and other pertinent topics. Treatment of capital gains and losses, disposition of business assets, installment sales, and other specialized subjects are covered. Prerequisite: Business 212 or departmental approval. 4 (4-0)

**260-265 Traffic and Transportation Management (Each) 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. 3 (0-3)

**267 Governmental and Institutional Accounting I Four credits**

Provides instructions in the characteristics of governmental and municipal accounting and how it differs from commercial accounting. The essentials of fund accounting, appropriations, allotments, encumbrances and liquidation are covered. Prerequisite: Business 212 (Business 252 preferred). 4 (4-0)

**268 Governmental and Institutional Accounting II Four credits**

Continuation of Governmental Accounting I offering detailed accounting procedures and accepted practices in governmental accounting including institutional accounting for units such as hospitals and schools. Instruction is also provided in summarizations and reports of activities and performance. Prerequisite: Business 267. 4 (4-0)

**269 Governmental and Institutional Accounting III Four credits**

Continuation of Governmental Accounting II with emphasis on recent changes and current practices in different government units. Considerable instruction and work is devoted to program budgeting and performance measurement. Prerequisite: Business 268. 4 (4-0)

**271 Real Estate Essentials Three credits**

This certificate course, jointly offered by the Lansing Board of Realtors and the College, is required for employment by local Board members, and provides background for the State Real Estate Salesman's examination. The course is designed for real estate sales people, and for those interested in entering the real estate profession. Subjects covered by expert resource people include Michigan License Law, Listing Agreements, Appraising, Finance, Offer to Purchase, Real Estate Law, The Code of Ethics and The Closing Transaction. 3 (3-0)

**275 Life Insurance Essentials Two credits**

An introductory course in insurance covering various phases of insurance, including the history, growth, and development; the economics of insurance; careers and sales programs; types of life, business, and health insurance; programming and estate planning; and Michigan License Law. The course is designed to give a student the opportunity to explore career positions in the insurance profession; to acquaint the student with various types of insurance and insurance terminology; to allow the student to better understand the purposes of insurance and its benefits; and to allow the student to realize the economic importance of insurance, professional insurance organizations and insurance salesmen in our present day economy. 2 (2-0)

- Business 278 Investment Essentials** **One credit**  
 Familiarizes the student with the workings of the stock market from a fundamental and a technical standpoint, as well as the many external forces which come into play. Valuable for personal enrichment, planning, or broadening of present qualifications. 1 (3-0)
- 280 Property Valuation and Assessment Administration I** **Three credits**  
 Covers history of property tax, public relations, local government financing, property tax law, assessment-valuation concepts and equalization, appeals, assessment, equalization, and allocation. 3 (3-0)
- 281 Property Valuation and Assessment Administration II** **Three credits**  
 This course includes aerial photography, interpretation, property descriptions, tax law, and residential appraisal. Continues to acquaint the student with various sources of information available to appraisal personnel. 3 (3-0)
- 282 Property Valuation and Assessment Administration III** **Three credits**  
 Provides discussion of valuation concepts, economic concepts of value, cost approach to value, market approach to value, and income approach to value as well as proper procedures, forms, reports, etc. 3 (3-0)
- 283 Property Valuation and Assessment Administration IV** **Three credits**  
 A study of the appraisal of residential, commercial, agricultural, and personal properties, and the proper procedures relative to these appraisals. 3 (3-0)
- 284 Property Valuation and Assessment Administration V** **Three credits**  
 Continuation of residential, commercial, agricultural, and personal property appraisals presented in effective and organized manner for the professional advancement of personnel in property valuation and assessment administration. 3 (3-0)
- 285 Property Valuation and Assessment Administration VI** **Three credits**  
 Real and personal property appraisals, legal and procedural aspects of appraisal, and appeal procedures are studied. A certificate is awarded upon successful completion of the property valuation and assessment administration courses. 3 (3-0)

### **Court and Conference Reporting**

- 101 Machine Shorthand I** **Six credits**  
 Theory and techniques of machine shorthand. Designed to develop vocabulary and build skill up to 60 words a minute. 6 (8-0)
- 102 Machine Shorthand II** **Six credits**  
 Continuation of CCR 101 with speed development to 100 words a minute. 6 (8-0)
- 103 Machine Shorthand III** **Six credits**  
 Continuation of CCR 102 with speed development to 120 words a minute. 6 (8-0)
- 104 Machine Shorthand IV** **Six credits**  
 Continuation of CCR 103 with speed development to 140 words a minute. 6 (8-0)
- 201 Court and Conference Reporting I** **Ten credits**  
 Introduction to Court and Conference Reporting vocabulary and shortcuts, voice transcription, reporting ethics, techniques and reference texts. Speed development up to 160 words per minute in Machine Shorthand. Prerequisite: CCR 104. 10 (12-0)

**202 Court and Conference Reporting II****Ten credits Business**

Continued practice in specialized vocabulary and shortcuts with speed development to 180 words per minute. Introduction of Court Reporting procedures, legal typing-transcription, deposition forms and verbatim testimony and jury charge reporting and transcription. Prerequisite: CCR 201. 10 (12-0)

**203 Court and Conference Reporting III****Ten credits**

Continuation of CCR 202 with advanced testimony-jury charge dictation, congressional-literary dictation and speed development of 200+ words per minute. Prerequisite: CCR 202. 10 (12-0)

**204 Machine Shorthand Speed Building****Four credits**

A course designed as both a refresher and up-grading opportunity for those with prior machine shorthand ability. Considerable dictation practice at speeds ranging from 160 words per minute to 240 words per minute with legal and congressional material. Prerequisite: CCR 203 or Departmental Approval. 4 (8-0)

**240 Court and Conference Reporting Practice I****Four credits**

On-the-job training is provided to bridge the gap between the classroom and the actual situation. Student will spend a minimum of 20 hours per week recording actual trials and/or conferences under the direction of a certified reporter and transcribing notes into proper form. Must be taken in conjunction with CCR 203. 4 (3-0)

**241 Court and Conference Reporting Practice II****Four credits**

Either a continuation of CCR 240 or may be used as a refresher-upgrading course with Departmental Approval. 4 (3-0)

**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. 3 (3-0)

**201 Principles of Economics I****Four credits**

This is the first of two courses about the American Economy designed to develop objective consideration of economic issues. Specific objectives are the knowledge and understanding of how resources are allocated by prices. Consists of price theory, consumer demand, cost structure of firms, aiding the supply of goods to the market, factor pricing and income distribution. Prerequisite: Sophomore standing or Departmental Approval. 4 (4-0)

**202 Principles of Economics II****Four credits**

A continuation of Economics 201 dealing with the aggregate activity of the economy, the level of national income, money supply, and prices. It also includes the relationship of the domestic economy to international economic activity, to provide the student with understanding of broad movements in the economy. Prerequisite: Economics 201. 4 (4-0)

## **Business Data Processing**

**001 Key Punch** **Three credits**

Provides speed and accuracy practice on a training tandem—a simulator for the numerical keys on a key punch machine. Also provides a programmed unit for study containing facts about the key punch, the verifier, and data processing in general. Course includes actual practice on the key punch machine with 4 to 7 jobs using program cards, program drums, and checking work on the verifier. 3 (0-4)

**110 Fortran (Fall, Winter, Spring)** **Three credits**

An introduction to programming using Fortran. Covers vocabulary and structure of Fortran. Experience afforded through writing and testing programs. Prerequisite: Mathematics 102. 3 (1-2)

**131 Survey of Data Processing (Fall, Winter, Spring)** **Three credits**

A general survey course designed to acquaint the layman with electronic data processing, its uses, terminology, and management. 3 (3-0)

**132 Cobol (Fall, Winter, Spring)** **Three credits**

Introduction to programming using Cobol. Covers vocabulary and structure of Cobol, but not to the extent of Cobol I. Student will gain experience through writing and testing programs. 3 (1-2)

**133 Systems and Applications (Spring)** **Three credits**

Provides basic understanding of computer system-oriented solutions to the problems and processes of the business environment, as well as a command of the terminology, principles, and procedures of data processing. Emphasis is on general systems techniques and general principles of data processing common to all semi-automatic and automatic business systems. 3 (3-0)

**151 Introduction to Data Processing (Fall, Winter)** **Five credits**

Covers definitions of the basic terms and ideas of data processing. A brief look at unit record equipment, and a rather detailed look at computers as they apply to handling data. Develops the concept of block diagramming, and briefly surveys the language of Cobol and Fortran. 5 (5-0)

**152 Cobol I (Winter, Spring)** **Five credits**

An introduction to programming using Cobol. Covers the vocabulary and structure of Cobol. Experience is gained by writing and testing programs. Prerequisite: DP 151 or approval of department. 5 (2-3)

**153 Cobol II (Spring)** **Five credits**

Continuation of Cobol I, with emphasis on more complex programs and on the interrelation of these programs to complete data processing cycles. Prerequisite: DP 152. 5 (5-0)

**246 Data Processing Internship and Field Project**

**Three credits**

A comprehensive individual assignment, involving the application of principles, skills, and techniques learned in earlier data processing courses. Prerequisite: Final term, sophomore status.

**251 Business Systems (Fall)** **Five credits**

A study of communications in business systems. Includes learning how to define problems, developing inputs, processing these inputs and producing results. Forms for input records and output reports will be developed. PLI will be introduced

112 and continued in DP 252. Prerequisite: DP 153. 5 (5-0)



252 Computer Systems (Spring) Five credits **Business**  
The PLI computer language will be continued and used with knowledge obtained from previous courses allowing a more sophisticated application of the computer. Tape, disk, batch, real time and time sharing systems will be covered and used. Prerequisite: DP 153 and DP 251. 5 (5-0)

253 Assembly Language and Software Five credits  
An introduction to programming at the assembly level. The vocabulary and structure of a language at this level is covered with experience provided through writing and testing programs. Its application to software will be considered. Prerequisite: DP 252. 5 (5-0)

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

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. 4 (4-0)

112 Basic Food Management & Production Five credits  
Basic concepts in menu planning, food purchasing, nutrition, sanitation and food storage. Demonstration and laboratory. 5 (1-4)

123 Food Production Techniques & Practice Five credits  
Food production as applied to quantity operation and application. To include laboratory exercises. 5 (1-4)

134 Internship and Seminar Three credits  
Offered 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. 3 (0-3)

201 Food Service Operation Three credits  
The five functions of management with emphasis on supervision and service. 3 (3-0)

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. 4 (3-1)

203 Food Science Four credits  
Physical, chemical and biological characteristics of food. A laboratory course. 4 (4-0)

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. 4 (4-0)

213 Merchandising for the Hospitality Industry Three credits  
Sales promotion and methods used to obtain public recognition and good will. 3 (3-0)

## **Business Law Enforcement**

### **101 Introduction to Law Enforcement** **Four credits**

Orientation course designed to acquaint the student with the fields of law enforcement. Municipal, county, state and federal police organizations studied. Includes the history, philosophy and administration of justice. 4 (4-0)

### **102 Police Organization and Administration** **Four credits**

Course covers analysis and study of functional divisions of the modern police department. Functions to be studied will include management operations, coordination of activities, communications, recruiting, training, public relations and a look at the future of law enforcement. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 4 (4-0)

### **103 Theory of Patrol** **Three credits**

Study of patrol as a basic operation of the police function, the responsibilities of the uniform and patrol officers, purposes, methods, types and means of police patrol. Covers determination of patrol strength layout, beats, areas and deployment. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 3 (3-0)

### **120 Basic Police Science** **Three credits**

Approval of Law Enforcement Coordinator required. 3 (3-0)

### **201 Introduction to Criminal Investigation** **Four credits**

Fundamentals of criminal investigation, including techniques of surveillance, search at the scene of the crime, collection, recording and preservation of evidence, methods used in the police science laboratory and cooperation with other agencies. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 4 (4-0)

### **202 Criminal Law and Procedures** **Four credits**

Study of elements of criminal law including its purposes and functions. Covers law of arrest, search and seizure, rights and duties of officers and citizens, elements necessary to establish crime and criminal intent. Other topics include sources of criminal law, criminal responsibility and general court procedure. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 4 (4-0)

### **203 Crime Prevention** **Three credits**

Analysis of causes and control of crime. Causes of crime and methods of dealing with criminal and potential criminal emphasized. Statistics of crime, problems of the juvenile offender, theories of punishment, problems of probation and parole and the police officer as an agent for the prevention of crime are examined. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 3 (3-0)

### **204 Traffic Law and Accident Investigation** **Three credits**

A course covering the Uniform Traffic Code, effective traffic control procedures, elements of "selective" enforcement, parking and intersection control, procedures and policies for vehicle accident investigation, investigation of fatalities, causes, prevention and scope of accident investigation. Prerequisite: Law Enforcement 101 or Law Enforcement Coordinator approval. 3 (3-0)

### **Juvenile Delinquency and Youth Behavior** **Three credits**

Early emphasis on the problems of defining juvenile delinquency and a survey of its present status in major industrial nations. Main concentration on theories attempting to account for juvenile delinquency and evidence supporting such theories.

**114** Brief coverage of control and correction as a concluding topic. 3 (3-0)

- 214 Law As Related to Innkeeping** **Three credits** **Business**  
 A course for innkeepers and their personnel as well as students. Presentation of safe, sound rules to assist in avoiding lawsuits and legal pitfalls. 3 (3-0)
- 215 Advanced Food Production** **Three credits**  
 Advanced commercial food production. A laboratory course. 3 (1-5)
- 221 Hospitality Management** **Three credits**  
 General concepts and management including personnel, guests, and operations present and future. 3 (3-0)
- 222 Food & Labor Cost Control** **Three credits**  
 Supervisory procedures in the control of two major items of expense. 3 (3-0)
- 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. 4 (3-1)
- 224 Catering & Beverage Operation** **Three credits**  
 Food and beverage sales and service. 3 (1-3)
- 205 Legal and Criminal Behavior** **Three credits**  
 Application of psychological principles, methods, and techniques to legal and criminal problems and procedures including the formation, detection, prevention and rehabilitation of criminal behavior, testimony, legal arguments, trial tactics, and other courtroom procedures. 3 (3-0)
- 206 Police Interviewing and Interrogation** **Three credits**  
 A study of the techniques and tactics that can be successfully used in police interviewing and interrogation. Major emphasis on the interview process as a method of gathering information. Includes constitutional law and court decisions regulating interviewing of suspects and criminal offenders. 3 (3-0)
- 246 Law Enforcement Internship** **Three credits**  
 After successful completion of basic Law Enforcement courses students may elect Law Enforcement Internship. This course allows the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages. To participate in this program students must secure approval from the Law Enforcement Coordinator. Their occupational interests are considered with their background and related classes to determine employment arrangements. Flexibility of developing individual programs for interested students in any of the Law Enforcement related occupations is accomplished on the basis of developing a practical training program in agreement with the training station supervisors and the college coordinator. The coordinator further conducts an arranged seminar once each week with the internship students to accomplish course objectives which are in accord with purposes of vocational education and to maintain constant evaluation in conjunction with the coordination visits to training stations. 3 (3-0)

## **Business Library Technology**

### **101 Introduction to Library and Use of the Library Three credits**

General course in use of the library, including general background and philosophy of library service, especially public libraries. Students receive instruction and practice in the use of the card catalog, Readers' Guide, encyclopedias, dictionaries, and general reference works. Practice in the shelving of books so that arrangement of books on the shelves is understood. 3 (3-0)

### **102 Ordering, Circulation, Maintenance, Preparation of Materials Three credits**

Ordering, preparation, physical arrangement, circulation, maintenance, and ordering of books, periodicals, pamphlets and other library materials. Study of various systems of circulating library materials. Study of the acquisition of periodicals and pamphlets, records, picture collections, etc. Study of inventory methods, reasons for inventory, and records to be kept.\* 3 (3-0)

### **103 Reference Three credits**

Study of general encyclopedias, special reference works, year books, dictionaries, and other basic sources used in reference work. An expanded course going beyond course I and including practice in the preparation of simple bibliographies, emphasizing correct form.\* 3 (3-0)

### **201 Technical Services Three credits**

Study of the Dewey Decimal Classification system with problems and practice in simple classification. The purpose is to give an understanding of the classification numbers, not to make classifiers of the students. Practice in dictionary cataloging plus practice in assigning subject headings. Emphasis to be placed on working under direction and on typing catalog cards from prepared copy with work on modifying printed cards. Practice in filing in the various library catalogs — dictionary catalog, authority file, and shelf list.\* 3 (3-0)

### **205 Library Problems Three credits**

Seminar type course designed to integrate the technical course work of the preceding quarters. Special problems are assigned for investigation and reporting. Group discussion of common problems. A unit on Audio-Visual familiarization is included.\* 3 (3-0)

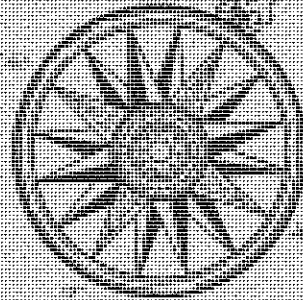
### **246 LT Internship Three credits**

Prerequisite: LT 101, 102, and 103. 3 (3-0)

\*Prerequisite: LT 101 or departmental approval.

# **COLLEGE OF TECHNOLOGY**

**Department of Applied Technology  
Department of Engineering Technology  
Transportation Training Program**



## Technology College of Technology

Principal Dean: William R. Higgins



The College of Technology is deeply involved in continuing service programs as well as the granting of students seeking degrees. Accordingly, our devisor offers these services in service training as part of the community service effort. In accord with this responsibility, courses are offered when needed by the local community and industry. Thus, our extension courses are offered but not included in this catalog.

Specifically, the offerings of the College of Technology can be found under the following subcategory:

### I. PRE-ENGINEERING EDUCATION

If a student desires to obtain a four-year Engineering degree, he may enroll in the Pre-Engineering curriculum and conduct his first two years of study at Lansing Community College. Lansing Community College is accredited by South Central Association of Colleges and Schools, Michigan Educational College Accreditation, thus insuring that work in specified programs within this institution is transferable to other institutions. Although requirements in programs vary among schools, colleges, and universities, normally, it is desirable that the student, who wishes to transfer, consult an early teacher or the institution he plans to enter. This will enable him to select the courses that will meet the requirements of a particular institution.

### II. CAREER TRAINING: other than that requiring a four-year degree.

These training programs include:

- A. Programs leading to the two-year Associate of Science degree. This group includes training for the career of technologist or associate technologist.
- B. One-year Certificate programs leading to a career of engineering technician or craftsman in industrial, building, or other occupations.
- C. Special courses providing intensified training leading to a career, such as the Lansing Community College Truck Driver Training program.
- D. Management Development courses sponsored by the U. S. and State of Michigan Departments of Education available in various fields from time to time.

### III. Individual specific courses which may be taken to provide additional training enabling the student to become more proficient in his field of interest.

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

## Engineering

The increased mechanization of American industry, especially in the last ten years, has created a demand for skilled technicians, young people who have an additional practical and technical training above the high school level. To meet this need, Lansing Community College has developed six separate but equally intensive two-year technology programs: Civil Technology, with Highway, Sanitary and Stormwater Systems; Computer Technology; Drafting Technology; Fiberglass, Electromechanical 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 adjustments, conduct laboratory developmental work, and plan and construct tests. They are employed as laboratory technicians, draftsmen, machinists, electricians, refrigeration technicians, and in a host of other capacities.

Another important facet of the increased mechanization of American industry is the continued demand for better 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 level of the vocational and technical training, 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.

And since again in its technical programs, as in its business programs, Lansing Community College gives ample opportunity for cooperative training by allowing them to participate in employment that corresponds to academic theory into practice. For the maintenance of the staffs, most of the courses are offered evenings as well as during the day.

## Applied Technology Department

## Applied Technology

Department Chairman: Harold J. Wagner

The Department of Applied Technology offers numerous and various practical training leading to a variety of craftsmen in the fields of building trades, industrial trades, and service trades. The field of building trades applies to commercial and home construction, and includes carpentry:

Carpentry  
 Electrical  
 Plumbing

Painting and Decorating  
 Furnishing and Upholstery  
 Sheet Metal

Industrial trades courses include:

Die Design  
 Die Makers  
 Die Setting  
 Toolroom Die  
 Machine Design  
 Washers  
 Millwright

Wood Working  
 Structural Steel Fabrication  
 Tool Design  
 Tool Inspection  
 Tool Making  
 Tool and Die Making

## Applied Technology

Service trades careers include those of:

Administrative Body Repair  
Automotive Painter  
Automotive Servicing  
Tire and Wheelman

Electrical Mechanics  
Heating, Air Conditioning and  
Refrigeration  
Radio and Television Servicing

In addition to learning leading by a career, students can enroll to take special courses to improve their performance in certain their abilities in their present activity. In general, courses are open to anyone, except that, in some cases, permission is given to apprentices and journeymen. First three to three courses may be set up for special groups.

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

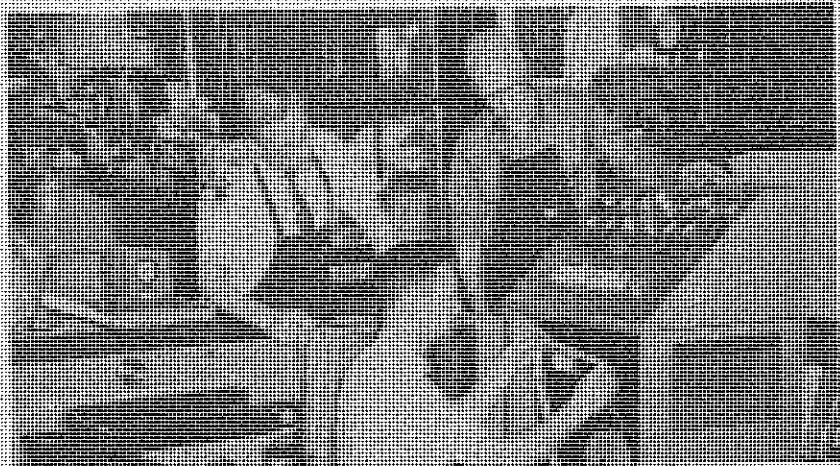
The Applied Technology offerings are open to apprentices or journeymen. Many are open to individuals from industry who are interested in upgrading or present jobs or preparing for new positions. Courses not previously listed may be offered if enough individuals are interested and enroll. The Applied Technology Department offers courses in Building, Industrial and Service Trades, as well as some courses applicable, in general, to all the trades. (See General Trades Department.)

Learning Community Colleges does not provide apprentice management services, except through referral or application or visitation at the request of participating employers, nor does the College exercise control over selection of apprentices. Joint Apprenticeship Committees do, however, place apprentices in the building trades.

Apprentice training offers the individual the opportunity to learn a skilled craft or trade while he works at the trade he wages and takes related instruction to learn more about the job. A person desiring apprentice training must, therefore, be employed on an apprentice basis according to law. 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, mathematics, arithmetic and initiation in abilities, be in good health, be mentally alert and generally interested in the industry.





Most trades require high school graduation. The tests are, as stated, in Group 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 trade apprenticeships may be received from the Applied Technology Office. No uniform procedure can be established since each trade differs in its entrance and placement procedure. An applicant must apply within the jurisdiction 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 at the Applied Technology Office, building trade applications are returned to the instructor for the trade.

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

**Service Trades**

The programs that industry is seeking to provide people with understandings and applications related to the great abundance and ease of obtaining them, has expanded the need for a new area of training. This new area is that of servicing.

The automobile industry alone is placing more responsibility on the trade trades that can be adequately serviced by the existing mechanics. The appliance service by means are also increasing.

Along with the means of service that take care of family needs are also here those which maintain the trucking industry. In great need of diesel and gas engine mechanics. The heavy equipment dealers have a similar need for mechanics.

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

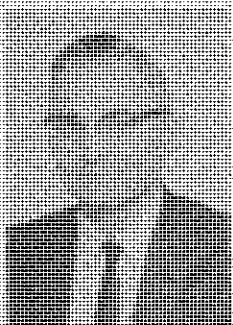
**Programs**

In an effort to meet the educational needs of the citizens of our community, Lansing Community College develops many courses. These courses are designed to upgrade the individual's existing effectiveness, to provide additional knowledge and to develop new skills. They can be for leisure, information or a vocation. High training relations and technical skills are emphasized. Techniques in reading, preparing, writing and creating plans and methods will be stressed according to need. The students are offered enrichment and credits for the courses vary. Sponsors have been considered or developed in the following areas:

- **Art/Crafting:** Cooking, heating, manufacturing, wiring and voicing.
- **Automotive:** Equipment, systems, work practices and management.
- **Instruction:**
- **Management:** Production cost, time study, critical path, quality control, and others.
- **Welding:** Fabrication, lecture and industry.
- **Writing:** Tool and die making, maintenance writing, maintenance building, production writing, etc.

If you are interested in a certain course, write to Dean, Technology Division, Lansing Community College, 415 North Capital Avenue, Lansing, Michigan 48904, or call 484-7700, Extension 303.

## Applied Technology Department of Applied Technology Certificate Programs



Harold J. Murray

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 pay credit for the courses taken. These courses may also be taken on a part-time basis.

Students who do not enroll in a certificate program for the purpose of job placement can be given a year's credit in employment. Credits may wish to transfer to an American College program after completion if they are awarded an equal status.

A minimum of 45 credit hours is required with a Grade Point Average of 2.0 or above, in order to complete the certificate program. A certificate is awarded for satisfactory completion of the course.

Students should bear in mind that the Certificate Programs are non-credit and restrictive in nature but are not equivalent in career work and job experience to the Programs of the various Learning Point Apprenticeship Committees, and do not of themselves lead to non-credit status. Students seeking Instructional credit should consult with the Apprenticeship and Training Committee of the appropriate Area Apprenticeship Board, or contact with the Bureau of Apprenticeship and Training, Learning office of the U. S. Department of Labor or the College Applied Technology office. To prevent student misunderstanding as to the nature of the Certificate Programs of the Applied Technology Department of Lansing Community College, all students will be requested to read and sign a statement prior to commencing the program.

The following programs are offered under the above plan:

1. Pre-apprenticeship and General Studies
2. Apprenticeship
  - a. Auto Mechanics
  - b. Automotive Body Man
  - c. Automotive Paints
  - d. Truckers
  - e. Carpenters
  - f. Electrical Construction
  - g. Glazier
  - h. Painting and Decorating
  - i. Plumbing and Pipefitting
  - j. Sheet Metal
  - k. Heating, Air Conditioning and Refrigeration
  - l. Metal Worker—Iron Worker, Tool and Die Maker
  - m. Metal Worker—Machine Repair, Millwright, Toolmaker
  - n. Metal Worker—Millwright
  - o. Pipefitter
  - p. Sheet Metal
  - q. Welder (Not the same as "cut and welder")

### ACADEMICS COURSE

All full time students will need a basic set of courses:

Fall Term		Credits Earned	Spring Term		Credits Earned
101	101 English I	3	101	101 English I	3
102	102 Mathematics I	3	102	102 Mathematics I	3
103	103 American History I	3	103	103 American History I	3
104	104 American History II	3	104	104 American History II	3
			105	105 American History III	3
			106	106 American History IV	3
					15
Winter Term					
107	107 American Electrical Training I - Repair	3			
108	108 American Electrical Training II - Repair	3			
109	109 American Electrical Training III - Repair	3			
110	110 American Electrical Training IV - Repair	3			
					12

1100 MATHS AND STATISTICS

Applied  
For Biology

Fall Term		Credit Hours	Spring Term		Credit Hours
111	111 Introductory Statistics	3	113	113 Probability & Statistics I	3
112	112 Probability & Statistics II	3	114	114 Statistics for Biology	3
113	113 Mathematical Probability	3	115	115 Mathematical Probability II	3
114	114 Mathematical Probability II	3	116	116 Statistical Inference	3
Winter Term			Recommended Electives		
117	117 Introductory Statistics I	3	118	118 Statistical Inference	3
118	118 Introductory Statistics II	3	119	119 Mathematical Probability I	3
119	119 Mathematical Probability I	3	120	120 Mathematical Probability II	3
120	120 Mathematical Probability II	3	121	121 Statistical Inference I	3
121	121 Statistical Inference I	3	122	122 Statistical Inference II	3
Totals			18		

1100 PHYSICS AND ASTRONOMY

Fall Term		Credit Hours	Spring Term		Credit Hours
111	111 General Physics I	3	113	113 General Physics II	3
112	112 General Physics II	3	114	114 Modern Physics	3
113	113 Modern Physics	3	115	115 Introductory Astronomy I	3
114	114 Introductory Astronomy I	3	116	116 Introductory Astronomy II	3
115	115 Introductory Astronomy II	3	117	117 Advanced Astronomy	3
116	116 Advanced Astronomy	3	118	118 Planetary Science	3
117	117 Planetary Science	3	119	119 Cosmology	3
Totals			18		

1100 CHEMISTRY AND BIOLOGY

Fall Term		Credit Hours	Spring Term		Credit Hours
111	111 General Chemistry I	3	113	113 General Chemistry II	3
112	112 General Chemistry II	3	114	114 Organic Chemistry I	3
113	113 Organic Chemistry I	3	115	115 Organic Chemistry II	3
114	114 Organic Chemistry II	3	116	116 Analytical Chemistry	3
115	115 Analytical Chemistry	3	117	117 Biochemistry	3
116	116 Biochemistry	3	118	118 Environmental Chemistry	3
117	117 Environmental Chemistry	3	119	119 Applied Chemistry	3
Totals			18		

1100 BIOLOGY

Fall Term		Credit Hours	Spring Term		Credit Hours
111	111 Introductory Biology	3	113	113 Cellular and Molecular Biology	3
112	112 Cellular and Molecular Biology	3	114	114 Evolutionary Biology	3
113	113 Evolutionary Biology	3	115	115 Applied Biology	3
114	114 Applied Biology	3	116	116 Environmental Biology	3
115	115 Environmental Biology	3	117	117 Systematics	3
116	116 Systematics	3	118	118 Plant Biology	3
117	117 Plant Biology	3	119	119 Animal Biology	3
118	118 Animal Biology	3	120	120 Microbiology	3
119	119 Microbiology	3	121	121 Applied Microbiology	3
120	120 Applied Microbiology	3	122	122 Environmental Microbiology	3
121	121 Environmental Microbiology	3	123	123 Biotechnology	3
Totals			18		

**Applied  
Technology**

**SPRING TERM**

Fall Term		Credit Hours	Spring Term		
111	101 Working as a Technician I	1	210	101 Working as a Technician II	1
112	201 Manufacturing Technology I	1	211	201 Working as a Technician III	1
113	301 Applied Algebra	1	212	101 Working	1
			213	101 Applied Plane Geometry	1
					14

Winter Term		Credit Hours	Summer Term		
214	101 Working as a Technician II	1	310	101 Employee/Employee Relations	1
215	201 Working as a Technician III	1	311	101 Job Functions and Post Job	1
216	301 Technical Mathematics	1	312	101 English	1
217	101 Applied Plane Geometry	1			14
218	201 Applied Algebra	1			
					14

**SPRING TERM**

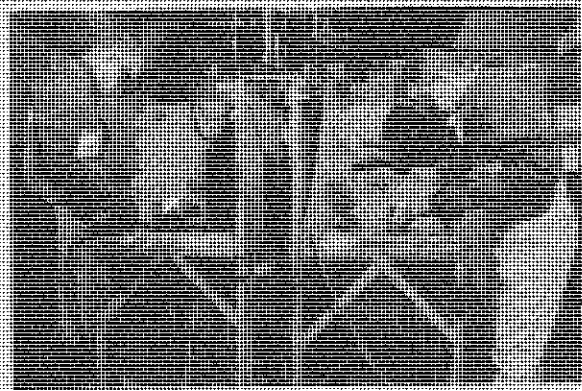
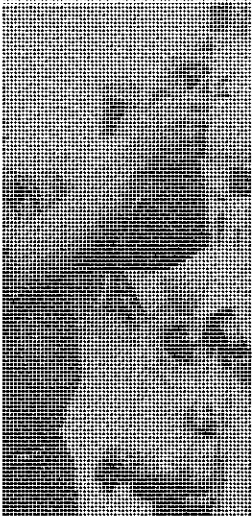
Fall Term		Credit Hours	Spring Term		
219	101 Working as a Technician I	1	313	101 Working as a Technician III	1
220	201 Technical Mathematics	1	314	101 Applied Plane Geometry	1
221	301 Applied Algebra	1	315	101 General Working II	1
222	101 General Working I	1			14
223	201 Manufacturing Processes	1			
					14

Winter Term		Credit Hours	Spring Term		
316	101 Working as a Technician II	1	316	101 Employee/Employee Relations	1
317	201 Working as a Technician III	1	317	101 Job Functions and Post Job	1
318	301 Applied Plane Geometry	1			14
319	101 General Working II	1			
					14

NOTE: This program is not available until the student has a "technical skills"

Fall Term		Credit Hours	Spring Term		
320	101 Working as a Technician I	1	320	101 Industrial Electronics	1
321	201 Working as a Technician II	1	321	101 Employee/Employee Relations	1
322	301 Applied Algebra	1	322	101 Job Functions and Post Job	1
323	101 General Working I	1	323	101 General Working II	1
			324	101 Applied Plane Geometry	1
					14

Winter Term		Credit Hours	Summer Term		
324	101 Working as a Technician I	1	324	101 Strength of Materials	1
325	201 Working as a Technician II	1	325	101 English	1
326	301 Applied Plane Geometry	1			14
327	101 General Working II	1			
328	201 Applied Algebra	1			
					14



# LANSING COMMUNITY COLLEGE

## Applied Technology Department

### DEPARTMENTAL RESPONSIBILITIES OF FACULTY

It is the responsibility of the faculty to coordinate with the department chair to ensure that their courses of instruction are appropriate, relevant, progressive and in accord with the needs of the community. The department chair is responsible for the overall management of the department.

### DEPARTMENT

Building	Classical	Industrial	Business	Food	Technology	Building	Technology	Professional	Other
----------	-----------	------------	----------	------	------------	----------	------------	--------------	-------

### Electronics Technology Computer Science Other

100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100

### Food Service Culinary Baking Food Processing Food Packaging Food Safety Food Quality Food Inspection Food Control Food Safety Food Quality Food Inspection Food Control

100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100

### Food Safety Food Quality Food Inspection Food Control

100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100

### Food Safety Food Quality Food Inspection Food Control

100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100

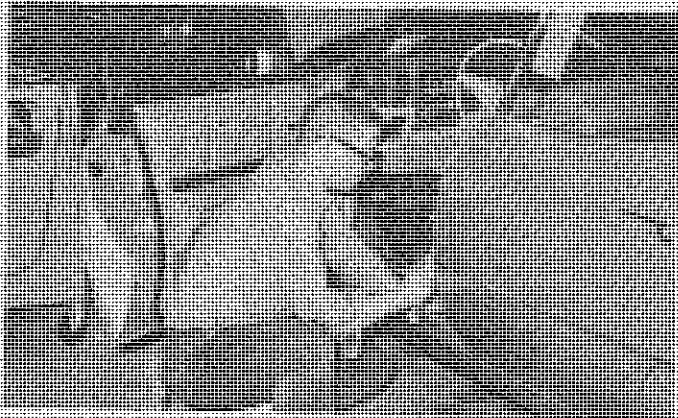
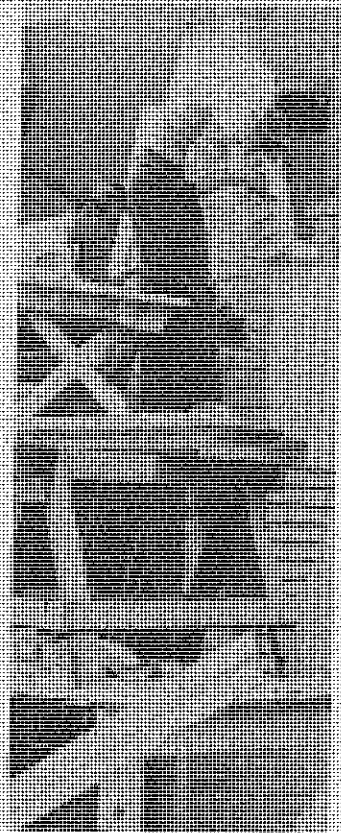
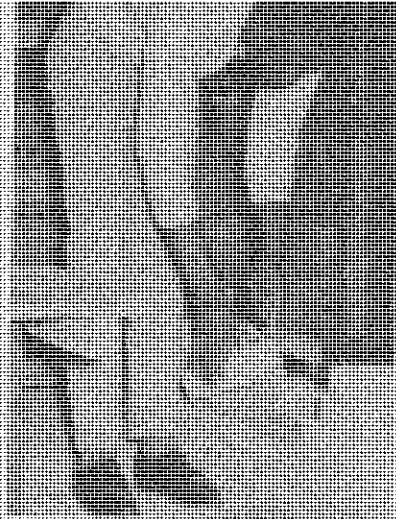
### Food Safety Food Quality Food Inspection Food Control

100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100  
100 100 100 100 100

NOTE: This department is responsible for the development, management and maintenance of the department's program. The department chair is responsible for the overall management of the department.



Applied  
Technology  
Building Trades



## COURSE DESCRIPTIONS

### Building Trades

**104** Apprentice Bricklaying  
Formerly VT 44

One credit

For apprentice bricklayers in registered programs with the Lansing Bricklaying and Masonry Joint Apprenticeship Committee. Includes manipulation practices, related theory, mathematics, estimating, blueprint reading and drawing. (1-1)

**114** Apprentice-Carpentry  
Formerly VT 40

One credit

For apprentice carpenters in registered programs with the Lansing Carpenter Joint Apprenticeship Committee. Covers theoretical standards and drawing, blueprint reading, mathematics, use of hand square, squaring and layout, finishing work, safety practices, manipulative practices and applied business practices (light and heavy construction practices). (1-3)

**115** Framing Square (as Handout)

Two credits

The selection, care, and use of the framing square is covered. Students will lay out rafters, rafter, hip and jack rafters, and determine the lengths of braces. Also to use the framing square with a level to determine a plumb line and the use of the level hand square table as demonstrated. (1-2)

125

**110 - Automotive-Electrical**  
Forensics VI 482

Institutional credit

Applied  
Technology  
Building Trades

Open to electrical apprentices indoctrinated to the Lansing Electrical Joint Apprenticeship Committee. Covers blueprint reading and drawing, electrical theory, differential tests, electrical code and reconditioning. (1-3)

**111 - Electrical Blueprint Reading (on demand)**

Three credits

Designed to enable the student to interpret blueprints and specifications, as well as wiring schematics. A study is also made of typical wiring diagrams, circuits and equipment used in the electrical trade. (1-2-2)

**112 - National Electrical Code (Institutional) (Fall, on demand)**

Four credits

Exhaustive study of the most recent National Electrical Code. Outside study required. (1-4-4)

**113 - Intermediate Electrician: Welding I (on demand)**  
Forensics VI 484

Four credits

Open to electrical journeymen and apprentices. Includes basic fundamentals of acetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. IRECE laboratory fee. (1-3-4)

**114 - Intermediate Electrician: Welding II (on demand)**  
Forensics VI 484

Four credits

Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of welding. Trades 113. Pre-requisite: Building Trades 113 or permission of instructor. IRECE laboratory fee. (1-3-4)

**115 - Apprentice Glazing**

Three credits

Open to apprentices indoctrinated to the Flint-Lansing Chapter I.A.C. Covers blueprint reading and sketching, tools and optical mathematics, feeds and equipment, safety, materials, glass processing, installation, compressed glassing and special jobs related to glazing. (1-2-4)

**116 - Apprentice Painting and Decorating**  
Forensics VI 485

Three credits

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, workmanship related to the trade, estimating and packaging. (1-2-2)

**117 - Paper Hanging For Journeymen I (on demand)**

Four credits

Designed for journeymen master decorators. Includes preparation of surface, selection and care of tools, selection of materials and adhesives, estimating of materials, layout, measuring and covering of finish, application of paper and vinyl. (1-2-4)

**118 - Paper Hanging For Journeymen II (on demand)**

Four credits

Continuation of Building Trades 117. Paper Hanging For Journeymen I. (1-2-4)

**119 - Apprentice Plumbing or Pipefitting**  
Forensics VI 484

Institutional credit

For apprentice plumbers and pipefitters indoctrinated to the Lansing Joint Plumbing and Pipefitting Apprenticeship and Training Committee. Includes mathematics, investigation practices, theory, blueprint reading and drawing, I.P. analysis, physical and other courses, and supplementary courses from the regular college offering approved by the I.A.C. (1-3-4)

Applied Technology	155 Blueprint Reading for Plumbers I (Winter only) Formerly VT 160	Three credits
Building Trades	Covers orthographic projection, linear and angular measurements and reading of prints when three views are given in the three principal planes of projection. Examples apply to the plumbing trades. 3-2-1	
	156 Blueprint Reading for Plumbers II (on demand) Formerly VT 113	Three credits
	Continuation of Building Trades 155 with emphasis on some complex prints. Actual construction prints are used whenever possible. Prerequisite: Building Trades 155 or permission of instructor. 3-2-1	
	158 Journeyman Pipefitter Welding I (on demand) (Fall) Formerly VT 145	Four credits
	Students who enter this class should be Journeyman Plumbers or Sheetmetal Apprentices in the plumbing or sheet metal trade for admission unless the degree of training they have achieved earns the approval of the Joint Apprenticeship Committee on Plumbing.	
	Training begins with a review of welding fundamentals and proceeds rapidly through advanced skills according to the needs of the individual student. Teacher-welding of all kinds of pipe, including stainless steel by the Indian method. 319-10 Laboratory fee. 4-2-4	
	159 Journeyman Pipefitter Welding II (Winter, on demand) Formerly VT 146	Four credits
	Continuation of Building Trades 158. Prerequisite: Building Trades 158. 319-10 Laboratory fee. 4-2-4	
	160 Journeyman Pipefitter Welding III (Spring, on demand) Formerly VT 104	Four credits
	Continuation of Building Trades 159. Prerequisite: Building Trades 160. 319-10 Laboratory fee. 4-2-4	
	170 Apprentice Sheet Metal Formerly VT 148	Three credits
	Open to apprentices indentured to the Lansing Sheet Metal Joint Apprenticeship Committee. Covers cooperative practices layout, manufacturing and drafting. 3-2-1	
	172 Sheet Metal I (Fall only) (on demand) Formerly VT 149	Three credits
	Course includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line and triangulation patterns developed. Heavy work includes layout of fittings with hand and machine tools. Current techniques of fabrication emphasized. 3-2-2	
	174 Sheet Metal II (Winter only) (on demand) Formerly VT 150	Three credits
	Continuation of Sheet Metal I with more advanced problems. Prerequisite: Building Trades 172 or permission of instructor. 3-2-2	
	175 Sheet Metal III (Spring only) (on demand) Formerly VT 121	Three credits
	Continuation of Sheet Metal II with specialty work. Prerequisite: Building Trades 174. 3-2-2	



120 Sheet Metal Welding I (on demand) Five credits  
 Formerly VI 100  
 Are working on applied to sheet metal. Introduction to fabricate RIB/2 laboratory  
 fee 412-4  
**Applied Technology**  
**Building Trades**

121 Sheet Metal Welding II (on demand) Five credits  
 Formerly VI 107  
 Completion of Building Trades I with additional work on fabricate. For  
 requirements: Building Trades I for approval of instructor. RIB/2 laboratory fee 412-4

122 Structural Blueprint Reading (on demand) Three credits  
 The student is trained to visualize and interpret blueprints and construct from  
 blueprints and to translate them into practical structures. The student is shown  
 the purpose of and the relationship between specifications and blueprints as ap-  
 plied to various trades. 1-13-2

**General Trades**

**General Trades**

123 General Trades Mechanics (on demand) Three credits  
 Principles involving mechanical technology and metal working plants are presented  
 and their applications to practical structures are shown. Included are: rivets,  
 bolts, nuts and washers, cotterpin pins, strength of materials, heat and tempera-  
 ture, and hydrostatics-pneumatics. 313-3

124 Rigging (on demand) Three credits  
 The uses and strength of ropes, chains, blocks and tackle, and the construction  
 and erection of gin poles are covered, along with a study of rope knots used in  
 rigging. Also covered will be safe working strength of chains, blocks, sheaves, ropes  
 and chains, and the use of personal safety equipment. 3-13-2

125 Electrical Math I (on demand) Five credits  
 A course presenting the basic mathematical skills required by students in electricity  
 courses. Included will be fundamentals from fractions to trigonometry. Students  
 will be solving mathematical problems concerning angles, parallel, and complex  
 circuits dealing with Ohm's and Kirchhoff's Laws. 1-13-4

126 Electrical Math II (on demand) Five credits  
 A course designed to acquaint students with a variety of problems having practical  
 application in electricity and electronics. Problems intended to enhance the  
 student's understanding of the basic principles of inductance, reactance, imped-  
 ance, and reactance as they apply to AC and DC circuits in parallel, series, re-  
 versed. 1-13-4

127 Safety Standards (Citizens, Teachers, and Industry) (on demand) Credit varies

128 Industrial Management Systems (Production Cost, Time Study, Critical Path, Quality Control, and others) (on demand) Credit varies 129

**Applied  
Technology  
Industrial Trades**

**Industrial Trades**

- 108. Blueprint Reading I** Three credits  
 Prerequisite: VT 105
- Covers orthographic projection, lines and angular measurements and reading of prints with their views given in the three principal planes of projection. Deals mainly with part prints. 3 (2-2)
- 109. Blueprint Reading II (Winter)** Three credits  
 Prerequisite: VT 108
- Covers application of orthographic projection principles as more detailed than taught in Industrial Trades 108. Deals with part prints and assembly drawings. Prerequisite: Industrial Trades 108 or permission of instructor. 3 (2-2)
- 110. Blueprint Reading for Welding (Fall)** Three credits
- Covers mechanical drawings and stress marking methods. 3 (2-2)
- 111. Template Making and Model Checking (Fall)** Three credits  
 Prerequisite: VT 108
- Functions of models and how to check models using size 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 performing of drawings used for template making and model checking. Prerequisite: Industrial Trades 108. Teaching Technology 101 or approval of instructor. 3 (2-2)
- 112. Die Construction I (Winter)** Three credits  
 Prerequisite: VT 105
- Lenses and processing related to die construction. Types of aids used in die construction and how to use these aids. How to select steel used in die construction. Limitations on geometry and finish of parts used in die construction employed, such as grinding and lapping. Covers various types of die construction used in industry and process related to die construction. Prerequisite: Industrial Trades 108 or approval of instructor. 3 (2-2)
- 113. Die Construction II (Spring)** Three credits  
 Prerequisite: VT 104
- Construction of inserts and processing from Industrial Trades 112. Covers theory of heat treat, setting, types of steel and types of aids used in die construction. Auxiliary equipment in dies such as lifters, bushes, ejectors, ejector levers, die bush inserts. Repair and maintenance of dies constructed as well as how dies should be built to make maintenance possible and possible long life. Prerequisite: Industrial Trades 112 or approval of instructor. 3 (2-2)
- 114. Die Construction and Design I (Fall)** Three credits  
 Prerequisite: VT 104
- Designed to cover the effective utilization of information contained in the design handbooks. Will design die central part given students in class or work from part print. Covers the importance of good die design. Prerequisite: Industrial Trades 112, 113 or approval of instructor. 3 (2-2)
- 115. Die Construction and Design II (Winter)** Three credits  
 Prerequisite: VT 104
- Emphasizes actual die design, working from actual piece parts produced by industry and also part drawings. Includes cost, ordering and handling of raw materials used for the construction and depreciation of equipment and tools used. Prerequisite: Industrial Trades 115 or approval of instructor. 3 (2-2)

134	Resistor-Inductor Networks (Fall, Spring) Formerly VT 124	Two credits	Applied Technology
	Emphasizes the interdependence of capital, labor and management. Includes personal and physical qualities essential to success. 2 (2-4)		
135	Sale Practices and First Aid Formerly BTH 125	Two credits	Industrial Trades
	This course is designed to acquaint individuals with First Aid and accidents through lectures, demonstrations and practice as outlined in the course of study based on the American Red Cross as requirement. Safe working practices in non-factory work with hand tools and animal assistance are stressed. Information about the safety factors of machines and how to identify and use them is covered. Upon successful completion of the course a certificate may be granted. 2 (2-4)		
136	Machinery Handbook I (Winter) Formerly VT 22	Three credits	
	Designed to familiarize the student with the effective utilization of information contained in this handbook. 3 (2-4)		
137	Basic Mathematics (Summer, Fall) Formerly VT 224	Four credits	
	Review of basic arithmetic operations: whole numbers, common fractions and decimals; percentages, ratio and proportion. Introduction to basic algebraic operations and formulas in plane geometry. 4 (1-4)		
138	Applied Algebra (Fall) Formerly VT 22	Four credits	
	Application of algebraic equations to shop work. 4 (1-4)		
139	Applied Plane Geometry (Winter) Formerly VT 224	Four credits	
	Application of geometric formulas to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: Industrial Trades 125. 4 (1-4)		
140	Applied Plane Trigonometry (Spring) Formerly VT 224	Four credits	
	Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: Industrial Trades 125. 4 (1-4)		
141	Advanced Applied Trigonometry (Fall) Formerly VT 224	Four credits	
	Continuation of Industrial Trades 125. Provides broad experience in solution of problems taken directly from industry. Prerequisite: Industrial Trades 125. 4 (1-4)		
142	Compound Angles I (Winter) Formerly VT 224	Four credits	
	Combination of solid geometry and advanced/college trigonometry enabling students to solve shop problems involving angles and tilted work. Prerequisite: Industrial Trades 124. 4 (1-4)		
143	Compound Angles II (Spring) Formerly VT 224	Four credits	
	Continuation of Industrial Trades 125. Emphasis on application of actual tooling setups for complex machining operations. Prerequisite: Industrial Trades 125. 4 (1-4)		

<b>Applied Technology</b>	<b>169</b>	<b>Electric Inspection I (Fall, as demand)</b> Formerly VT 1P5	Three credits
<b>Industrial Trades</b>		Advanced techniques of tool and gage inspection, calipers, verniers, gauge blocks, fixed and adjustable gauges, test indicators, gear and cam-making measurement, hardness testing. Prerequisite: Mechanical Technology 10, Industrial Trades 166, Industrial Trades 169, or equivalent. 115-2	
	<b>168</b>	<b>Electric Inspection II (Winter, as demand)</b> Formerly VT 1P4	Three credits
		Practical layout work related to gages and inspection problems. Prerequisite: Industrial Trades 166. 115-3	
	<b>174</b>	<b>General Welding I (all terms)</b> Formerly VT 1E3	Four credits
		Study of principles and fundamentals in application and safe operation of metal arc welding equipment. Handling, fillet and multiple pass welding of butt, lap and corner type joints in flat and horizontal positions. S1000 Laboratory fee. Lecture and Laboratory. 413-1	
	<b>171</b>	<b>General Welding II (all terms)</b> Formerly VT 1E2	Four credits
		Study of principles and fundamentals in application and safe operation of non-ferrous welding and cutting equipment. Handling and fillet welding of butt, lap and corner type joints in all positions. Introduction to brazing of sheet metals is also presented. S1000 Laboratory fee. Lecture and Laboratory. 413-4	
	<b>172</b>	<b>General Welding III (all terms)</b> Formerly VT 1E1	Four credits
		Vertical and overhead butt, multiple pass fillet and groove welds in butt, lap and corner type joints. Use and interpretation of fillet and groove welding symbols relative to butt, lap, tee and corner type joint design. S1000 Laboratory fee. Prerequisite: Industrial Trades 170. 413-6	
	<b>175</b>	<b>Advanced Welding I (Winter)</b> Formerly VT 1E1	Four credits
		Specialized instruction in arc welding of structural steel, sheet metal, steel pipe, rust steel and aluminum. Introduction to TIG welding. S1000 Laboratory fee. Prerequisite: Industrial Trades 172. Lecture and Laboratory. 413-3	
	<b>176</b>	<b>Advanced Welding II (Spring)</b> Formerly VT 1E1	Four credits
		Specialized instruction in the non-ferrous welding and finishing of sheet metal, steel pipe, steel pipe, cast iron and aluminum. Silver brazing and solder techniques are also presented. S1000 Laboratory fee. Prerequisite: Industrial Trades 174. 413-4	
	<b>177</b>	<b>Advanced Welding III (Fall)</b> Formerly VT 1E1	Four credits
		A study of computer techniques in welding process (MIG/MAG) for control of changes in all positions. Instruction in cold chisel, hot chisel, standard steel, aluminum and magnesium alloys. S1000 Laboratory fee. Prerequisite: General Welding I and II. 413-6	
	<b>186</b>	<b>Welding for Pipefitters I</b> Formerly E10 100	Four credits
		This is a practical welding course designed to develop skill in the welding of pipe. Knowledge of pipe welding experience is desirable, a review of basic	

welding skills is first given. As the basic skills increase, the student applies these techniques to the welding of pipes. Additional skills in laying out, measuring and bending of different joints for different types and sizes of pipes are covered. Plans and the work may also be used. The student may be required to pass performance tests. **SHSSE Laboratory for Lectures and Laboratory. 4-12-4**

**151 Welding for Pipelines II** **Four credits**  
**Prerequisite:** ITH 149

A continuation of 150. Prerequisite: 150. **SHSSE Laboratory for Lectures and Laboratory. 4-12-4**

**151 Welding for Pipelines III** **Four credits**  
**Prerequisite:** ITH 147

A continuation of 151. Prerequisite: 151. **SHSSE Laboratory for Lectures and Laboratory. 4-12-4**

**158 Applied Metallurgy (see demand)** **Three credits**

A general study of ferrous and nonferrous metals with concentrated study in modern heat treating practices, such as induction heat, annealing, tempering, etc. Current furnace practices are covered for heat treat. Discussion pertaining to the reaction of metals under work strains and heat will be covered. **4-12-4**

**159 Metallurgical Testing of Metals I (see demand)** **Four credits**  
**Prerequisite:** VT 234

Welding of low carbon steels in various ways, and testing of all welds to determine quality and reliability. Characterization of metal-metal. Study of internal strain, cracking, shrinkage and warpage. **SHSSE Laboratory for Prerequisite: Mechanical Technology 2M, Industrial Trades III, Lectures and Laboratory. 4-12-4**

**161 Metallurgical Testing of Metals II (see demand)** **Four credits**  
**Prerequisite:** VT 232

Throat-type welding and testing of various metals and testing of all welds for quality and reliability. Welds are sectioned and examined under metallograph. Sources for weld defects (porosity, slag inclusions and lack of fusion, etc.) are explained. **SHSSE Laboratory for Prerequisite: Mechanical Technology 2M, Industrial Trades 2M, Lectures and Laboratory. 4-12-4**

**163 Metallurgical Testing of Metals III (see demand)** **Four credits**  
**Prerequisite:** VT 230

Shielded metal arc welding of carbon steel, groove type welds, butt, root and side bend tested for quality and reliability. Processes for weld defects (porosity, lack of fusion, slag inclusions, undercut and overlap, etc.) are explained. **SHSSE Laboratory for Prerequisite: Industrial Trades III, Lectures and Laboratory. 4-12-4**

**165 Welding for Certification I (see demand)** **Four credits**  
**Prerequisite:** VT 240

Designed to give students intensive practice in arc welding for those who wish to pass certification tests conforming to AWS/ASME rules and specifications. Students desiring credit to obtain an equivalent level of competence may also take this course. **SHSSE Laboratory for Prerequisite: Industrial Trades III, Lectures and Laboratory. 4-12-4**

**166 Welding for Certification II (see demand)** **Four credits**  
**Prerequisite:** VT 241

Continuation of Industrial Trades 165. Course covers nondestructive welding and brazing. **SHSSE Laboratory for Prerequisite: Industrial Trades 165, Lectures and Laboratory. 4-12-4**

Applied Technology	287	Welding for Certification III (see demand)	Four credits
Industrial Trades		Prerequisite: VT 142	
	288	Body Design I (Fall)	Four credits
		Basis: automotive body design will acquaint the student with the techniques and drafting procedures used in actual industry drafting rooms. The tools, materials and techniques differ from those used in mechanical drafting in many ways, particularly because of the preponderance of curved lines and surfaces. Prerequisite: Drafting Technology 25. Lecture and Laboratory. 4 (1-3)	
	289	Body Design II (Winter)	Four credits
		Prerequisite: VT 119	
		Reviews basic descriptive geometry as applied to actual automotive true view problems. Includes basic study of simple and compound bodies (development, surface development and true view practice) applied to actual automotive design problems. Prerequisite: Industrial Trades 288. Lecture and Laboratory. 4 (1-3)	
	290	Plastics I (Interim)	Four credits
		Will include the characteristics of plastics, plastic structure, and how plastics are made. The thermoplastics family, acetal, acrylic, cellulose, diacetylenes, polyamide, polypropylene, styrene and vinyl plastics; and the thermoset family, urea and melamine resins, epoxy plastics, polyester plastics, urethane, etc. 4 (1-3)	
	291	Plastics II (Processing)	Four credits
		Covers molding processes such as compression, transfer, injection, extrusion, etc.; casting processes and thermoforming processes such as mechanical, vacuum, and hot. Forming processes, such as the extruding, extrudable, casting, extruder form, vacuum forming and electroforming will be discussed. 4 (1-3)	
	292	Plastics III (Fabrication and Design)	Four credits
		This course will cover the cutting and finishing of plastics, joining and fastening and types of tools and equipment used for plastic work. Product design in plastics will be covered as this influenced by processing and fabrication. Prerequisite: Plastics I and II or approval of instructor. 4 (1-3)	
	293	Welding Seminars (see demand)	Credit varies
		Trade and Art Welding, Resistance Welding, Maintenance Welding, Precision Welding, etc.	
Service Trades		Service Trades	
	294	Automotive Service I (Fall)	Four credits
		Trains understanding of basic tools and ability to use service manuals. Includes safety instruction. Student learns to work on exhaust system, cooling systems, fuel system, lubrication, battery service, automobile accessories, and tires. 4 (1-3)	
	295	Automotive Electrical Theory (Winter)	Four credits
		Basis: electricity as it applies to the automobile. The student will learn to adjust and/or repair storage batteries, ignition systems, charging systems, starting systems, instruments, and alarm electricity. 4 (1-3)	

162 Automotive Brakes and Suspension (Fall)	Six credits	Applied Technology Vehicle Trades
Students learn to adjust brakes, adjust brakes, turn down brake shoes, adjust lining, and service the hydraulic system. 6 (3-3)		
163 Automotive Electrical Testing and Repair (Winter)	Four credits	
A practical course in testing and repair of charging systems, cranking systems, ignition systems, batteries, body wiring, and chassis wiring. Electrical principles. 519 (41, 4 (2-4)		
164 Engine Lab (Spring)	Two credits	
A lab practice course in engine repair. 5 (3-4)		
165 Engines (Fall)	Four credits	
A background in principles, design, operation, and service procedures of various gasoline engines. Program student to begin practical experience in engine maintenance and service. 4 (3-4)		
166 Automotive Drive Lines (Spring)	Four credits	
Students trained to service shifters, manual transmissions, axles, universal joints, drive shafts, differentials, and rear ends. 4 (3-4)		
167 Engine Diagnosis and Tune-up (Winter)	Four credits	
Students diagnosing and tuning-up an engine in regard to the engine's fuel, ignition, timing, and charging system. 4 (3-4)		
168 Tune-Up Lab (Spring)	Two credits	
A lab practice course in engine diagnosis and tune-up. 2 (3-4)		
169 Service Orientation (Winter)	Six credits	
Students perform service and maintenance jobs on equipment automobiles. The instructor devotes time to individual student work. 6 (3-3)		
171 Customer Service (Spring)	Six credits	
Instruction in practical application of service procedures and techniques. Upon successful practical experience program with students doing actual service work. 6 (3-3)		
172 General Auto Mechanics I (Fall)	Three credits	
This course is designed for beginners. The student will gain a better understanding of his automobile and be able to make minor repairs. Areas covered include preventive maintenance, tuning, front end, engine, electrical systems, drive lines, front end and steering. 2 (3-4)		
174 Automotive Engine	Three credits	
A review of automotive engines with emphasis on the individual parts of each engine. 4 (3-4)		
175 Refrigeration Servicing I (Winter)	Four credits	
Instruction for beginners in the refrigeration servicing field. Domestic refrigeration are studied in detail. Most common types of refrigerators are covered thoroughly, with particular attention given to procedure of construction and operation of non-plate refrigeration systems. Emphasis is placed on theory and principles under basic repairing and practical shop work. The student performs such jobs as tube bending, flaring, and brazing, as well as the charging and testing of refrigeration equipment. 4 (3-4)		
176 Refrigeration Servicing II (Spring)	Four credits	
Advanced course for those who have completed Refrigeration Servicing I, or who have had some practical experience in the refrigeration servicing field. More com-		155

**Applied  
Technology  
Service Trades**

rice refrigeration systems are discussed, and students connect various components to make complete refrigeration systems. Students receive practical work in oil burning and servicing refrigeration units and circuits, and in inside checking and tube refrigeration systems. 3 (2-4)

**133 - Gas and Oil Burner Servicing I (Winter) Four credits**

Information about construction and operation of various types of automatic heating equipment for furnaces, circulators, sheetmetal work, and other related. Material covered includes construction and operation of high-pressure oil burners, installation of over-scan burners, servicing of valves, electrodes, and gauges and basic controls and control circuits. 4 (2-4)

**134 - Gas and Oil Burner Servicing II (Spring) Four credits**

Continuation of 133. Includes work on various types of oil burners other than high-pressure burners, gas burner installation and servicing, checking and adjusting burners for combustion efficiency, more detailed wiring systems, and practice in locating and correcting service faults on a variety of heating systems. 4 (2-4)

**135 - Customer Relations (Winter) Two credits**

Trains competence in talking to and performing work for customers. Stress laid general in selected emphasis in planning customer service projects. 2 (2-4)

**136 - Radio Servicing (Fall) Six credits**

Covers A.C. and D.C. theory and circuitry, trouble shooting principles, trouble jumper, and its use. FM and AM principles, waves and multiple systems. The student will build a vacuum tube radio, repair R.F. generators, and do radio repair. 6 (2-4)

**137 - Television Servicing (Winter) Six credits**

Covers black and white T.V. and the principles under which it operates. The student will construct an intelligence for his use, and will repair black and white televisions. 6 (2-4)

**138 - Advanced Television Servicing (Spring) Eight credits**

Work in the area of color television, and the operation of color televisions. Student will also make a virtual repair. All equipment made in these courses is kept by the student upon completion. 8 (2-4)

**139 - Parts Counter Man I (Fall) Four credits**

Covers the identification of automotive parts and systems made on an automobile. 4 (2-4)

**140 - Parts Counter Man II (Winter) Four credits**

This course covers parts catalogs and their use. 4 (2-4)

**141 - Parts Counter Man III (Spring) Four credits**

This course covers product knowledge. 4 (2-4)

**142 - Air Conditioning Services (on demand) Credit varies**

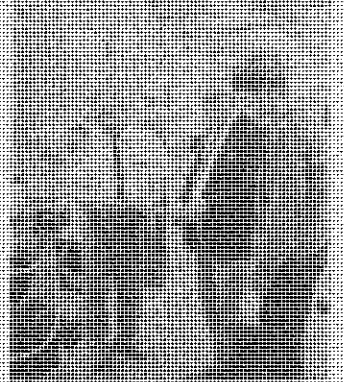
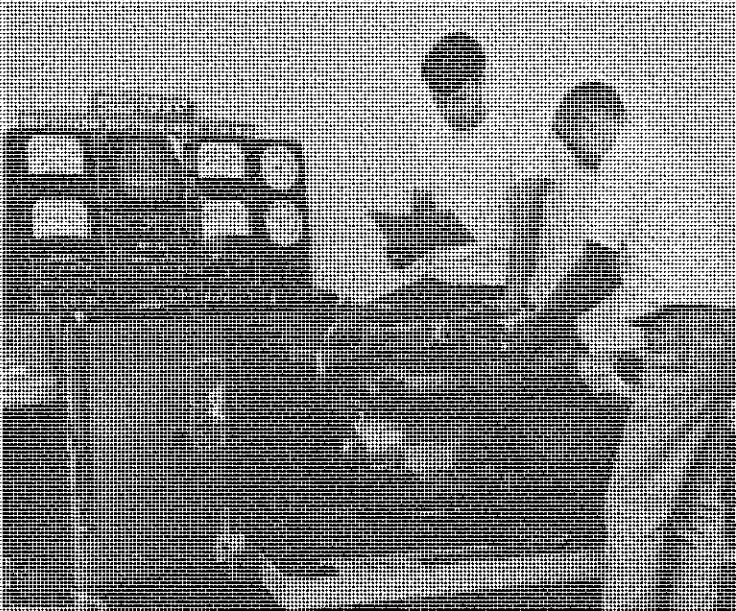
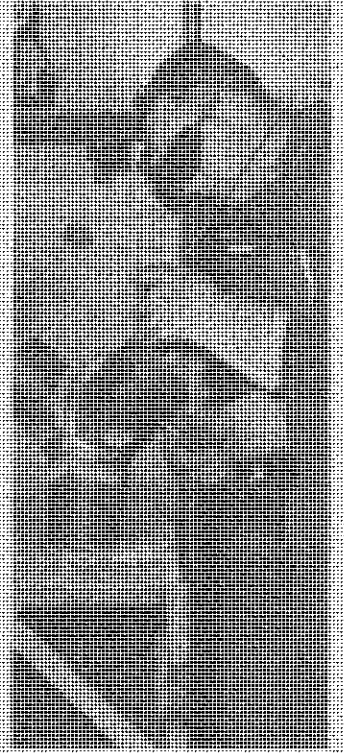
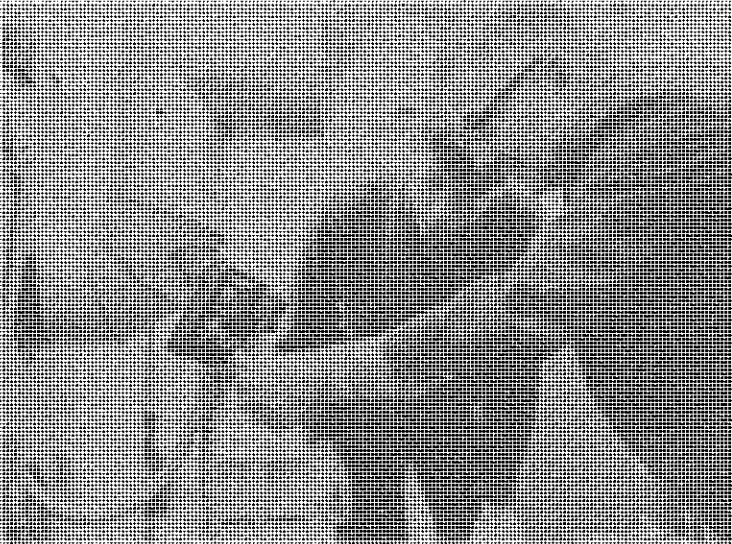
Charging, Bleeding, Overcharging, Filtering, and Purifying.

**143 - Automotive Services (on demand) Credit varies**

**135 - Equipment, Economics, Work Practices, and Management**







## Engineering Technology

## Department of Engineering Technology

Department Chairman: Robert C. Thompson



Robert C. Thompson

The rapidly changing technological developments facing our modernized society have resulted in the demand for technically prepared personnel in all fields of technical employment. Lansing Community College Engineering Technology Department has as its primary objective the responsibility for preparing those capable 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 mathematics than craftsmen and in maintenance skills than skill professionals. Technicians usually become qualified through formal technical training, on-the-job training, or a combination of both.

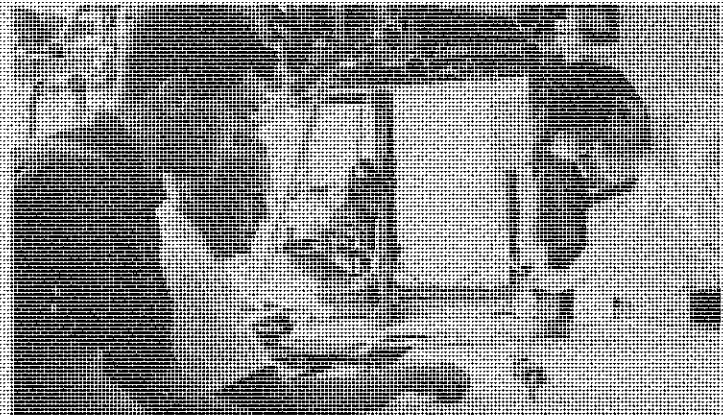
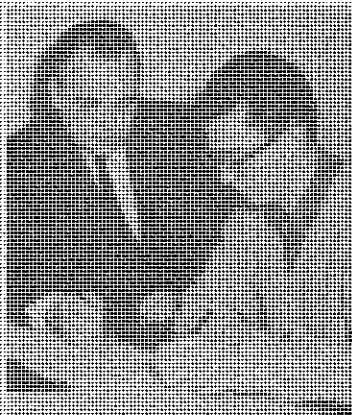
In addition to receiving technical training in a specific field, the prospective technician will be required to take additional courses of a general education nature that will give him a better understanding, appreciation, and knowledge of his basic civic and occupational responsibilities. Upon completion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

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

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

### Engineering Technology Curricula

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



# LANSING COMMUNITY COLLEGE

## Department of Engineering Technology

Associate Degree Program  
 Required and Optional Electives - Student Course

Course/Program	Fall Semester		Spring Semester		Mechanical Technology	Electrical Technology	General Studies
	197-100	197-101	197-102	197-103			
Mechanical Technology	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
Electrical Technology	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
Automotive Technology	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
Aircraft Technology	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
General Studies	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106
	197-100	197-101	197-102	197-103	197-104	197-105	197-106



**Engineering  
Technology**

**Architectural Technology Associate Degree Program**

The college offers a specific two-year associate degree program designed to prepare students to become competent technicians in the area of Architectural Technology.

An Architectural Technician is a highly trained and professional working in the field support of a professional architect or engineer.

Courses emphasize the preparation of architectural working drawings, the ability to think, communicate, and illustrate with drawings.

The curriculum is designed primarily to prepare a student for employment with an architectural or engineering firm. Many other opportunities are available in the building industry.

**ARCHITECTURAL TECHNOLOGY**

**1970 - 1971 CATALOG YEAR AREA**

1970-1971 Catalog Year Area		1972-1973 Catalog Year Area	
1970-1971	Credits/Hours	1972-1973	Credits/Hours
ATV 201	Engineering Technical Drawing* 3	ATV 201	Introduction to Drafting 3
ATV 202	Architectural Drawing - Basics 3	ATV 202	Architectural Materials 3
ATV 203	Architectural Drawing - Residential Planning 3	ATV 203	Architectural Codes 3
ATV 204	Architectural Drawing - Commercial Planning 3	ATV 204	Introduction to Building Construction 3
ATV 205	Architectural Drawing - Mechanical Planning 3	ATV 205	Strength of Materials 3
ATV 206	Architectural Drawing - Electrical Planning 3	ATV 206	Structural Drafting 3
ATV 207	Architectural Drawing - Development 3	ATV 207	Code Enforcement 3
ATV 208	Architectural Drawing - Commercial Construction 3	ATV 208	Building Fire Alarm Systems 3
ATV 209	Architectural Drawing - Mechanical Construction 3	ATV 209	Building Electrical Systems 3
ATV 210	Architectural Drawing - Electrical Construction 3	ATV 210	Lighting Planning 3
ATV 211	Office Practice and Procedures 3	ATV 211	Job Finding and Job Coaching 3
ATV 212	Architectural Survey 3		
ATV 213	Computer Graphics 3		
ATV 214	Project I in Architectural Technology 3		
ATV 215	Project II in Architectural Technology 3		

\*Two students with no background in Drafting

**GENERAL REFERENCE**

- 101 - 101 Federal Bureau of Investigation
- 102 - 102 American Government

**MECHANICAL**

**MATH 101**

1970-1971 Catalog Year Area		1972-1973 Catalog Year Area	
1970-1971	Credits/Hours	1972-1973	Credits/Hours
MTH 101	Applied Math 3	MTH 101	Computer I 3
MTH 102	Applied Calculus 3	MTH 102	Computer II 3
MTH 103	Applied Trigonometry 3	MTH 103	Technical Presentation 3
MTH 104	Mathematics for Technicians 3	MTH 104	Communications I 3
MTH 105	Mathematics for Technicians 3	MTH 105	Communications II 3
MTH 106	Mathematics for Technicians 3	MTH 106	Communications III 3

**IDENTIFIERS**

**1970-1971 Catalog Year Area**

Students are advised on the basis of Student Interest and specific course prerequisites requirements. Students should consult with their Department advisors before making and selecting courses.

## Architectural Technology Certificate Program

## Engineering Technology

The one-year certificate program is designed for initial job placement in the architectural field. Some may wish to enroll in a certificate program for job advancement prior to enrolling in a four-year degree program. All courses completed in the certificate program may be transferred to an Associate Degree program after completion.

A minimum of 45 credit hours is required from the following courses:

### ARCHITECTURAL TRAINING

		45 credit hours required	
		Credits	Hours
114	111 Beginning Mechanical Drawing*	1	1
115	112 Mechanical Drawing interior	1	1
116	113 Mechanical Drawing** Mechanical Drawing	2	2
117	114 Architectural Drafting—Detailing	1	1
118	115 Architectural Drafting—Plant Plans	1	1
119	116 Architectural Drafting—Structural	1	1
120	117 Architectural Drafting—Structural Construction	1	1
121	118 Electrical Drafting for Interiors*	1	1
122	119 Electric Drafting	1	1
123	120 Electric Drafting	1	1

\*Fig. 1 courses not recommended in drafting

### RELATED ENGINEERING

		45 credit hours required	
124	121 Applied Algebra	1	1
125	122 Descriptive Geometry	1	1
126	123 Construction Materials	1	1
127	124 Construction Materials	1	1
128	125 Construction Math	1	1
129	126 Construction Mathematics	1	1
130	127 Strength of Materials	1	1
131	128 Elementary Plane Trigonometry	1	1
132	129 Vector Principles and Applications	1	1
133	130 Statics and the Construction	1	1
134	131 Building Planning Problems	1	1
135	132 Building Mechanical Systems	1	1
136	133 Technical Illustration	1	1

### GENERAL COURSES

#### Minimum 15 credit hours\*

137	134 Applied Plane Geometry	1
138	135 Applied Plane Trigonometry	1
139	136 Math for Technicians I	1
140	137 Math for Technicians II	1
141	138 Math for Technicians III	1
142	139 Drawing I	1
143	140 Engineering Drawing/Level I	1
144	141 Architectural Drafting	1

\*Students should consult with their Departmental advisor before making any schedule modifications.

The above course requirements are based on data available through the Engineering Board for Technical Engineering programs.

## Engineering Technology

### 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 use of drawing tools has become an essential element in our physical society. The technique has been refined and continuously improved since the beginning when crude maps were made freehand in the field during exploration. Today the work requires selection of cartographic methods involving the investigation, development, evaluation, selection or adaptation of plans, standards, equipment, methods, or techniques of map, chart design or construction.

The following courses in Cartographic Drafting and Photogrammetry are offered as credit:

- ET 105 Aerial Photo Interpretation
- ET 106 Cartographic Drafting
- ET 108 Advanced Photogrammetry & Stereoscopic Operation

Cooperation programs between local industrial mapping cartographic draftsmen and the college are arranged for students desiring training in this area. Other recommended courses in the drafting and civil programs include:

- ET 101 Engineering Drawing
- ET 102 Descriptive Geometry
- ET 104 Engineering Drawing II/III
- ET 110 Elementary Plane Surveying
- ET 112 Plane Surveying
- ET 113 Advanced Surveying
- ET 114 Kinematic Surveying

Minimum requirements for a certificate or an Associate Degree in Cartographic Drafting and Photogrammetry are listed below:

CARTOGRAPHY		ASSOCIATE DEGREE	
	Min. Credits		Min. Credits
Cartographic Drafting	2	Cartographic Drafting	2
Mathematics	2	Math Drafting	2
English	3	Mathematics	15
Art	3	English Speech	2
Physics	1	Civil	11
	11	Technical Communication	1
		Office Management	1
Students desiring to receive equivalent credit for a certificate or an Associate Degree in Cartography should consult the college catalog for the courses selected and meet the credit requirements for the certificate.		Physics	1
		Electronics	11
			11

## Civil Technology

The civil technicians in demand for a variety of positions in the general construction field, especially areas which demand a working knowledge of drafting, measuring, construction materials, estimating, and landgrader. The University College two-year program offers training in the basic areas of construction and serves as needed in the civil engineering field, and includes both construction laboratory and on-the-job experience as part of the curriculum 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 own on-the-job experience with county or municipal departments or private firms.

### Civil Technology Highway Option

### Engineering Technology

This two-year curriculum is designed to provide the background and skills for immediate employment as an engineering draftsman, topographical draftsman, civil and mechanical structural detailer, estimator and traffic technician, construction inspector, materials laboratory technician, specification writer, estimator, or civil direction equipment salesman.

### Civil Technology Highway Option Cooperative

Under the Highway Option Program, Lansing Community College participates with the Highway Department as 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.

### MINIMUM CREDITS

#### THE GENERAL ENGINEERING

20 Credits Required		20 Credits Required	
	Credits Required		Credits Required
ET 101	101 Construction Methods	ET 201	201 Physics
ET 102	102 Construction Methods	ET 202	202 Physics
ET 103	103 Construction Methods	ET 203	203 Physics
ET 104	104 Highway Technology	ET 204	204 Applied Science
ET 105	105 Civil Drawing and Construction		
ET 106	106 Construction Methods		
ET 107	107 Concrete Technology		
ET 108	108 Highway Technology		
ET 109	109 Highway Technology		
ET 110	110 Highway Technology		
ET 111	111 Highway Technology		
ET 112	112 Highway Technology		
ET 113	113 Highway Technology		
ET 114	114 Highway Technology		
ET 115	115 Highway Technology		
ET 116	116 Highway Technology		
ET 117	117 Highway Technology		
ET 118	118 Highway Technology		
ET 119	119 Highway Technology		
ET 120	120 Highway Technology		

### NOTE

14 Credits Required		14 Credits Required	
	Credits Required		Credits Required
ET 101	101 Highway Technology	ET 201	201 Highway Technology
ET 102	102 Highway Technology	ET 202	202 Highway Technology
ET 103	103 Highway Technology	ET 203	203 Highway Technology
ET 104	104 Highway Technology	ET 204	204 Highway Technology
ET 105	105 Highway Technology	ET 205	205 Highway Technology
ET 106	106 Highway Technology	ET 206	206 Highway Technology
ET 107	107 Highway Technology	ET 207	207 Highway Technology
ET 108	108 Highway Technology	ET 208	208 Highway Technology
ET 109	109 Highway Technology	ET 209	209 Highway Technology
ET 110	110 Highway Technology	ET 210	210 Highway Technology

### REACTIVE

4 Credits Required		4 Credits Required	
	Credits Required		Credits Required
ET 101	101 Highway Technology	ET 201	201 Highway Technology
ET 102	102 Highway Technology	ET 202	202 Highway Technology
ET 103	103 Highway Technology	ET 203	203 Highway Technology
ET 104	104 Highway Technology	ET 204	204 Highway Technology

Requirements for these courses are listed in the course descriptions.

**Engineering Technology** **Civil Technology - Sanitary Section**

This two-year curriculum provides the background and skills for immediate employment in a sanitary engineering laboratory, sewer or water system construction projects, sewage treatment plant technician, water treatment plant technician, public health technician, laboratory technician, water pollution investigator, or process and equipment salesman.

**Civil Technology - Structural Section**

A two-year curriculum prepares the student for employment as a structural draftsman, construction draftsman, construction estimator, construction inspector, state laboratory technician, technical specifications writer, or building materials and supplies salesman.

**REQUIREMENTS FOR COURSE SELECTION**

--Credits Required: 100

Credit Hours

ET 101	Math	Calculus	3
ET 102	Math	Trigonometry	3
ET 103	Math	Algebra	3
ET 104	Math	Geometry	3
ET 105	Math	Statistics	3
ET 106	Math	Physics	3
ET 107	Math	Chemistry	3
ET 108	Math	English	3
ET 109	Math	Computer	3
ET 110	Math	Surveying	3
ET 111	Math	Drafting	3

Other requirements in Civil Technology courses include: 1) Math credits 1 through 11; 2) Social Science credits, plus 11 elective credits.

**REQUIREMENTS FOR COURSE SELECTION**

--Credits Required: 100

Credit Hours

ET 101	Math	Calculus	3
ET 102	Math	Trigonometry	3
ET 103	Math	Algebra	3
ET 104	Math	Geometry	3
ET 105	Math	Statistics	3
ET 106	Math	Physics	3
ET 107	Math	Chemistry	3
ET 108	Math	English	3
ET 109	Math	Computer	3
ET 110	Math	Surveying	3
ET 111	Math	Drafting	3

Other requirements in Civil Technology courses include: 1) Math credits 1 through 11; 2) Social Science credits, plus 11 elective credits.

**Drafting Technology Associate Degree Program**

The College offers a two-year associate degree program to prepare students to become competent draftsmen in the area of Industrial Drafting. This program enables the industrial drafting student to progress his employment in the field of production design, tool design, or site design in a wide range of industries.

Emphasis is placed on the application of principles involved in product drafting and the production and techniques in construction of pipe, ductwork, piping, forming and assembly.

The program provides drafting room experience supplemented by related shop and laboratory experiences, as well as general courses designed to enable the student to enter an industrial drafting career as a qualified draftsman.

The program also provides valuable background information for those desiring to enter other occupational classifications relating to industry.

**REQUIREMENTS FOR COURSE SELECTION**

11 Credits Required

Credit Hours

ET 101	Math	Calculus	3
ET 102	Math	Trigonometry	3
ET 103	Math	Algebra	3
ET 104	Math	Geometry	3
ET 105	Math	Statistics	3
ET 106	Math	Physics	3
ET 107	Math	Chemistry	3
ET 108	Math	English	3
ET 109	Math	Computer	3
ET 110	Math	Surveying	3
ET 111	Math	Drafting	3

**REQUIREMENTS FOR COURSE SELECTION**

11 Credits Required

Credit Hours

ET 101	Math	Calculus	3
ET 102	Math	Trigonometry	3
ET 103	Math	Algebra	3
ET 104	Math	Geometry	3
ET 105	Math	Statistics	3
ET 106	Math	Physics	3
ET 107	Math	Chemistry	3
ET 108	Math	English	3
ET 109	Math	Computer	3
ET 110	Math	Surveying	3
ET 111	Math	Drafting	3





**MECHANICAL TECHNOLOGY**

10 Credits Required	
Credit Hours	
ME 101	ME Manufacturing Processes 1
ME 102	ME Manufacturing Processes 2
ME 103	ME Manufacturing Processes 3
ME 104	ME Strength of Materials 1
ME 105	ME Kinematics and Machine Elements 1
ME 106	ME Machine Design 1
ME 107	ME Thermodynamics and Processes I 1
ME 108	ME Thermodynamics and Processes II 1
ME 109	ME Powering and Plant Layout 1
ME 110	ME Instrumentation 1
ME 111	ME Metallurgy 1

**ELECTRICAL TECHNOLOGY AND SERVICE**

8 Credits Required	
Credit Hours	
ET 101	ET Basic Electricity 1
ET 102	ET Industrial Electricity 1
ET 103	ET Industrial Electronics 1
ET 104	ET Power Mechanical and Elec. 1
ET 105	ET Refrigeration 1

**GENERAL EDUCATION**

4 Credits Required	
Credit Hours	
EN 101	EN American Government* 1
Total 200	
4 Credits Required	
Credit Hours	
TECH 101	Tech of Process Systems 1
ENGL 111	Communications I 1
ENGL 112	Communications II 1
ENGL 113	Communications III 1
ENGL 114	Communications*
ENGL 115	Communications*
ENGL 116	Communications*
ENGL 117	Communications*

\*To be selected by Transfer Student.

**MATHEMATICS -- 8 Credits**

Students are selected on the basis of student interest and specific career preparation requirements. Students should consult with their department which helps them get a suitable placement.

**Drafting Certificate Program**

The college offers a one-year certificate program which prepares a student to qualify for the position of draftsman in industry. Drafting skills are indispensable in virtually all manufacturing, construction and service industries.

The drafting program is designed to prepare graduates to enter these industries. The program is scheduled during the evenings to enable persons presently employed to upgrade themselves or prepare for positions as industrial draftsmen.

Classes are oriented to practical experience in the various areas of drafting. These experiences are implemented by study in the related areas of manufacturing, mathematics and testable.

These students may, through transfer, apply credits earned in the one-year certificate program to the two-year Associate Degree Program.

**DRAFTING**

11 Credits Required	
Credit Hours	
DT 101	DT Engineering Mechanical Drawing* 1
DT 102	DT Engineering Drawing 1
DT 103	DT Engineering Processes 1
DT 104	DT Computer Technology 1
DT 105	DT Arts and Culture 1
DT 106	DT Computer Drafting 1
DT 107	DT Computer Drafting 1

**APPROPRIATE PROVISIONS**

1 Credit Required	
Credit Hours	
ET 101	ET Basic Electricity 1

**RELATED MATHEMATICS 8 Credits Required**

Credit Hours	
MTH 101	MTH Applied Algebra 1
MTH 102	MTH Applied Plane Geometry 1
MTH 103	MTH Applied Plane Trigonometry 1

**GENERAL TECHNOLOGY 4 Credits Required**

Credit Hours	
TECH 101	Tech of Process Systems 1
TECH 102	TECH Applied Systems 1

\*To be selected with an instructor's drafting.

**SPECIAL COLLEGE-BASED DRAFTING CERTIFICATE**

DT 111	DT Tech of Technology I, II, and III	3 credits each
DT 112	DT Tech of Design I and II	1 credit each
DT 113	DT Computer Aids and Design	1 credit
DT 114	DT Technical Illustration Fundamentals	1 credit
DT 115	DT Strength of Materials	1 credit
DT 116	DT Thermodynamics and Plant Layout	1 credit
DT 117	DT Metallurgy	1 credit

The above credits are transferable toward an Associate Degree.

**Engineering Technology**

**Engineering  
Technology**

**Electronics Technology Associate Degree Program**

Electronics Technicians are employed in many fields, especially in those industries considered necessary for national defense. Many are located 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 abstract theory. He should be familiar with the purpose and every use of vacuum tubes, transistors, diodes, capacitors and other components of electronic circuits. He repairs and maintains analog electronic equipment such as digital and analog computers, microcalculators, photoelectric controls, automatic test and measurement equipment, and devices used in automation. He may be called upon to test electronic equipment such as airborne control and navigation equipment, detectors, sensitive test circuits, and units. He may design, build and adjust circuits to meet prescribed specifications, using breadboard techniques and troubleshooting techniques to obtain desired performance.

**Electronics Technology Associate Degree Program**

**COURSE**

		4 Credits Required	
		Credits Hours	
ET	201 Basic Electricity Concepts	1	
ET	211 Electrical Systems I	2	
ET	212 Electrical Systems II	2	
ET	213 Electronic Circuit	2	
ET	221 Computer I	2	
ET	222 Computer Circuit	2	
ET	223 Computer Circuit II	2	
ET	231 Automation I	1	
ET	232 Automation II	1	
ET	233 Automation III	1	
ET	241 Industrial Electronics	1	
ET	242 Industrial Electronics	1	
ET	243 Communications I	1	
ET	244 Communications II	1	
ET	245 Communications III	1	
ET	246 Fundamentals	1	

		4 Credits Required	
		Credits Hours	
ETC	111 Communications I	1	
ETC	112 Communications II	1	
ETC	113 Communications III	1	
ETC	121 Computer I	1	
ETC	122 Computer II	1	
ETC	123 Computer III	1	

**PHYSICS**

		3 Credits Required	
		Credits Hours	
PH	21 Physics	1	
PH	22 Physics	1	
PH	23 Physics	1	
PH	24 Physics*	1	
PH	25 Physics*	1	
PH	26 Physics*	1	

**MATHEMATICS**

		12 Credits Required	
		Credits Hours	
MTH	201 Applied Algebra	3	
MTH	202 Applied Geometry	3	
MTH	211 Analytical Trigonometry I	3	
MTH	212 Analytical Trigonometry II	3	
MTH	221 Matrix and Trigonometry III	3	
MTH	222 Algebra and Trigonometry III	3	
MTH	223 Analytical Geometry and Calculus I*	3	

**SOCIAL SCIENCE**

		4 Credits Required	
		Credits Hours	
SS	101 American Government	4	

**SCIENCE**

		3 Credits Required	
		Credits Hours	
SCI	101 Technical Presentation	1	
SCI	102 Applied Science	1	
SCI	103 Technical Interviewing Seminar	1	

\*Students on a transfer program should start the MTH 223, SCI 102, and SS 101.

\*Recommended for transfer students.

**GENERAL EDUCATION REQUIREMENTS**

		4 Credits Required	
		Credits Hours	
GEN	101 Communicative Processes I	1	
GEN	102 Communicative Processes II	1	
GEN	103 Communicative Processes III	1	
GEN	104 Personal Conduct I	1	
GEN	105 Personal Conduct II	1	
GEN	106 Personal Conduct III	1	

Electives are selected on the basis of student interest and specific career preparation requirements. Students should consult with their department advisor before making curricular choices.

**Credits Required (36)**

## Electronics Technology Certificate Program

## Engineering Technology

Certificate programs in industrial electricity-electronics, computer technology, and communications are offered as part of the electronics technology program. They are primarily for part-time students who desire basic qualifications in various areas of electricity and electronics. Basic theory is supplemented with practical laboratory experience.

ELECTRICITY		ELECTRONICS	
	Class Hours		Class Hours
ET 101	Basic Electricity and Electronics	ET 101	Basic Electricity and Electronics
ET 102	Industrial Electricity	ET 102	DC Applied Electronics
ET 103	Industrial Electronics	ET 103	DC Applied Electronics
ET 104	Applied Electronics Electronics Department	ET 104	Communications I
		ET 105	Communications II
		ET 106	Communications III Electronics Department
<b>COMPUTER</b>			
ET 107	Basic Electricity and Electronics	ET 107	Industrial Electronics
ET 108	Applied Electronics	ET 108	Applied Electronics
ET 109	Communications I Electronics Department	ET 109	Math in Technology

## Fire Science Technology

Throughout the country there is a shortage of skilled personnel in the areas of fire protection, suppression, and prevention. Fire control is more urgently needed today than it has been because of the concentration of value in business and industry.

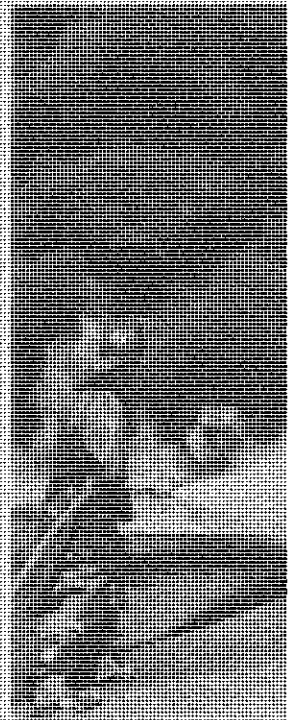
To effectively cope with the tremendous demands for trained personnel must be trained in addition to a team effort with a variety of technical equipment. Accuracy, timing, and good judgment are demanded if human life is to be protected, property preserved, and insurance rates held down.

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

Lansing Community College offers the following Fire Science courses as needed to meet the needs of the Greater Lansing area fire protection.

- ET 104 Fire Strategy and Tactics
- ET 105 Basic Fire Science
- ET 106 Fire Science
- ET 107 Hazardous Materials
- ET 108 Ordinances and Codes
- ET 109 Fire Hydraulics
- ET 110 National Ordinances and Codes
- ET 111 Building Construction for Fire Security
- ET 112 Fire Investigation I
- ET 113 Emergency Rescue Procedures
- ET 114 Fire Investigation II
- ET 115 Organization and Procedures
- ET 116 Project Laboratory
- ET 117 Project Laboratory

Courses may be taken individually. Students seeking certification as Associate Engineer in Fire Science may develop programs to fit their individual needs. Curricular programs require 45 credit hours of instruction. Associate Engineers require



**Engineering Technology**

60 credit hours of instruction. Minimum credit hours in subject areas for a two-  
 year and Associate Degree are shown below:

ASSOCIATE DEGREE		TWO-YEAR	
Course	Credit Hours	Course	Credit Hours
Math Science	14	Math Science	14
Mathematics	9	Mathematics	9
Physics	6	Physics	6
Physics and Practice	3	Physics and Practice	3
Technical Government	3	Electronics	12
Electronics	11		
	60		60

Subtotal of courses will depend upon the background and interest of the individual student.

**Mechanical Technology Associate Degree Program**

It has long been evident that machines will be one of the most important factors in our future economy. History records many inventions such as the horse, the steam locomotive, the automobile, the airplane, and the radio. Man with a full understanding of machinery will soon be able to make the road for machines in expanding computers, automation, precision machines that operate themselves, fuel alternatives, steel and wood and will replace the man who designs, who builds, or repairs the machines. The need for mechanical technicians exists in every industry: steel mills, steel processing, construction, transportation, communications, chemical, food, clothing, medical, and almost all other divisions of our economy.

**MECHANICAL TECHNOLOGY**

18 Credits Required  
 Credit Hours

MT 101	MT Manufacturing Processes	3
MT 102	MT Manufacturing Processes	3
MT 103	MT Manufacturing Processes	3
MT 104	MT Computer Control I	3
MT 105	MT Computer Control II	3
MT 106	MT Computer Control III	3
MT 107	MT Planning and Production	3
MT 108	MT Industrial Management	3
MT 109	MT Drafting	3
MT 110	MT Advanced Heat Treating Processes	3
MT 111	MT Hydraulics and Pneumatics I	3
MT 112	MT Hydraulics and Pneumatics II	3
MT 113	MT Strength of Materials	3
MT 114	MT Processes and Machine Elements	3
MT 115	MT Machine Design	3
MT 116	MT Materials and Processes in Manufacturing	3
MT 117	MT Power Lab	3
MT 118	MT Power Lab	3

**MATHEMATICS**

18 Credits Required  
 Credit Hours

MT 120	MT Applied Algebra	3
MT 121	MT Applied Calculus	3
MT 122	MT Applied Trigonometry	3
MT 123	MT Mathematical Techniques	3
MT 124	MT Mathematical Techniques	3
MT 125	MT Mathematical Techniques	3

**MECHANICAL TECHNOLOGIES**

12 Credits Required  
 Credit Hours

MT 130	MT Engineering Drawing	3
MT 131	MT Engineering Drawing	3
MT 132	MT Thermoplastic Composites	3
MT 133	MT Fibre and Fibrous Composites	3
MT 134	MT Die Design	3

**ELECTRONIC TECHNOLOGY**

12 Credits Required  
 Credit Hours

ET 101	ET Basic Electronics	3
ET 102	ET Industrial Electronics	3

**GENERAL TECHNOLOGY**

4 Credits Required  
 Credit Hours

GT 101	GT Industrial Fundamentals	1
GT 102	GT Applications	1
GT 103	GT Technical Drawing Seminar	2

**PHYSICS**

3 Credits Required  
 Credit Hours

PH 101	PH Computerized	1
PH 102	PH Computerized I	1
PH 103	PH Computerized	1
PH 104	PH Computerized	1
PH 105	PH Computerized	1
Prerequisite(s) to be verified with instructor.		

**MEDIA CENTER**

4 Credits Required  
 Credit Hours

MC 101	MC Personal Systems	2
MC 102	MC Business Computers	2

**EXPERIENCE - 17 Credits (Minimum)**

Students are selected on the basis of studies in their field and accreditation program requirements. Students should consult with their department of interest for additional program requirements.

**Credits Required (40)**



## Mechanical Technology Certificate Program

Engineering  
Industry

Completion certificates in Mechanical Technology are awarded to students for successful completion of any of the following course sequences:

Course Title	Credits Required
Manufacturing Processes	2
Hydraulics and Pneumatics	2
Commercial/Industrial Drafting	10
Math 104	2
Manufacturing	10

## Pre-Engineering

The pre-engineering curriculum parallels in content those offered by four-year institutions within the State of Michigan, as well as others outside the state. It is planned to satisfy general education requirements and the entrance requirements of the professional schools.

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

Cooperative education programs are available to qualified students. The University of Michigan, Eastern Campus and the University of Detroit presently offer cooperative programs. The Lansing Community College pre-engineering students should consult a counselor in the Student Personnel Services Office for assistance in choosing a proper sequence of courses for these schools or other schools of their choice.

## Pre-Engineering

Course Title	Fall Term	Credits Earned	Requirement	Fall Term	Credits Earned
MTE 101 Machine Design and Technology	1	3	MTE 101 Machine Design and Technology I	1	3
ENG 101 Computer	1	3	ENG 101 Computer II	1	3
MTE 111 General Chemistry I	1	3	MTE 111 General Chemistry	1	3
MTE 102 Mathematics	1	3	MTE 102 Engineering Drawing	1	3
PE 101 Physical Education	1	2	PE 101 Physical Education	1	2
		15			15
	<b>Spring Term</b>			<b>Spring Term</b>	
MTE 101 Machine Design and Technology		3	MTE 101 Machine Design and Technology II		3
ENG 101 Computer		3	ENG 101 Computer		3
MTE 111 General Chemistry II		3	MTE 111 Engineering Drawing		3
PE 102 Physical Education		2	PE 102 Physical Education		2
		17			17
	<b>Summer Term</b>			<b>Summer Term</b>	
MTE 101 Machine Design and Technology		3	MTE 101 Machine Design and Technology		3
ENG 101 Computer		3	ENG 101 Computer		3
MTE 111 General Chemistry		3	MTE 111 Engineering Drawing		3
PE 103 Physical Education		2	PE 103 Physical Education		2
		15			15
		32			32

**COURSE DESCRIPTIONS**

**Civil Technology**

**CE1 Fundamentals of Surveying**

Five credits

Specifically designed for those engaged in surveying, who do not possess the prerequisite for CE 113, or who have not directly engaged in surveying, who nevertheless need to acquire a background in the theory, methods, procedures, nomenclature, and equipment involved. Emphasizes the concepts of fundamental elements normally taught in Elementary Plane Surveying and Plane 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 supplemented by field work assignments if the needs of the participants so dictate. 2-1-1

**CE2 Construction Methods**

Two credits

Study of techniques and equipment used in constructing highways, structures, pipelines, and buildings. Also emphasizes the study of estimating projects. 2-1-2

**CE3 Construction Materials**

Four credits

A course dealing with determination of the properties of concrete, asphalt, aggregate, 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. 4-1-1

**CE4 Construction Cost**

Three credits

Designed to fortify the student with general methods of preparing national rate-cards and labor estimates, and applying current unit costs to estimate construction costs. Focuses on the planning and discussion of indirect costs and measurement of methods for predicting the final of future costs. Emphasizes the student to compare and analyze hidden costs. Prerequisite: Civil Technology 103, 101. 2-1-3

**CE5 Construction Materials**

Two credits

Same course content as Civil Technology 103 but without the laboratory. 2-1-4

**CE6 Social Factors Interpretation**

Three credits

Covers identification of terrain features (both geographic and geomorphologic), and ability and identification of general contour control, elevation and identification, and identification of vegetation. 3-1-1

**CE7 Elementary Plane Surveying**

Five credits

An introductory course in surveying which includes the study of cosmology, the use of tape, level, transit measurement of distances, angles and directions, analysis and use of contours, and the study of the public land system, traverse and triangulation surveys and mapping. Prerequisite: Trigonometry. 2-1-5

**CE8 Construction Contracts**

Three credits

Preparation of specifications, contracts for quantities, bid analysis, proposals and contracts, and change orders. Prerequisite: CE1. 1-1-1

**CE9 Highway Technology**

Four credits

Current plan and profile drawings, highway planning, financing, organization, and material design, traffic studies, structural design of pavements, signs, diagrams,

canals, irrigation and levees. Also includes discussion of trends in mass transportation. Prerequisite: Civil Technology 301, Civil Technology 302, Civil Technology 315. 4 (3-4)

Engineering  
Technology  
Civil

**303 Soil Testing and Classification** Three credits  
Designed to teach testing and classification of soils. A.S.T.M., A.A.S.H.O. and geological systems. Also includes discussion of descriptive geologic principles as related to soils. Prerequisite: Civil Technology 301, Civil Technology 302. 3 (3-3)

**304 Strength of Materials** Three credits  
Study of beams, shear and moment diagrams, stress strain, creep, fatigue, yield, plasticity, buckling. Thin body analysis, combined stresses, deflection, shear flow, compression, tension, and horizontal shear stresses. Prerequisite: Civil Technology 302, Physics 201. 3 (3-3)

**305 Hydraulics** Three credits  
Analysis of runoff and the main techniques of design to control it. Includes discussion of drainage and infiltration, stream flow, open channel flow, Bernoulli's Theorem, rainfall storm-water studies, ground water, and water table. No prerequisite. 3 (2-3)

**306 Project Lab (1000)** Three credits  
Affords the student the opportunity to undertake and complete an independent study or project under the supervision of the staff. Prerequisite: Completion form. 3 (3-0)

**307 Structural Technology** Four credits  
Description of light and structure for bridges, steel detailing, concrete detailing, elementary theory of reinforced concrete, elementary analysis of structural steel, cast and composite structures, types of joints and building frames, braced frames, welding and bolting details and their analysis. Prerequisite: Civil Technology 304. 4 (2-6)

**308 Structural Technology I** Four credits  
Elementary theory of reinforced concrete, elementary analysis of structural steel and elementary analysis of timber construction as they pertain to bridges and buildings. Various types of connections, moment-resisting frames, and bolting details, and their analysis are included. 4 (2-4)

**309 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. 4 (2-4)

**310 Hydraulics** Three credits  
Hydraulics, laminar and turbulent flow in pipes and fittings, pump characteristics, Venturi meters, nozzles, flow in open channels, orifices, weirs, critical depths, subcritical and critical flow, channel transitions. 3 (2-3)

**311 Route Surveying** Four credits  
Study of profiles, horizontal curves, vertical curves, surveying and computational applications, spirals, and compound and reversed curves. Prerequisite: Civil Technology 115. 4 (3-1)

151

<b>Engineering Technology</b> ET-11	<b>ET-11 Advanced Surveying</b>	Four credits
	Theory of levels and advanced surveying methods; photogrammetry; ground and aerial photography; stadia and solar observations and calculations; and precise surveying procedures. Prerequisite: Civil Technology III, Civil Technology III, 4-3-3	
	<b>ET-12 Geomatics Surveying</b>	Four credits
	Study of precise level and advanced other measuring methods; line lines, box sights, triangulation, traverse, leveling, least squares, the theory of probable errors, least wire leveling, the use of theodolites, and theodolite. Prerequisite: Civil Technology III, 4-2-4	
	<b>ET-14 Water Supply and Treatment</b>	Four credits
	Study of sources of water supply; quality and quantity measurements; systems and structural design to accomplish waterworks, collection, filtration, softening, flow control and distribution; distribution systems. 4-2-4	
<b>ET-15 Sewerage and Wastewater Treatment</b>	Four credits	
	Design, construction, and functioning of sewerage and sewage treatment facilities, includes sedimentation, coagulation, filtration, aeration, digestion, sludge processing and stabilization; quality of effluent. 4-2-4	
	<b>ET-16 Photogrammetry and Stereoscopic Operation</b>	Four credits
Course in detail, aerial photography, stereoscopy, camera construction, aerial film plotting, project planning, and operations management. Extensive training will be provided in the actual operation of stereoplotting devices and equipment. 4-2-4		
<b>ET-17 Engineering Review</b>	Three credits	
	First in a series of three courses which provide a theoretical background in the engineering sciences for people with limited academic background, or who desire an extended course in preparation for engineering registration. A student may enroll in any or all of the courses. Topics include mathematics, physics, statics and dynamics. 3-2-4	
	<b>ET-18 Engineering Review</b>	Three credits
Consistencies of Civil Technology III. Includes fluid mechanics, kinematics, thermodynamics, and mechanics of materials. 3-2-4		
<b>ET-19 Engineering Review</b>	Three credits	
	Consistencies of Civil Technology III. Includes electricity, electronics, management concepts, contract law and professional ethics. 3-2-4	
<b>Architectural and Drafting Technology</b>		
<b>AT-11 Beginning Drafting</b>	Two credits	
	For students without previous drafting experience or who need a refresher course in understanding basic concepts in orthographic projection, auxiliary projection, descriptive geometry, orthographics and pictorial. Drafting techniques will also be stressed using both manual and computer-aided drafting practices. AT-11 is a prerequisite to AT-12 for those students who do not have a sufficient background in drafting. 2-2-2	
<b>AT-12 Engineering Drafting</b>	Three credits	
Advanced drafting designed to enable the student to become efficient in reading, understanding, and drawing. Areas covered are orthographic projections, isometrics		



potential drawings, assemblies, forms, and instruments according to industrial standards. Various problems in each area are developed by the student. Prerequisite: EET 101 or a one-year high school or equivalent background in drafting. 3-2-4

**102 Engineering Drafting Three credits**

A combination of drafting practices stressed in EET 101 with emphasis on advanced techniques to develop a skill in drafting correlated to the demands of industry. Lines, curves, and lettering layout positions are discovered. Advanced bounding and assembly type drawings is done by each student. Prerequisite: EET 101. 3-2-4

**103 Descriptive Geometry Three credits**

A basic course in the science of graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic projection. Covers the following topics: planes, lines, and planes, points, and curves; descriptive geometry, parallelism, perpendicularity, measured surfaces, developments and intersections, practical projections, design, and shadows. Makes a study of Civil and Mechanical engineering problems. Prerequisite: Drafting Technology 102 or Drafting Technology 100. Co-requisite: Drawing - Civil EET 104. 3-2-4

**104 Jigs and Fixtures Three credits**

Jigs and fixtures practice to properly locate and hold a work piece while work is performed on it. Jigs and fixtures may be made with materials obtained by welding, sawing, turning, and casting. In this course all parts produced in the shop by a fixture will be alike, with tolerances. Each student will work on drawing problems in designing and drawing various types of jigs and fixtures. Prerequisite: EET 101 and 102. 3-2-4

**105 Engineering Drawing - Civil Three credits**

Other practice in techniques of transferring field survey notes to the drawing and suitable surface plotting, topographic maps, profiles, cross sections, earthwork plans, layout plans, and plot plans. 3-2-4

**111 Residential Planning Three credits**

For those who desire to learn home design. Topics include construction details as well as architectural style and planning concepts. Some reading of blueprints and working in drawing basic plans. 3-2-4

**112 Pictorial Illustration (Architectural) Three credits**

Fundamental course for those interested in who are working as illustrators. Covers basic principles of descriptive projection, perspective shading, and shadows, with experience offered in the use of technical media. 3-2-4

**113 Pictorial Illustration (Industrial) Three credits**

Fundamental course for those who are interested in becoming as they are working as illustrators in industries. Includes exposure to various methods of illustrating, especially used in industry, including use of sketches, photographs, isometric, and three-point perspective and use of camera. Use camera to achieve finished finish drawing effects, other than rendering. Prerequisite: EET 102 or equivalent in graphics. 3-2-4

**121 Die Design Three credits**

Teaches the student to detail and design basic sized punch and die used in industrial production processes. Cold chisel and forging dies also are stressed. Each student will design and draw basic sized punch and die. Prerequisite: EET 101, EET 102. 3-2-4

**Engineering  
Technology  
Drafting**

- EE: Electrical and Electronic Drafting** Three credits  
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 integrated circuits, catalogs, and pertinent technical literature. Attention given to pictorial drawings, connection diagrams, block diagrams, logic diagrams and schematics, using the first orthography and practice, and using material based on A.S.E., I.R.E. and N.E.C. Includes study of current tracing and debugging. Prerequisite: Drafting Technology III, 812-4.
- EM: Cartographic Drawing and Photogrammetry** Six credits  
Essentials of large area mapping and characteristics of the various map projections. Drafting, Geological, Land Subdivision, and Route Location Maps are also studied and prepared. Course time devoted to costly construction for color separation on printed maps. Course also includes fundamentals of photogrammetry and aerial operation of stereo plotter. 812-4.
- EN: Cartographic Drafting** Four credits  
Course in detail the preparation of large area maps. Drafting, Geological, Land Subdivision, and Route Location Maps are also studied in detail. Course time devoted to costly construction for color separation on printed maps. 412-4.
- EA: Electrical and Electronic Drafting** Six credits  
First of series of two semester courses affording the student training in Electrical and Electronic Drafting Technology to select a project that will, at the completion of the second term, constitute a course 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. Prerequisite: satisfactory completion of first term, second year mathematics. 512-4.
- ED: Electrical and Electronic Drafting** Six credits  
Finalizing course of a two-semester program. Student completes a course, establishing his drafting skills and his general knowledge of his selected field. Course shall include refinement of design, technical data, detail drawings, and assembly drawings. Prerequisite: Drafting Technology III, 812-4.
- EA: Architectural Drafting** Three credits  
A continuation of Drafting Technology I25, with primary emphasis placed upon commercial and industrial construction. Course covers both two-dim and isometric buildings. Prerequisite: Drafting Technology I29 for drafting technology requires others, approval of department. 312-4.
- EA: Architectural Drafting** Six credits  
First of series of two semester courses designed to allow the student with the guidance of the instructor, to exemplify his process 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 project materials, and prepare preliminary working drawings in accordance with the needs of the firm and customer and as directed by local building codes. Prerequisite: Drafting Technology I29. 512-4.
- EA: Architectural Drafting** Six credits  
Continuation of EA1 where the student prepares final working drawings and completes a set of specifications covering the project designed in EA. The final result of EA1 and EA2 should be a well prepared review of the student's architectural drafting abilities and his general knowledge of the construction industry. 512-4.

<b>EN1 Architectural Drafting</b>	<b>Five credits</b>	<b>Engineering Technology Drafting</b>
Covers proper selection of building materials and the recognition of architectural details using these materials. Emphasis is placed upon using reference material and preparing working drawings from architectural sketches. 1104		
<b>EN2 Estimating</b>	<b>Two credits</b>	
Site development, earthwork, grading plans, site structures, parking, lawns, and soil erosion control, and planning layout. 1104		
<b>EN3 Structural Drafting</b>	<b>Three credits</b>	
Acquaints the student with the standard graphic representation of various structural designs using correct word and word of structural components and of structural details. 1104		
<b>EN4 Office Practices and Procedures</b>	<b>Four credits</b>	
Covers general specifications, experimental or job specifications, approved specifications, building codes, use of reference material, shop drawings, taking practices, office selection of field data, and field inspection procedures. 1104		
<b>EN5 Plumbing Systems for Buildings</b>	<b>Two credits</b>	
Components and arrangement of residential and commercial plumbing systems. Emphasis placed on code and specification requirements. 1104		
<b>EN6 Electrical Systems for Buildings</b>	<b>Two credits</b>	
Components and arrangement of residential and commercial electrical systems. Emphasis placed on code and specification requirements. 1104		
<b>EN7 Urban Planning</b>	<b>Two credits</b>	
Large area redevelopment plans with emphasis on: (1) the population and its needs, (2) present conditions, (3) land use and resources, and (4) community services and functions. 1104		
<b>EN8 Heating and Air Conditioning</b>	<b>Three credits</b>	
Components and arrangement of residential and commercial heating and air conditioning systems. Emphasis is placed on environmental factors, specification requirements, and code practice. 1104		
<b>EN9 Architectural History</b>	<b>Two credits</b>	
Development of architecture as an art form in each of the civilizations in architectural periods from antiquity to contemporary. 1104		
<b>EN10 Project Laboratory (Drafting)</b>	<b>Three credits</b>	
This course will give the student an opportunity to further his skills in Drafting Technology with particular emphasis on beginning layout and advanced detailing. Each student will be given an advanced problem to solve and complete in one term. Each student also will be responsible for some research to design applications. Recommended for students enrolled in Drafting Technology or working toward a Drafting Certificate. 1104		
<b>EN11 Project Laboratory (Drafting)</b>	<b>Six credits</b>	
Designed for students with a strong background in drafting, who wish to enhance their ability in design. Each student will be given a minimum of 12 hours per week of layout procedure. Upon completion of the course and all testing, the student meets the drawing requirements for a drafting certificate and is fully qualified to		

**Engineering  
Technology  
Drafting**

Emphasize a draftsmen's activities. Class requirements include the design of a set, chemical drawing and working a complete design drawing. The student is evaluated on his ability to create and complete this mechanical drawing. 4-1001

**224 Project Laboratory (Architectural)**

Three credits

For students who have completed the basic courses in the architectural curriculum and desire an in depth project in a particular area of architectural technology. The student imitates the guidance of an instructor and through the research, design of projects attempt to meet the requirements of a three credit architectural course. 4-1011

**225 Project Laboratory (Architectural)**

Six credits

Designed for students with a strong background in architectural technology who wish to enhance their ability in design. Each student spends a minimum of 32 hours per week as an architectural technology project. The student imitates the guidance of an instructor and through research, design or construction of project to meet the requirements of a six credit architectural course. 4-1021

**Electronics**

**Electronics Technology**

**226 Basic Electronics and Basic Electrotech**

Four credits

A basic course covering the fundamentals of electricity and electronics. The emphasis of the course is upon laboratory work drawing measurements and report preparation to establish theoretical principles. No prerequisites. 4-11-4

**227 Electrical and Electronic Circuits I**

Five credits

An introduction of basic electrical circuits with the emphasis on direct current, Ohm's electrical laws, Ohm's law, Kirchoff's law, network theorems, inductance and capacitance, voltage, current, and resistance measurements are emphasized in the lab, through the use of the NVM, VVM, Ohmmeter, and Wheatstone bridge. Sample reports are constructed and graded. 5-11-1

**228 Electrical and Electronic Circuits II**

Five credits

Continuation of EE 111 with emphasis on, sinusoidal voltage and current and power line theory. Analysis of RC, RL, and RLC circuits, both ac and dc. AC, impedance, network theorems and complex circuits are discussed. The various type of connected and simple circuits are studied. Laboratory work emphasizes AC measurements and various AC characteristics through the use of the oscilloscope, voltmeter, milliammeter, signal generator, AC bridge, curve tracer, and other meters. 5-11-2

**229 Electrical and Electronic Circuits III**

Five credits

A continuation of EE 112 with major emphasis on the transistor, semiconductor theory, small signal characteristics, loading, and practical applications are studied. Laboratory work covers the lecture through the construction and testing of the various amplifier circuits. The multistage, common emitter, milliammeter, signal generator, curve tracer, and transfer systems are used. 5-11-3

**230 Project Laboratory (Electrical)**

Three credits

Student imitates a project independently with his chosen field of work. The student imitates the guidance of the instructor and through research, design, construction, and tests imitates to establish design. 4-11-4

ENI, EN2, and EN3 International Morse Code	One credit*	Engineering Technology First Year
Principles of International Morse Code transmission, reception, and speed building. The course may be obtained under the course numbers indicated in subsequent items. 110-3		
EE1 Computer Circuits I	Three credits	
First of a series of three courses designed to cover the laws of radio, diodes and vacuum circuits. This course may be taken along with an introduction to digital computer operation. Included topics are number systems, logic, and computer languages. Laboratory work will emphasize these topics through actual programming of a small computer. 112-4		
EE2 Computer Circuits II	Three credits	
Continuation of EE1EE1 with more emphasis on the actual circuitry of computing and digital devices. Circuits covered are multiplexers, scheduling characteristics of semiconductor devices, and microprocessors. Laboratory work continues before mentioned through actual construction and test. 112-5		
EE3 Computer Circuits III	Three credits	
Continuation of EE1EE2. Topics covered include Schmitt trigger, blocking and latching, and more logic operations. Applications are made to the field of instrument logic. 112-6		
EE4 Automation I	Four credits	
First of a series of three courses covering rotating electrical machines and devices which control them and automatic electronics. Includes parts of AC and DC motors and generator characteristics, relay control circuits, thyristors and lighttron, regenerative inductives and static commutated rectifiers. 113-1		
EE5 Automation II	Four credits	
A continuation of EE4EE4 with emphasis on phase-locked loops, automatic speed, torque regulation and electronic motor control. 113-2		
EE6 Automation III	Four credits	
A continuation of EE4EE5 with emphasis on microprocessors, analog computers, relay frequency loading and numerical control. 113-3		
EE7 Industrial Electricity	Three credits	
First of two courses dealing with electrical control of industrial machinery. Includes parts of A.C. and D.C. motor characteristics, and electronic aspects of "EE" control. 114-1		
EE8 Industrial Electricity	Three credits	
A continuation of EE7EE7 with emphasis on static control. Topics covered include logic diagrams and symbols, C.R. static control and NUMERAC. 114-2		
EE9 Communications I	Five credits	
First of series of three courses dealing with electronic communications. Includes study of transmission lines, antennas, RF oscillators, class C amplifiers, and coupling circuits. Laboratory work emphasizes the use of RF measuring tools such as slotted line, SWR bridge, impedance bridge, heterodyne frequency meter, and RF power meter. 115-1		

Engineering Technology Electronics	ETI - Communications II	Five credits
	A continuation of ET 001. Includes the theory of modulation circuits, AM and FM demodulation, and the superheterodyne receiver. Laboratory work includes the use of HF signal generator, sweep signal generator, and spectrum analyzer. 3-3-4	
	ET1 - Communications III	Five credits
	A continuation of ET 002. Includes the television system, UHF, and microwave circuits. Laboratory work utilizes television linearity pattern generator, color bar generator, digital waveguide reflectometer, and various microwave components. 3-3-4	
	<b>Fire Science (C/T)</b>	
	140 - Fire Fighting Strategy and Tactics	Three credits
	Fundamentals of fire fighting strategy and tactics, planning methods of attack and protecting the public. Prerequisite: Fire Technology III. 3-3-0	
	141 - Basic Fire Protection	Three credits
	An investigation of local, county, state, Federal and private fire protection agencies as to organization and functions. Study of the history of fire and its development by fire, and the history and philosophy of fire protection. Also includes future employment and career opportunities. 3-3-0	
	142 - Fire Protection Systems and Equipment	Three credits
	Study of fire detection and alarm systems, special hazard protection systems, sprinkler systems and fire extinguishing equipment. 3-3-0	
	143 - Hazardous Materials	Four credits
	Fire fighting methods relating to hazardous materials, to tanks, solids, liquids and gases and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials. Prerequisite: Chemistry III. 4-1-0	
	144 - Ordinances and Codes	Three credits
	Study of state laws and regulations, local ordinances and national standards including International Conference Building Regulations as to fire protection. 3-3-0	
	145 - Fire Hydraulics	Four credits
	Fundamentals of fire hydraulics. Includes a study of water supply problems, standards for pump requirements, formulas, flow criteria and physical laws relating to hydraulics, and practical application to fire fighting problems. Prerequisite: Trigonometry. 4-1-0	
	146 - Related Ordinances and Codes	Three credits
	Continuation of Ordinances and Codes. 3-3-0	
	147 - Building Construction in Fire Safety	Five credits
	Includes the elements of building design and construction. Includes special features and considerations related to fire safety. Prerequisites: III, 140, and 142. 3-3-0	
	148 - Fire Investigation I	Three credits
	Fire features and importance of determining origin. Procedures used in identifying accidental, incendiary or arson type fires. Methods of recognizing and identifying indicators for arson. Case studies in the structured setting of fires. Prerequisite: Fire Science Technology 140 and 142. 3-3-0	

**EE Emergency Rescue Procedures** Four credits **Engineering Technology**  
 Study of emergency hospital and clinic practices. Training with characteristics and rescue equipment and its application to actual aid, major disaster and civil defense. 3-3-3

**EE Fire Investigation II** Three credits  
 Continuation of Civil Technology 254. Preservation of evidence and photographic coverage of the methods of interrogation related to fire investigation and report for investigators. Study of flash, smoke and sound procedures relative to evidence and documents. Importance of cooperation between investigative agencies, courts, agents and case histories. 1-3-4

**EE Organizational Procedures** Three credits  
 Further study of fire department organization. Classroom 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: Fire Science Technology I/II. 3-3-3

**EE Project Laboratory** Three credits  
 Affords the student the opportunity to undertake and complete an independent study or project under the supervision of the staff. Students should consult with Departmental Advisor before enrolling. 1-3-3

**EE Project Laboratory** No credits  
 Affords the student the opportunity to undertake and complete an independent study or project under the supervision of the staff. Students should consult with Departmental Advisor before enrolling. 5-0-5

**Mechanical Technology (MT)**

**Mechanical**

**ME 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 (lathes, milling machines, shapers, drill press, grinders, metal sawing, blank work and measuring instruments, including illustration of sheet metal and plastic forming methods. 3-3-3

**ME Manufacturing Processes** Three credits  
 Continuation of MT 105 with emphasis on milling, shaping and planing. Prerequisite: MT 105. 3-3-3

**ME Manufacturing Processes** Two credits  
 Foundation of MT 105 with emphasis on grinding, sawing, hydraulic power transmission, castings and cutting fluids. Prerequisite: MT 105. 1-3-3

**ME Numerical Control I -- Fundamentals of Numerical Control** Four credits  
 General introduction to machine concepts of numerical control of machine tools including the introduction of these new manufacturing methods to the various departments of a machine shop. Emphasis on consulting needs, introductory programming and limited machine operation. 4-3-3

**ME Numerical Control II -- Manual Programming in Numerical Control** Four credits  
 Continuation of MT 154 with emphasis on developing skill in manual programming of two and three axis, point-to-point positioning, numerically controlled ma-

**Engineering  
Technology**

state tools. Operation of filamentary and vertical milling machine provides an important part of this course. 4130

**22 Numerical Control III - Introduction to  
Computer Aided Programming** Four credits

Study of types of parts which can be programmed to advantage, using a computer, and actual experience programming several elementary programs. Includes areas of various computer programming languages and methods used to study them in numerically controlled machine tools. Equipment used includes computer, filamentary and numerically controlled milling machine. 4135

**23 Materials and Processes in Manufacturing** Four credits

Covers a wide field of manufacturing including casting, sand die, investment, centrifugal, etc.; mechanical metallurgy, hotworking, processes rolling, forging, planing, shearing, extrusion, etc.; cold working processes, annealing, cold chalking, oxidation, coating, plating, spraying, etc.; plastic molding, casting, extrusion, sheet, welding (arc, gas resistance, etc.); manufacturing related techniques (inventory and human, automation and tape control, etc.) and testing methods use of Audio-Visual Aids. Prerequisite: 4140

**24 Industrial Management** Three credits

The management function, development of successful management, industrial relationships, the manufacturing function, the governmental function, the personnel function, production control, and production control. 4140

**25 Metallurgy** Three credits

Physical and mechanical properties of metals, stress-strain, crystal structure, phase in metal systems, phase diagrams, and metallography. Prerequisite: Chemistry III 4145

**26 Industrial Heat Treating Processes** Three credits

Blistering, carburizing, annealing, case hardening, carbonizing, cyaniding, nitriding, flame hardening, induction hardening, re-tempering, austempering, nitrocarburizing, and production of steels. 4150

**27 Hydraulics and Pneumatics I** Three credits

Pressure, viscosity, flow rate, fluid power, hydraulic and pneumatic fluids, pumps, motors, cylinders, valves, actuators, controls, servitors, systems, filters, and hose circuits. 4155

**28 Hydraulics and Pneumatics II** Three credits

Continuation of ME 27. Emphasis is reapplication of pneumatic and hydraulic circuitry in industrial machinery. Prerequisite: ME 27 Hydraulics and Pneumatics I. 4160

**29 Strength of Materials** Four credits

Stress, strain, tension, pure bending, compound stresses, failure theories, shear, deflection, torsion, and connections. Prerequisite: Mathematics for Technicians III 4165

**30 Electromechanical and Machine Elements** Four credits

Kinetic analysis of linkages, cams, and gears. Study of machine components such as shafts, dials, brakes, and clutches. Prerequisite: ME 26 Engineering Drawing applied Systems. 4170

**31 Machine Design** Four credits

**32** Friction, design, and fundamentals, strength of materials and lubrication are ap-



ated to solve finite machine design problems. Prerequisites: MET 225, MET 230 and Math for Technicians 222, 4 (1-3)

Engineering  
Technology

**226 Project Laboratory (Mechanical)**

Three credits

An advanced course, recommended only for students wishing to do in-depth work in the mechanical technology area after finishing basic prerequisites. Student selects a project compatible with his chosen field of work. The student works under the guidance of the faculty and through research, design or constructs a mechanical device or mechanism. Projects and assignments of work are comparable to a three-credit course in the Mechanical Technology program. 3 (1-3)

**227 Project Laboratory (Mechanical)**

Three credits

Advanced course, recommended only for students wishing to do in-depth work in the mechanical technology area after finishing basic prerequisites. Student selects a project compatible with his chosen field of work. The student, under the guidance of the faculty and through research, design or constructs a mechanical device or mechanism. Projects and assignments of work compare with a two-credit course in the Mechanical Technology program. 3 (1-3)

**Systems Technology**

General

Some techniques, techniques, methods, and procedures apply to the entire System. In contrast to the specific technology disciplines, such as mechanical, 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 system-oriented technology is developing. Current offerings in the discipline of systems technology include the following:

**228 Critical Path Method**

Four credits

The CPM method of project control involves planning, scheduling, and monitoring. The course includes construction of the arrow loop diagram that includes time management and cost estimates, time-cost functions, management and equipment leveling, project sequencing, and network flow calculations. PERT probability estimates are discussed and various computer techniques are investigated and compared. 4 (1-3)

**229 Statistical Quality Control**

Three credits

An introductory course in quality control methods. The program develops basic statistical concepts and assists the student in recognition of variation in what ever form it may occur. Graphical solution of quality control problems is considered. Actual case studies are used in the form of class projects. 3 (1-3)

**General Technology**

General

**230 Analysis and Presentation of Technical Data**

Three credits

This course emphasizes the means for presenting information effectively using drawings, graphs, tables and reports. Methods for using graphical presentations in technical calculations will be included. Incorporation of such graphs, tables will be used in laboratory presentation projects. 3 (1-3)

**231 Applied Science**

Three credits

This course is a study of the fundamental phenomena commonly encountered in a career technician, apprenticeship, and craftsman career. It includes fundamentals of technology principles involved in mechanical technology, electronics and the branch, civil technology, industrial, metal working, and heating and air conditioning. 3 (1-3)

161

**Engineering  
Technology**

training. This course will provide the basic foundation in fundamental physical phenomena necessary for the student preparing for a working career. Emphasis will be placed on building technology fundamentals by means of practical problem measurement in the various technical, operative, and maintenance careers. 3-1-3

**280. 281, 282 and 283 (Advanced) Internship Courses**

Three credits

After successful completion of basic courses, students following the traditional two-year students may elect internship. This course allows the student to be placed in an approved training position with credits for satisfactory work performance, and may range for hours of work. To participate in this program students must be qualified in career approval from their department and accord with the conditions. They occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for individual students in any related occupational opening is accomplished on the basis of developing a practical training program in agreement with the training center supervisor and the college coordinator.

**281 Mathematics for Technicians I**

Five credits

Designed for technicians. Emphasizes the applied aspects of algebra and trigonometric fundamentals. Topics in algebra covered are: system of linear, linear systems of equations, determinants, Binomial, factoring, and quadratic equations. Topics in trigonometry include: identities and right triangle properties in all quadrants, trigonometric equations, vectors, laws of sines, law of cosines and graphs of trigonometric functions. Prerequisite: one year each of high school algebra and geometry or equivalent experience. 3-1-3

**282 Mathematics for Technicians II**

Five credits

Continues Mathematics for Technicians I with topics on exponents, radicals, a special, logarithms, rational systems of equations, irrational numbers, theory of equations, inequalities and absolute values, progressions and trigonometric identities, functions and equations. Prerequisite: Mathematics for Technicians I. 3-1-3

**283 Mathematics for Technicians III**

Five credits

Continues Mathematics for Technicians II with selected topics in analytic geometry and calculus. Prerequisite: Mathematics for Technicians II. 3-1-3

**284 Safety and Accident Prevention**

Three credits

Accident causes and the standards of conduct of workers are fully discussed. Includes the philosophy of modern progressive fundamental philosophy, relative importance of unsafe acts and mechanical hazards, opportunities for correction of accident causes, errors of accident facts, and recording and recording these facts. 3-1-3

**285 Elements of Safety**

Three credits

A study of the most and factors in industrial injuries to the person involved, the company and to society. Also includes safety apparatus, systems and safety records. 3-1-3

**286 Industrial Hazards**

Three credits

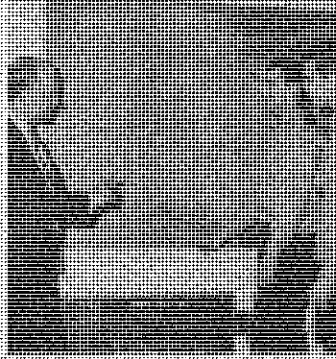
Developed to acquaint accident prevention personnel and those beginning this work with the specific nature and significance of accident situations. 3-1-3

**287 Industrial Hygiene**

Three credits

Modern methods in the prevention and control of industrial diseases (occupational diseases) - their nature, incidence, and prevention, air sampling methods and analysis, engineering control methods, personal protection equipment, and industrial health education. 3-1-3

## Transportation Training Program



### Transportation Training Program

Coordinator: Edward D. Jenkins

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 direct and supportive training.

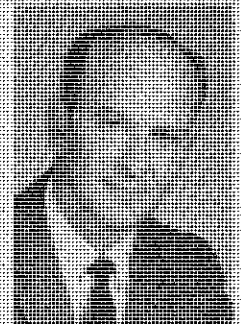
This program includes studies on the following subjects:

Accident Prevention and Reporting	Motor & Maintenance of Equipment
Air Brake System	D.O.T. Safety Regulations
Communications	Job Injury Prevention
Customer and Public Relations	Labor Relations
Driver's Study Logs	Loading & Securing Loads
Driver's Responsibility & Maintenance	Maintenance
Driver's Operations	Orientation
Fire Training	Psychic-Physical
Freight Handling	Regulations
Health & First Aid	State Code
Highway Regulations & Laws	

Range instruction consists of 200 hours actual driving time in closed rigs. An extended road trip is taken during the final week of training. The four-week training course is conducted five days a week from 8:00 a.m. to 3:00 p.m.

The range program consists of exercises on the college driving range restricted both in time and weather, 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 40.



Edward D. Jenkins

## Transportation Training Program

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, 415 South Capital Avenue, Lansing, Michigan 48904, requesting application forms.
2. Complete the forms you receive and return them to the coordinator along with the application fee (\$25.00) and tuition deposit (\$25.00). The forms you will receive include Interstate Commerce Commission physical examination form to be completed by a doctor and the American Transportation Association application for employment.
3. After your application is reviewed by the Lansing Community College staff and a screening committee composed of representatives of the trucking industry, you will be notified of your acceptance and the time, date, and location for the first class.
4. The balance of the tuition fee must be paid in full when registering for the class unless special arrangements are made with the coordinator. A \$25 tuition deposit is required with the application and will be returned toward full tuition on acceptance. Refunds will be given 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 pro rata for the weeks of training received, less \$25 which is retained after completion of the second full week of training.

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

# ADMINISTRATION

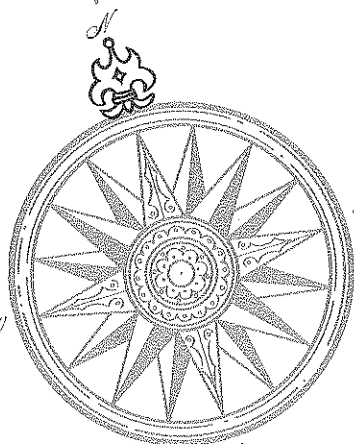
Board of Trustees

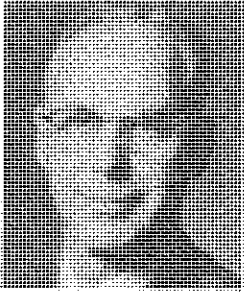
President's Cabinet

Faculty Directory

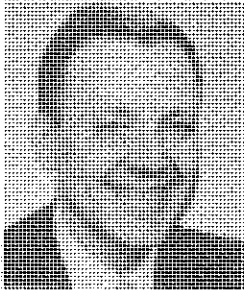
Administrative Personnel

Index

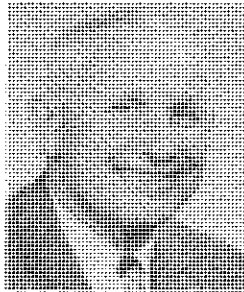




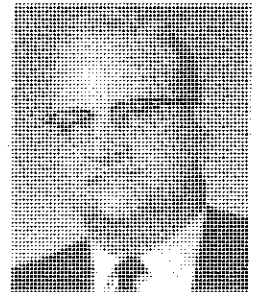
*Albert C. Boyd*  
*Chairman*



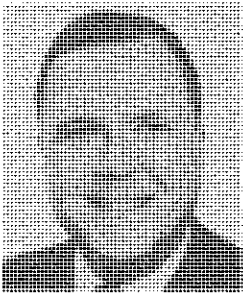
*David L. Froh*  
*Vice-Chairman*



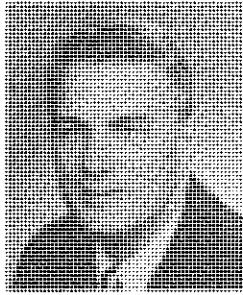
*David D. Diehl*  
*Secretary*



*Lee A. Trumble*  
*Treasurer*



*John H. Dart*  
*Trustee*



*Edward T. Hacker*  
*Trustee*



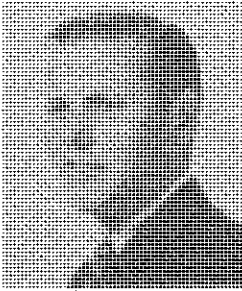
*James L. Reutter*  
*Trustee*

## **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; the new Health Careers-Liberal Arts and Sciences unit opened for students in the fall of 1968, the renovation of Old Central is complete, and student enrollment totaled 7,181 students in the fall of 1969.

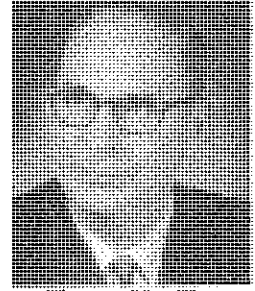
167



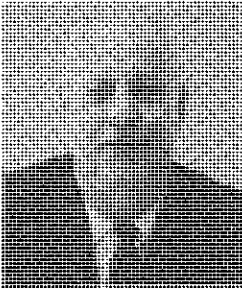
*James Platte  
Chairman  
Learning Resource  
Center*



*Dean Krummer  
Dean  
College of Arts, Sciences  
and Health Careers*



*James MacCallister  
Dean  
Special Projects and  
College Services*



*George Hopkins  
Dean  
College of Business*

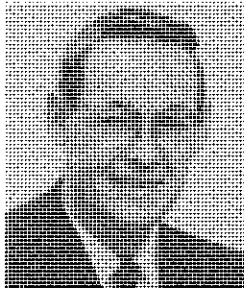


*William Hissner  
Dean  
College of Technology*

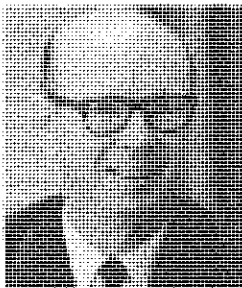
## **PRESIDENT'S CABINET**



*William Schauer  
Dean  
Student  
Personnel Services*

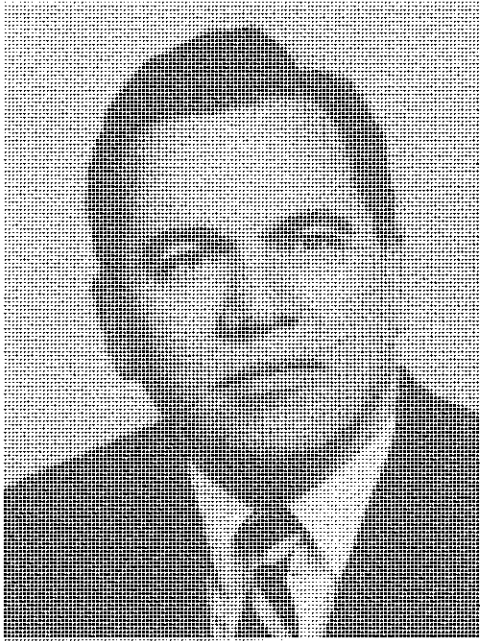


*Bruce Peterson  
Controller*

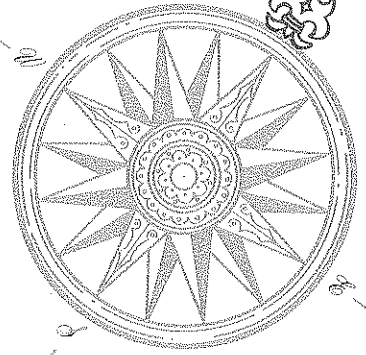


*Frank Benedict  
Administrative  
Vice-President*





*Philip J. Cannon  
President*



## **Faculty Directory**



Faculty Directory *Faculty Directory*

- ANDERSON, Geneva** **Counselor**  
B.A., Michigan State University; M.A., Michigan State University.
- ANDERSON, Joseph L.** **Chairman, Humanities**  
A.B., Augustana College; B.D., Augustana Theology Seminary; S.T.M., Union  
Theology Seminary; Ph.D., Boston University.
- ANDERSON, Raymond O.** **Registrar and Director of Admissions**  
B.S., University of Michigan; M.A., University of Michigan; D.A.G.S., Michigan  
State University; Doctoral Candidate, Michigan State University.
- ANSELMO, FeGaddi** **Assistant Professor, Social Science**  
B.S., University of Santo Tomas; M.A., Michigan State University; Ph.D., Michi-  
gan State University.
- ANTICO, John** **Associate Professor, Language Arts**  
B.A., Wayne State University; M.A., Wayne State University; Graduate Study,  
Michigan State University.
- ANTONIDES, Chris** **Instructor, Language Arts**  
B.A., New York University; M.A., New York University; Graduate Study, Michigan  
State University.
- ARGANIAN, David** **Associate Professor, Humanities**  
B.A., University of Wisconsin; M.A., University of Wisconsin; Doctoral Candidate,  
Michigan State University.
- BAILEY, Perry L.** **Professor, Social Science**  
B.A., Western Michigan University; M.A., Columbia University; Ph.D., Ohio  
State University.
- BANKS, James R.** **Assistant Professor, Science**  
B.A., University of Louisville; M.A.T., Michigan State University.
- BAZYLEWICZ, Joseph** **Assistant Professor, Applied Technology**  
B.S., Michigan State University; M.E., Michigan State University.
- BEACH, John E.** **Assistant Professor, Engineering Technology**  
A.S., Flint Junior College; B.S., Wayne State University.
- BEAVERS, Claude R.** **Counselor**  
B.S., University of Wisconsin; M.A., University of New Mexico.
- BECK, Norman A.** **Instructor, Language Arts**  
B.A., University of Rhode Island; M.A., University of Rhode Island; Graduate  
Study, Michigan State University.
- BENEDICT, Frank A.** **Administrative Vice-President**  
B.M., Michigan State University; M.A., University of Michigan; Graduate Study,  
Michigan State University.
- BERGMANN, Edwin C.** **Chairman, Engineering Technology Department**  
B.S., Bowling Green University; M.S., Stout State College; Doctoral Candidate,  
Michigan State University.

**BOGNER, John R.** Chairman, Student Financial Aids  
and Placement Department  
B.S., Western Michigan University; M.A., Michigan State University.

**BOROFF, George** Assistant Professor, Applied Technology  
A.A., Lansing Community College; B.S., Michigan State University; M.A., Michigan State University; Graduate Study, Temple University.

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

**BOX, Richard C.** Associate Professor, Engineering Technology  
B.S., Central Michigan University; M.S., Michigan State University; Doctoral Candidate, Michigan State University. Associate American Institute of Architects.

**BRADLEY, Byron T.** Instructor, Accounting and Office Programs  
B.A., Michigan State University; M.A., Michigan State University.

**BRINK, Michael J.** Assistant Professor, Engineering Technology  
B.M.E., General Motors Institute; M.S., Michigan State University; Doctoral Candidate, Michigan State University.

**BROUSE, David V.** Assistant Professor, Science  
B.S., Brockport State; M.A.T., Michigan State University; Graduate Study, Michigan State University.

**BUTTERMAN, Geraldene** Instructor, Science  
A.B., Calvin College; M.A., University of Michigan.

**BRYANT, Joel C.** Counselor  
B.A., Johnson C. Smith University; M.A., Michigan State University.

**BUCKLIN, William T.** Associate Professor, Social Science  
B.S., Montana State University; M. S., Michigan State University.

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

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

**CAMERON, Donald** Apprenticeship Coordinator

**CARLISLE, Harold R.** Transportation Training Specialist  
Transportation Training Program  
Detroit Institute of Technology.

**CARPENTER, Elbert J.** Apprenticeship Coordinator, Applied Technology  
A.B., University of Michigan.

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

Faculty Directory

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

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

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

**DEAN, Harris D.** Assistant Professor, Management and Marketing  
B.S., University of Michigan; Merchandising School, Ford Motor Company; Graduate Study, University of Chicago and Michigan State University.

**DeJONGE, Robert** Assistant Professor, Engineering Technology  
B.S., Western Michigan University.

**DOCTOR, David** Instructor, Social Science  
B.A., Northwestern State; M.A., Wichita State University.

**DOUGLAS, Philip J.** Associate Professor, Mathematics  
B.S., Michigan State University; M.A.T., Michigan State University; M.S., Michigan State University.

**DUNHAM, Dale A.** Director, Instructional Media Center  
B.S., Ferris State College; M.A., Michigan State University; Graduate Study, Temple University.

**DYER, Alan F.** Associate Librarian, Learning Resource Center  
A.A., Flint Community Jr. College; A.B., University of Michigan; A.M.L.S., University of Michigan; Graduate Study, Michigan State University.

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

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

**ENGEL, Elfriede A.** Assistant Professor, Humanities  
B.A., Michigan State University; M.A., University of Chicago.

**FARRIS, John R.** Teaching Technician, Management and Marketing  
A.A., Lansing Community College.

**FORREST, David G.** Chairman, Food Services  
Associate Degree in Business, Lansing Community College; Advanced Study, Michigan State University.

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

**CARTHE, Ronald** Assistant Professor, Applied Technology  
B.S., Central Michigan University; M.A., Central Michigan University.

**GARGETT, Richard K.** Lecturer II, Engineering Technology  
A.S., Lansing Community College; B.S., Michigan State University, Graduate Study, Michigan State University.

**GLASGOW, Mary Lou** Counselor  
B.S., Western Michigan University; M.A., Western Michigan University; Ed., S., Western Michigan University.

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

**HALL, John** Instructor, Humanities  
B.A., Michigan State University; M.A., Michigan State University.

**HAMELIN, Ardath M.** Educational Specialist, Health Careers  
R.N., Edward W. Sparrow Hospital.

**HANEY, John** Instructor, Accounting and Office Programs  
B.A., Michigan State University.

**HAZARD, James D.** Director of Employee Relations  
B.S., U.S. Naval Academy, M.A., George Washington University; Ph.D., University of Michigan.

**HARTWIG, Joan E.** Counselor  
B.S., Michigan State University; M.A., Michigan State University.

**HEATER, William H.** Chairman, Social Science Department  
B.A., Denison University; B.D., Union Theological Seminary; Ph.D., Michigan State University.

**HOKE, Helen R.** Instructor, Mathematics  
B.S., Capital University; M.A., University of Michigan.

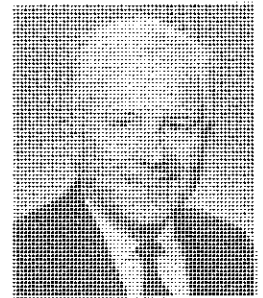
**HOPKINS, George F.** Dean, College of Business  
B.S., Kent State University; M.A., Western Michigan University.

**HOPKINS, Howard S.** Instructor, Language Arts  
B.A., Michigan State University; M.A., Michigan State University.

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

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

**HUNT, Beverly** Director, Counseling Department  
B.S., Eastern Illinois State University; M.A., Michigan State University; Ph.D., Michigan State University.



*James Hazard*

Faculty Directory

- HURLBUTT, Fred D.** Manager, Data Processing
- IDALSKI, Robert L.** Assistant Professor, Engineering Technology  
A.S., Alpena Jr. College; B.S., Michigan State University; M.A., Michigan State University.
- JACOBS, Annette M.** Instructor, Language Arts  
B.A., University of Wisconsin; M.A., Michigan State University.
- JENKINS, Edward D.** Coordinator, Transportation Training Program
- JOHNSON, Ralph B.** Assistant Professor, Engineering Technology  
B.S.C.E., Michigan State University; Registered Professional Engineer.
- JONES, Douglas C.** Teaching Technician, Applied Technology  
Associate Degree in Science, Lansing Community College.
- JONES, J. Howard** Associate Professor, Mathematics  
B.S., Illinois State University; M.A.T., Michigan State University; M.S., Michigan State University.
- JONES, Maebelle L.** Assistant Professor, Language Arts  
B.A., Oklahoma State University; M.A., Oklahoma State University; Doctoral Candidate, Indiana University.
- KASUDA, Stanley M.** Instructor, Management and Marketing  
B.S., University of Detroit; M.A., University of Detroit.
- KELL, Grace W.** Assistant Professor, Social Science  
M.A., University of North Carolina; B.A., Duke University.
- KIM, Tia S.** Instructor, Social Science  
B.S., Seoul National University; M.A., Michigan State University.
- KINTZER, Sam** Dean, College of Arts, Sciences and Health Careers  
B.A., Brooklyn University; M.A., Teachers College, Columbia University; Graduate Study, University of Cincinnati.
- LaFAVE, Daniel C.** Assistant Director of Admissions  
B.S., Central Michigan University; M.S., Michigan State University; Doctoral Candidate, Michigan State University.
- LENKOWSKI, Michael F.** Chairman, Health Careers Department  
B.S., University of Pennsylvania; Ed.M., Temple University.
- LeROY, Melvin** Assistant Professor, Applied Technology  
B.S., Wayne State University.
- LIMING, Sarah A.** Educational Specialist, Health Careers  
R.N., St. Lawrence Hospital.
- LINGO, Walter B.** Assistant Director Student Activities  
B.S., Michigan State University; M.A., Michigan State University.
- LOO, Solomon Y.** Assistant Professor, Social Science  
B.A., University of Hawaii; M.A., University of Hawaii; Doctoral Candidate, Michigan State University.

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

**LUBBERS, Margery** Instructor, Health Careers  
B.S., Michigan State University; M.A., Michigan State University.

**LUDWIG, Dawn** Instructor, Language Arts  
A.B., Indiana University; M.A., University of California.

**LYNAM, William J.** Instructor, Language Arts  
B.A., Albion College; M.A., Michigan State University; Graduate Study, Michigan State University.

**MAAR, Allan R.** Assistant Professor, Language Arts  
B.S., State University of New York; M.A., Michigan State University; Graduate Study, Michigan State University.

**MacCLURE, Thomas W.** Dean, Special Projects and College Services  
B.S., Michigan State University; Graduate Study, Michigan State University.

**MacDONALD, Robert K.** Assistant Professor, Applied Technology  
B.S., Western Michigan University.

**MACHTEL, David F.** Associate Professor, Humanities  
B.M., University of Michigan; M.A., University of Michigan; Ph.D., Teachers College, Columbia University.

**MANION, John W.** Associate Professor, Language Arts  
B.A., Washington State University; M.A., Washington State University; Doctoral Candidate, Michigan State University.

**MANNING, George E.** Instructor, Science  
B.S., Eastern Michigan University; M.A., University of Michigan; Graduate Study, Michigan State University.

**MARTIN, Dorothy L.** Educational Specialist, Health Careers  
B.S.N., Capital University, Columbus, Ohio.

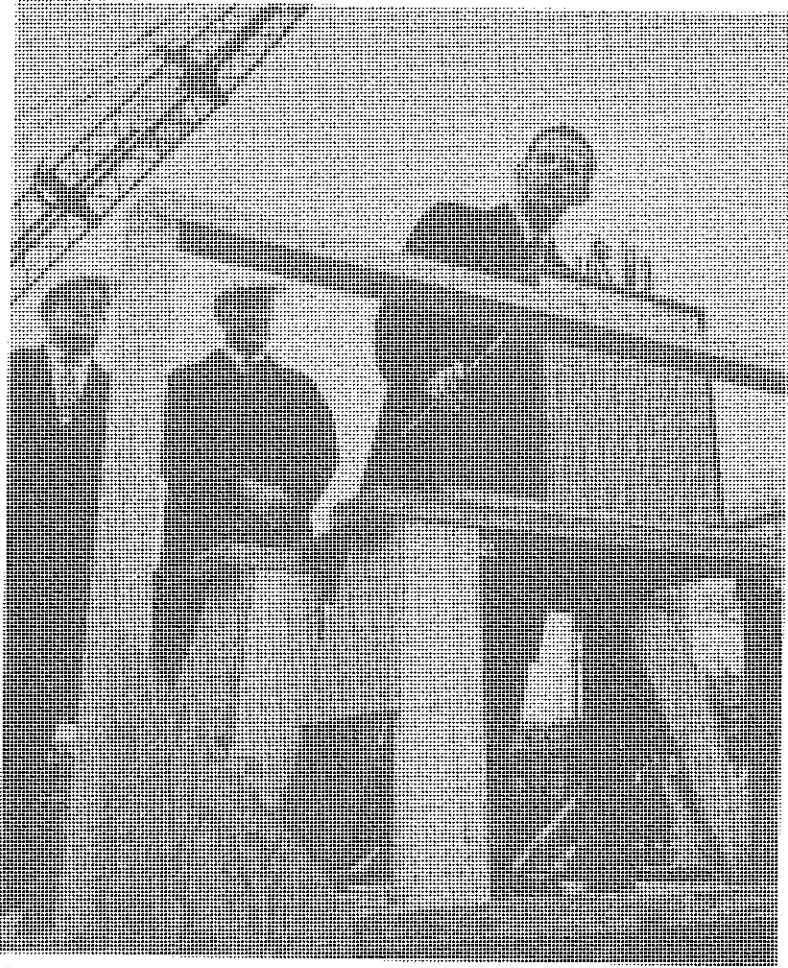
**MASSIE, Dennis L.** Instructor, Language Arts  
B.A., Michigan State University; M.A., Michigan State University; Doctoral Candidate, Michigan State University.

**MATTSON, Morton E.** Coordinator, Planetarium  
B.S., Central Michigan University; M.A.T., Michigan State University' Graduate Study, Cornell University.

**McCONNELL, Henry Paul** Counselor  
B.A., Muskingum College; M.S., Purdue University; Graduate Study, Michigan State University.

**McCRACKEN, Lillian** Educational Specialist, Health Careers  
R.N., University of Louisville.

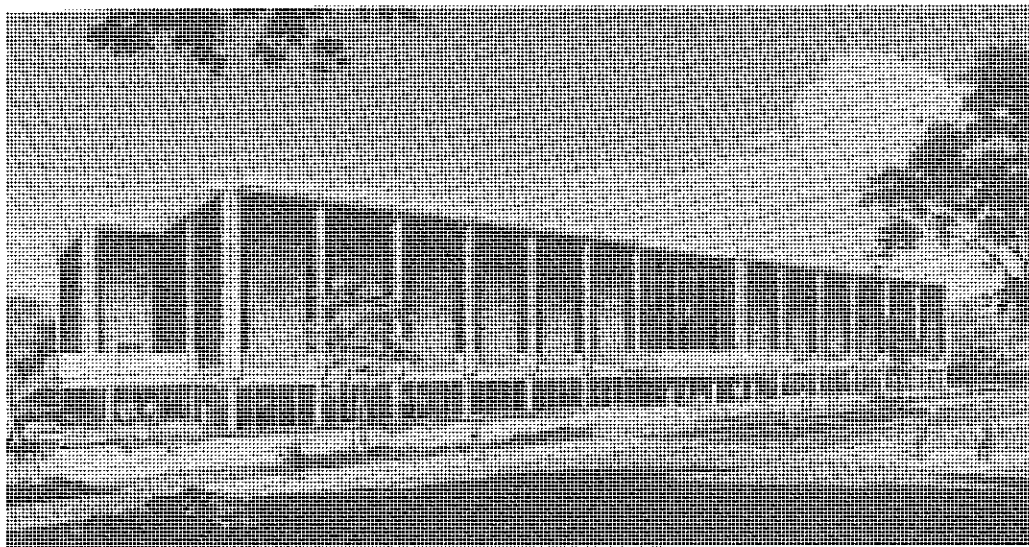
**McCLURE, James F.** Instructor, Social Science  
A.A., Flint Jr. College; B.A., Michigan State University.



*Gov. William Milliken*







*Artist's Rendition of Liberal Arts, Sciences and Health Careers Building*

*Ground Breaking Ceremony  
Oct. 19, 1966*



Faculty Directory

**McCOLLOUGH, Dale W.** Instructor, Humanities  
B.A., Anderson College; M.A., Michigan State University.

**McGREGOR, Barbara** Assistant Librarian, Learning Resource Center  
A.B., University of Michigan; M.A., University of Michigan; Graduate Study,  
Western Michigan University.

**McKESSON, Phyllis I.** Coordinator, Public Information  
B.A., Michigan State University.

**McKINSTRY, Douglas D.** Coordinator, Plans and Maintenance Department  
B.S., University of Illinois; M.A., Michigan State University.

**MONROE, William R.** Dean, College of Technology  
B.A., Baylor University; M.S., Texas A & M University; Doctoral Candidate,  
Cornell University.

**MOURADIAN, Nora N.** Instructor, Language Arts  
B.A., College Hripsimiantz (Beirut); M.A., Michigan State University.

**NEALEY, Lois M.** Educational Specialist, Health Careers  
R.N., Edward W. Sparrow Hospital.

**NEVAL, Janos W.** Instructor, Science  
M.A., Magyar Testnevelési Foiskola; Doctoral Candidate, Michigan State University.

**NEWMAN, Bruce G.** Controller  
Graduate, Lansing Business University.

**NICHOLAS, Caroline J.** Instructor, Health Careers  
B.S., Michigan State University; M.A., Michigan State University.

**OATES, Donald E.** Assistant Professor, Management and Marketing  
B.S., Northern Michigan University; M.A., Michigan State University.

**OMUNDSON, Bruce** Instructor, Humanities  
B.A., Luther College; M.A., Washington University.

**PEARSON, Charles B.** Assistant Professor, Management and Marketing  
B.A., Michigan State University.

**PERSON, Ellen M.** Librarian, Learning Resource Center  
B.S., Central Michigan University; M.A., Western Michigan University; Graduate  
Study, Western Michigan University.

**PERSON, James E.** Chairman, Management and Marketing  
Associate in Arts, Bay City Junior College; B.A., Central Michigan University;  
M.A., Central Michigan University; Graduate Study, Michigan State University.

**PETERSON, Leonard** Instructor, Accounting and Office Programs  
A.B., Michigan State University; M.A., Michigan State University.

**PETERSON, K. Robert** Instructor, Applied Technology  
B.S.M.E., Allied Institute of Technology.

**PETERSON, William A.** Assistant Professor, Language Arts  
B.S., Purdue University; M.S., University of Utah; Ph.D., Florida State University.



*Douglas McKinstry*

**PFISTER, Douglas R.** Instructor, Accounting and Office Programs  
B.A., Adrian College; B.B.A., Emory University.

**PIPES, Anna R.** Assistant Professor, Language Arts  
B.A., Kentucky State College; M.A., Atlanta University; Doctoral Candidate,  
Michigan State University.

**PLATTE, James P.** Chairman, Learning Resource Center  
B.A., Aquinas College; M.A., Michigan State University; A.M.L.S., University of  
Michigan.

**PLYLER, E. Diane** Instructor, Social Science  
B.A., University of Missouri; B.S., University of Missouri.

**POWERS, Clarence A.** Chairman, Mathematics Department  
B.S.E., Kansas State University; M.A.T., Michigan State University.

**PRAY, Hazel** Instructor, Health Careers  
B.S., Michigan State University.

**REYNOLDS, Gary T.** Assistant Professor, Language Arts  
B.A., University of Detroit; M.A., University of Detroit.

**RICHARDS, Wanda** Instructor, Humanities  
B.M., Marygrove College.

**RISKEY, Raymond J.** Instructor, Social Science  
B.A., Michigan State University.

**RODERICK, Wanda W.** Assistant Professor, Accounting and  
Office Programs  
B.S., Murray State University; M.S., Illinois State University; Graduate Study,  
University of Illinois and Michigan State University.

**ROOT, Roscoe B.** Associate Professor, Science  
B.S., Central Michigan University; M.S., University of Chicago.

**ROWE, Roger J.** Assistant Professor, Engineering Technology  
B.S., Michigan State University; M.A., Michigan State University.

**RUSSELL, Eugene N.** Assistant Professor, Engineering Technology  
B.S., Michigan State University; M.S., Michigan State University.

**SABIDO, J. Perez** Assistant Professor, Language Arts  
B.A., Colegio Champagnat (Cuba); M.A., University of Havana.

**SCHAAR, William G., Jr.** Dean, Student Personnel Services  
B.A., Michigan State University; M.A., Michigan State University; Ph.D., Michi-  
gan State University.

**SCHRAM, Hugh R.** Chairman, Language Arts Department  
B.A., Eastern Michigan University; M.A., University of Texas; Graduate Study,  
University of Texas.

**SCHWARTZ, Jack** Assistant Professor, Social Science  
B.A., University of Missouri; M.A., Michigan State University.

Faculty Directory

**SCOTT, James F.**

B.S., Michigan State University; M.A., Michigan State University; Graduate Study, Michigan State University.

**Admissions Officer**

**SEBESON, John M.**

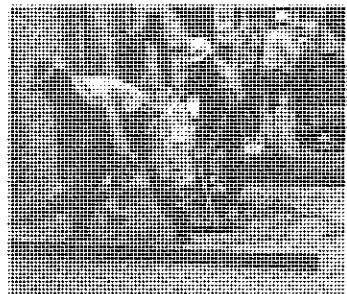
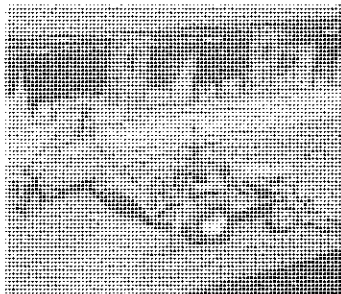
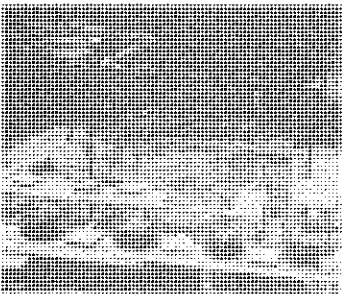
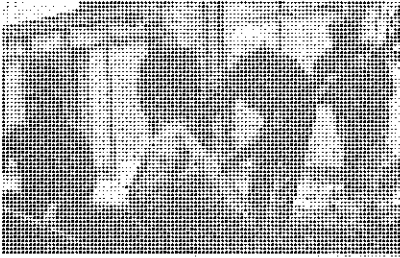
B.E., Wisconsin State University; M.A., Michigan State University; Graduate Study, Michigan State University;

**Associate Professor, Science**

**SHAH, Vikram**

S.E., Gujrat University; B.S., University of Michigan.

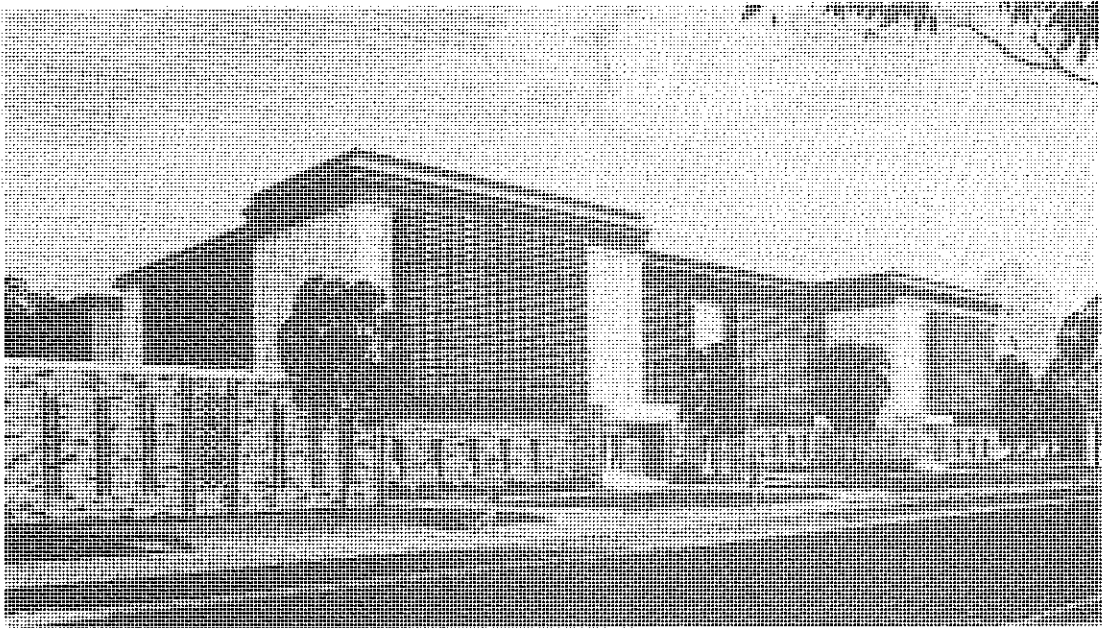
**Instructor, Accounting and Office Programs**





*Old Central*  
1872

1968



Faculty Directory

**SHULL, David L.** Chairman, Science Department  
B.S., Michigan State University; M.S., Michigan State University; Ph.D., Michigan State University.

**SMITH, Lowell C.** Assistant Professor, Engineering Technology  
B.S., Michigan State University; M.S., Michigan State University; Registered Professional Engineer.

**SMITH, Winfred** Counselor  
B.A., Anderson College; M.A., Michigan State University.

**STARK, James W.** Assistant Professor, Mathematics  
B.S.E., (Mathematics), University of Michigan; B.S.E., (Chemistry), University of Michigan; M.A., University of Michigan.

**STAUFFER, Warren G.** Instructor, Management and Marketing  
B.A., Michigan State University.

**STEARNS, Barry G.** Counselor  
B.A.E., University of Florida, M.Ed., University of Florida.

**STECK, Douglas E.** Instructor, Humanities  
B.A., Denison University; M.A., Michigan State University; Doctoral Candidate, Michigan State University.

**STEENBERGEN, Aaron L.** Instructor, Social Science  
B.A., State College of Iowa; M.A., Purdue University; A.B.T., Michigan State University.

**STEWART, M. James** Assistant Professor, Mathematics  
B.A., Michigan State University; M.S., Michigan State University.

**TAYLOR, Edward, Jr.** Instructor, Social Science  
B.S., Cornell University; M.A., Michigan State University.

**TAYLOR, Ronald M.** Associate Professor, Science  
B.S., Michigan State University; M.S., Michigan State University; Doctoral Candidate, Michigan State University.

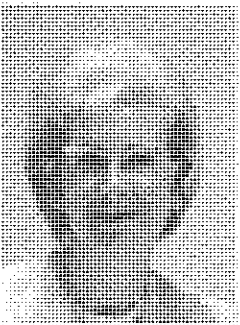
**THOMAS, Morris O.** Instructor, Social Science  
B.S., Northwestern Michigan College.

**TYLER, June I.** Coordinator, Purchasing  
Lansing Community College.

**VANDERSLICE, Ralph L.** Professor, Engineering Technology  
B.A., Maryville College; M.A., University of Michigan.

**WALPER, Harold J.** Chairman, Applied Technology  
B.S., Eastern Michigan University; M.A., University of Michigan; Graduate Study, University of Michigan and University of Toledo.

**WALLACE, Francis T., Jr.** Instructor, Management and Marketing  
A.A., Saint Petersburg Junior College; B.A., University of South Florida; M.A., University of South Florida.



*June I. Tyler*

**WALSH, Marion H.** Assistant Professor, Accounting and Office Programs

B.A., University of Michigan; M.A., Michigan State University.

**WARBACH, Laura H.** Educational Specialist, Health Careers  
R.N., Cumberland Hospital School of Nursing; B.A., Michigan State University.

**WARREN, Joseph A., III** Instructor, Humanities  
B.A., Michigan State University; M.A., Michigan State University.

**WASSERMAN, Claron** Range Instructor, Transportation Training Program

**WATSON, Claude M.** Associate Professor, Science  
B.S., Michigan State University; M.S., Michigan State University.

**WELLER, Stephen A.** Assistant Professor, Management and Marketing  
B.S.E.E., Michigan State University; B.S.A.E., Michigan State University; B.S.A.E., Michigan State University; Graduate Study, Michigan State University.

**WILLIAMS, Mildred L.** Associate Professor, Accounting and Office Programs  
B.A., Michigan State University; M.A., Michigan State University; Ed.D., Michigan State University.

**WORST, Harry A.** Assistant Professor, Humanities  
Kendall School of Design; American Academy of Art.

**YARGER, Richard D.** Instructor, Science  
B.S., Central Michigan University; M.A., Western Michigan University; Graduate Study, Michigan State University.

**YODER, Marian** Educational Specialist, Health Careers  
B.S., Goshen College

**ZUHL, William A.** Director, Student Activities  
A.B., Kalamazoo College; M.A., Western Michigan University; Graduate Study, Michigan State University and North Texas State University.

## Administrative Personnel

### President's Office

Betty L. Clegg, *Secretary III*  
Lillie Gutter

### Administrative Vice-President's Office

Phyllis J. Rich

### College of Arts, Sciences and Health Careers

Judy Voketz

### Accounting and Office Programs

Ann Valenti, *Lab Technician*  
Judy Mason

### Admissions

Jane P. DeRose, *Office Manager*  
Kay Grounds  
Mary Krenerick  
Patricia Lovely  
Bonnie May  
Betty McDowell  
Betty J. Neumann  
Nancy Nunham  
Margaret Patterson  
Gloria L. Rodriguez  
Cheryl Weber

### Applied Technology

Roderick McLean, *Technician*  
K. Blake Partlow, *Technician*  
Karla S. Smith  
Connie Welch

### College of Business

Frances Shipstead

### College Services

Dana C. Cornett, *Manager*  
Rose Maurer  
George A. Mueller  
Diane S. Page



College of Technology

Madelyn Springer

Controller's Office

Nan Smith, *Office Manager*

Joyce Heath

Tom Kessler

Shirley Niemi

Kathy Soderberg

Counseling

Cheryl L. Debelak

Kathleen DeForest

June Hagan

Data Processing

Milton C. Bliss

*Operation Manager, Acting*

Robert Bogan

*Computer Operator*

Jerry L. Brija

*Lead Programmer*

William M. DeWald

*Systems and Programming Manager*

Elizabeth Hull

*Computer Operator*

Bobby J. Powers

*Programmer*

William A. Shellberg

*Programmer*

Clarence J. Truscott

*Programmer*

Debbie Baer

Carol Baillargeon

Robbin Peck

N. Delaine Pierce

Ann Wade

Elaine Womboldt

**Administrative**

**Personnel**

Cordell Loken  
*Electronics Technician*  
Dorothey Miller

*Evening College*

Jean A. Christie  
Genevieve R. Spedoske

*Food Services*

Eva S. Adams  
Eva O. Alberts  
Esther S. Alvarado  
Marjorie N. Baum  
Dorothy Buffington  
Dorothy E. Flitton  
Lillian Fox  
Margarita Gonzales  
Ethelyn LaClear  
Esther Medlock  
Mary Rennaker  
Ruth Shaw  
Alma Simmers  
Mary L. Smith  
Edith E. Stanley

**Administrative  
Personnel**

*Health Careers*

Lyla A. Cavanaugh  
Marie Fajardo

*Humanities Department*

Carolyn Beckwith

*Language Arts*

Ann Gorsline

Learning Resource Center

Roger Ward, *Graphic Artist and Photographer*

Lillian Bertoline

Allen Bronson

Dianne Hunt

Ross Munson

Cynthia Sanders

Norman Sedelmaier

Gladys Shire

Gail Watson

Laurene Woodworth

Management and Marketing

Charlotte Warner

Personnel

Donna L. Bloomquist, *Personnel Specialist*

Pamela S. Hammond

Plans and Maintenance

Jimmy Birmingham

Raymond Birmingham

Robert Birmingham

Kenneth H. Cary

William Demps

Fred George, Jr.

William Greenfield

Earl E. Greenlee

Thomas H. Hayward

Spencer Jones

Donald Keesler

Coleman Paschal

B. June Smith

Michael Warner

## Administrative

## Personnel

Public Information

JoAnn Heintz, *Assistant*

Purchasing

Troy Collins, *Supply/Warehouse Foreman*

Ronald R. Gurk

Harriet S. Krantz

Shirley I. Perkins

Office Personnel

Science

**Beverly Johnson**

Special Projects and College Services

**Lloyd R. Meyers, *Administrative Specialist***

**Margaret J. Hewer**

**Monnell J. Donley**

Social Science

**Gloria C. DeRath**

Student Activities

**Carol Schutzler**

Student Personnel Services

**Judy Day**

Transportation Training

**Betty Combs**

# INDEX

	Page		Page
<b>A</b>			
Academic Advising . . . . .	21	College of Arts, Sciences and Health Careers . . . . .	29-80
Accounting and Office Programs, Department of . . . . .	84-91	College Transfer Articulation . . . . .	21
Accounting, Associate Degree . . . . .	85	Commercial Art . . . . .	56
Accounting, course descriptions . . . . .	103-115	Community Leadership . . . . .	31
Accounting, one year certificate . . . . .	84	Community Services . . . . .	83
Accreditation . . . . .	3	Cooperative Internship . . . . .	83
Administration . . . . .	165	Correspondence, Business . . . . .	105
Administrative Office Personnel . . . . .	184-188	Counseling Services . . . . .	21
Admissions . . . . .	13	Course Codes . . . . .	20
Advanced Placement . . . . .	31	Course Numbers . . . . .	20
Advertising . . . . .	105	Court and Conference Reporting, Associate Degree . . . . .	86
Afro-American History . . . . .	57	Court and Conference Reporting, course descriptions . . . . .	110
Afro-American Literature, Survey of . . . . .	64	Credits . . . . .	15
Anthropology . . . . .	78	Transfer of . . . . .	15
Application . . . . .	13	Load and limitations . . . . .	15
Transfer Students . . . . .	13	Cultural Program, Fine Arts . . . . .	25
Special Students . . . . .	13		
Applied Technology, Department of . . . . .	119		
Architectural Drafting . . . . .	140		
Architectural Technology, course descriptions . . . . .	152	<b>D</b>	
Art Appreciation . . . . .	55	Data Processing, Certificate Program . . . . .	95
Art, course descriptions . . . . .	55-56	Data Processing, course descriptions . . . . .	112-113
Art History . . . . .	55-56	Data Processing, Associate Degree . . . . .	96
Articulation, college transfer . . . . .	21	Decorating and Painting . . . . .	119
Articulation, high school . . . . .	18	Degrees . . . . .	17
Arts, Sciences and Health Careers, College of . . . . .	30	Dental Assistant . . . . .	50
Associate Degree Programs . . . . .	32	Dental Assistant, course descriptions . . . . .	53
Arts . . . . .	32-36	Dental Hygiene . . . . .	49
Arts and Sciences . . . . .	32-38	Dentistry, pre-professional . . . . .	40
Business . . . . .	85	Department Codes . . . . .	20
Nursing . . . . .	48-49	Die Maker, Certificate Program . . . . .	123
Science . . . . .	36-38	District, map of . . . . .	2
Astronomy . . . . .	70	Drafting Technology . . . . .	144
Attendance . . . . .	17	Drafting Technology, course descriptions . . . . .	152-156
Auditing Classes . . . . .	15	Drafting Technology, Industrial . . . . .	126
Automotive Service, Certificate Program . . . . .	122	Draftsman (Mechanical), Certificate Program . . . . .	145
		Drawing, course descriptions . . . . .	55-56
		Drops and Adds . . . . .	15
<b>B</b>			
Basic Courses . . . . .	20		
Biological Science, course descriptions . . . . .	70	<b>E</b>	
Biology, Associate Degree . . . . .	37	Economics, course descriptions . . . . .	111
Board of Trustees . . . . .	166-167	Educational, Vocational Information . . . . .	21
Bricklaying . . . . .	119	Education, Social Science . . . . .	76
Building Trades, course descriptions . . . . .	126-129	Electrician, Certificate Program . . . . .	122
Business Administration, Associate Degree . . . . .	102	Electronics Technology . . . . .	145
Business, College of . . . . .	82-115	Electronics Technology, course descriptions . . . . .	155-158
Business Correspondence . . . . .	105	Elementary Education, pre-teaching . . . . .	45
Business, course descriptions . . . . .	103-115	Engineering Technology Curricula . . . . .	119
Business Law . . . . .	104	Engineering Technology, Department of . . . . .	138
Business Machines . . . . .	104	Engineering, pre-professional . . . . .	149
Business Mathematics . . . . .	104	English, course descriptions . . . . .	62-64
		English, Associate Degree . . . . .	33
		Evening Classes . . . . .	19
		Examinations . . . . .	17
<b>C</b>			
Calendar . . . . .	10-11		
Carpentry . . . . .	119	<b>F</b>	
Cartographic Drafting and Photogrammetry . . . . .	142	Faculty Directory . . . . .	169-183
Certificate Programs, Applied Technology . . . . .	122-136	Federal Income Tax . . . . .	109
Chemistry, course descriptions . . . . .	72	Fees . . . . .	19
Chemistry, Associate Degree . . . . .	37	Financial Aids . . . . .	22-24
Chiropractic, pre-professional . . . . .	39	Fine Arts, cultural program . . . . .	25
Civil Technology . . . . .	142	Fire Science Technology . . . . .	147
Civil Technology, course descriptions . . . . .	150-152	Fire Science, course descriptions . . . . .	158-159
Civil Technology, Highway Option . . . . .	143	Foreign Languages, course descriptions . . . . .	65
Civil Technology, Sautary Option . . . . .	144	Foreign Studies, Seminar . . . . .	57
Civil Technology, Structural Option . . . . .	144	Food Service, Hotel-Motel . . . . .	97-98
Clerical, General, Certificate Program . . . . .	86		
Codes, Course and Department . . . . .	20		

Fortran . . . . .	110
French Language . . . . .	65
Functions, purposes, objectives . . . . .	7-9
Funds, loan . . . . .	22-24

## C

Canuon, President Philip J. . . . .	5
General Clerical prgrams . . . . .	86
General Technology, course descriptions . . . . .	161-162
Geography, course descriptions . . . . .	76
Geology . . . . .	74
Glazing . . . . .	119
Governmental and Institutional	
Accounting . . . . .	109
C Grades . . . . .	16
System . . . . .	16
Term Reports . . . . .	16
Graduation Requirements . . . . .	17
Grants . . . . .	22-24

## H

Health Careers, Department of . . . . .	48
Heating, Air Conditioning & Refrigeration, Certificate Program . . . . .	123
Highway Option, Civil Technology . . . . .	143
High School Articulation . . . . .	18
High School Honors Institute . . . . .	31
History, course descriptions . . . . .	57
Honor Points . . . . .	16
Hotel-Motel and Food Service	
Mid-Management Technology . . . . .	97-98
Hotel-Motel and Food Service	
Mid-Management Technology, course descriptions . . . . .	113
Housing . . . . .	21
Humanities, Associate Degree . . . . .	33
Humanities, Department of . . . . .	55

## I

Industrial Trades, course descriptions . . . . .	130-134
Instructional Media Center . . . . .	26
Insurance, Life . . . . .	109
Internship, cooperative . . . . .	83
Internship, office . . . . .	107

## L

Language Arts, course descriptions . . . . .	62-66
Law Enforcement, Associate Degree . . . . .	99
Law Enforcement, Certificate Program . . . . .	100
Law Enforcement, course descriptions . . . . .	114-115
Law, pre-professional . . . . .	40
Learning Resource Center . . . . .	26
Legal Secretary, Associate Degree . . . . .	88
Legal Shorthand . . . . .	105
Libraries . . . . .	27
Library Technology, Associate Degree . . . . .	101
Library Technology, Certificate Program . . . . .	101
Library Technology, course descriptions . . . . .	116
Life Insurance Essentials . . . . .	109
Loans . . . . .	22-24

## M

Machine Repairman, Certificate Program . . . . .	123
Machinist, Certificate Program . . . . .	123
Machines, Business . . . . .	104
Management, Associate Degree . . . . .	93
Management, Certificate Program . . . . .	92
Management and Marketing, course descriptions . . . . .	103-116
Management and Marketing, Department of . . . . .	92-102
Management and Marketing Seminar . . . . .	107

Management, office . . . . .	106
Management, personnel . . . . .	106
Management, principles of . . . . .	106
Management, sales . . . . .	107
Management, smaller business . . . . .	103
Management and Supervisory	
Development . . . . .	106
Management, traffic and transportation . . . . .	109
Marketing, Associate Degree . . . . .	94
Marketing, Certificate Program . . . . .	93-94
Marketing, managerial . . . . .	107
Mathematics, Associate in Science Degree . . . . .	38
Mathematics, business . . . . .	104
Mathematics, course descriptions . . . . .	67-69
Mathematics, Department of . . . . .	67
Mechanical Technology . . . . .	148
Mechanical Technology, course descriptions . . . . .	159-161
Medical, pre-professional . . . . .	41
Medical Secretary, Associate Degree . . . . .	89
Medical Shorthand . . . . .	105
Mid-Management Technology, Hotel-Motel-Food . . . . .	97
Millwright, Certificate Program . . . . .	123
Mortuary Science, pre-professional . . . . .	41
Music, applied . . . . .	60
Music, course descriptions . . . . .	58-59

## N

Natural Science, course descriptions . . . . .	74
Nursing Education, course descriptions . . . . .	52
Nursing, Associate Degree program . . . . .	48

## O

Objectives, purposes, functions . . . . .	7-9
Occupational Therapy . . . . .	50
Office Management . . . . .	106
Office Methods . . . . .	105
Office Internship Seminar . . . . .	107
Office Personnel . . . . .	184-188
Optometry, pre-professional . . . . .	43
Orientation . . . . .	21

## P

Painting and Decorating . . . . .	119
Painting, course descriptions . . . . .	56
Piano . . . . .	60
Philosophy, course descriptions . . . . .	61
Photogrammetry, Cartographic Drawing . . . . .	142
Physical Education, Men . . . . .	79
Physical Education, Women . . . . .	80
Physical Therapy, pre-professional . . . . .	44
Physics, Associate in Science Degree . . . . .	38
Physics, course descriptions . . . . .	75
Pipefitting . . . . .	110
Placement . . . . .	84
Planetarium . . . . .	27
Plumbing . . . . .	119
Political Science, course descriptions . . . . .	77
Practical Nursing . . . . .	51
Practical Nursing, course descriptions . . . . .	53-54
Pre-professional Programs . . . . .	39-47, 102, 129
Pre-Business Administration . . . . .	102
Pre-Chiropractic . . . . .	39
Pre-Dentistry . . . . .	40
Pre-Engineering . . . . .	149
Pre-Law . . . . .	40
Pre-Medical . . . . .	41
Pre-Mortuary Science . . . . .	41
Pre-Nursing, transfer information . . . . .	42-43
Pre-Optometry . . . . .	43
Pre-Pharmacy . . . . .	43
Pre-Physical Therapy . . . . .	44
Pre-Teaching, elementary . . . . .	45

	Page
Pre-Teaching, secondary . . . . .	45
Pre-Theological . . . . .	46
Pre-Veterinary Science . . . . .	47
President's Cabinet . . . . .	168
President's Message . . . . .	5
Probation . . . . .	16
Psychology, course descriptions . . . . .	77-78
Psychology majors . . . . .	36
Public Relations . . . . .	107
Purposes, functions, objectives . . . . .	7-9

**R**

Radio and Television Servicing, Certificate Program . . . . .	136
Real Estate Essentials . . . . .	109
Registration Procedures . . . . .	14
Religion, course descriptions . . . . .	61
Retailing . . . . .	104

**S**

Sales . . . . .	105
Sales Management . . . . .	107
Scholarships . . . . .	22-24
Science, Associate Degree . . . . .	36
Science, Department of . . . . .	70
Science Foundation Courses for Teachers . . . . .	74
Sculpturing . . . . .	56
Secretarial Science, Associate Degree . . . . .	90
Secretarial Machines . . . . .	104
Secretarial training . . . . .	105
Service Trades . . . . .	121
Service Trades, course descriptions . . . . .	134-136
Sheet Metal, Certificate Program . . . . .	124
Shorthand . . . . .	103
Social Science, Associate Degree . . . . .	35
Social Science, course descriptions . . . . .	76

Page **Index**

Social Science, Department of . . . . .	76
Social Work Curriculum . . . . .	44
Sociology . . . . .	78
Spanish Language . . . . .	65
Speech, Associate Degree . . . . .	34
Speech, course descriptions . . . . .	66
Stenographic, Certificate . . . . .	91
Student Activities . . . . .	25
Student Government, Organizations . . . . .	25
Student Personnel Services, Division of . . . . .	12-25
Systems Technology, course descriptions . . . . .	161

**T**

Technology, College of . . . . .	117-164
Television, Radio Servicing . . . . .	136
Testing Services . . . . .	21
Theology, Pre-Professional . . . . .	46
Tool Maker, Certificate Program . . . . .	123
Traffic and Transportation Management . . . . .	109
Transfer students, application . . . . .	13
Transportation and Traffic Management, evening courses . . . . .	102
Transportation Training Program . . . . .	163-164
Trustees, Board of . . . . .	166-167
Tuition . . . . .	19
Typewriting . . . . .	163

**V**

Veterinary Science, Pre-Professional . . . . .	47
Voice . . . . .	60

**W**

Welding . . . . .	124
Withdrawal from college . . . . .	15
Work Study Program . . . . .	23