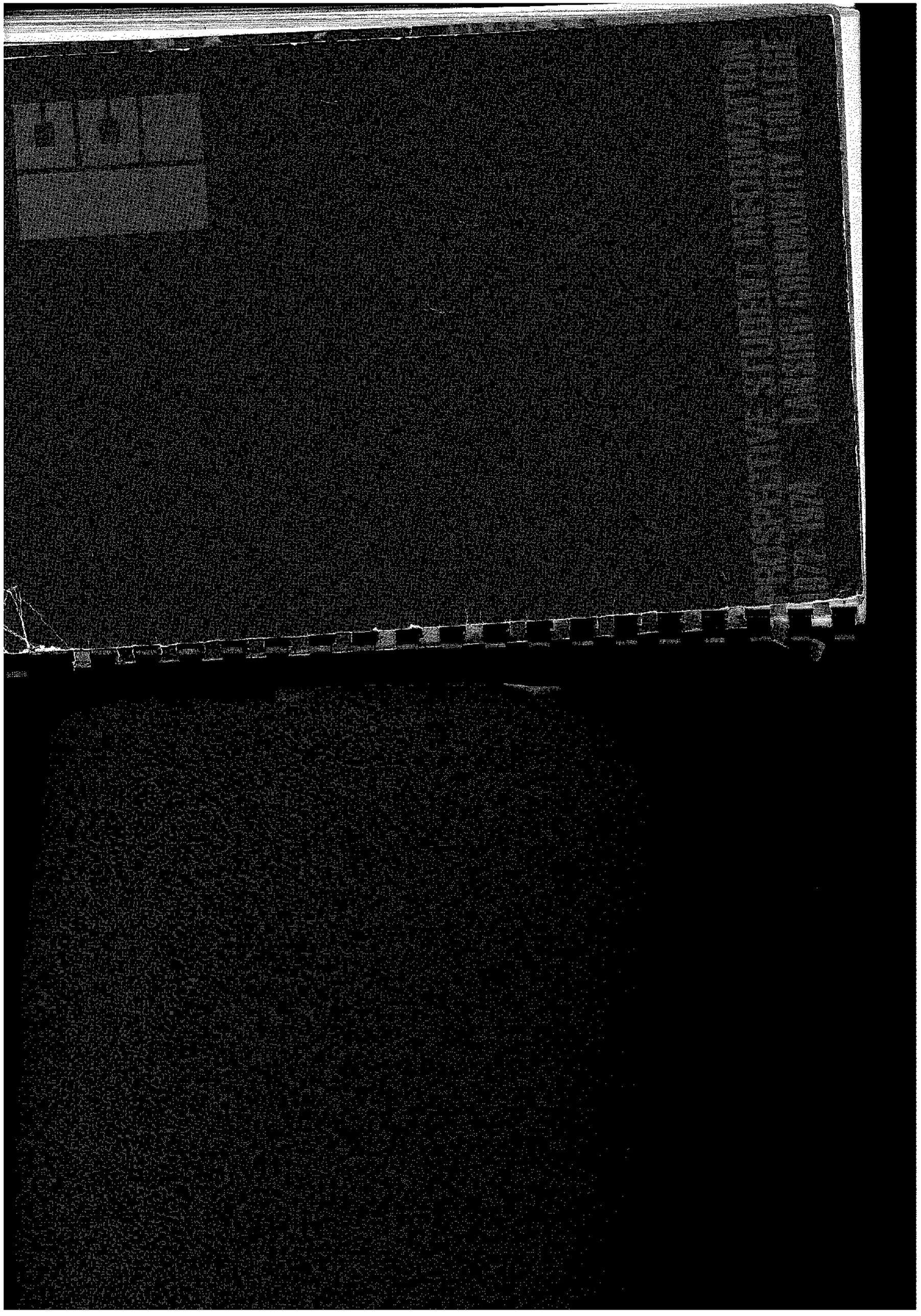

Joan Hartwig

SD
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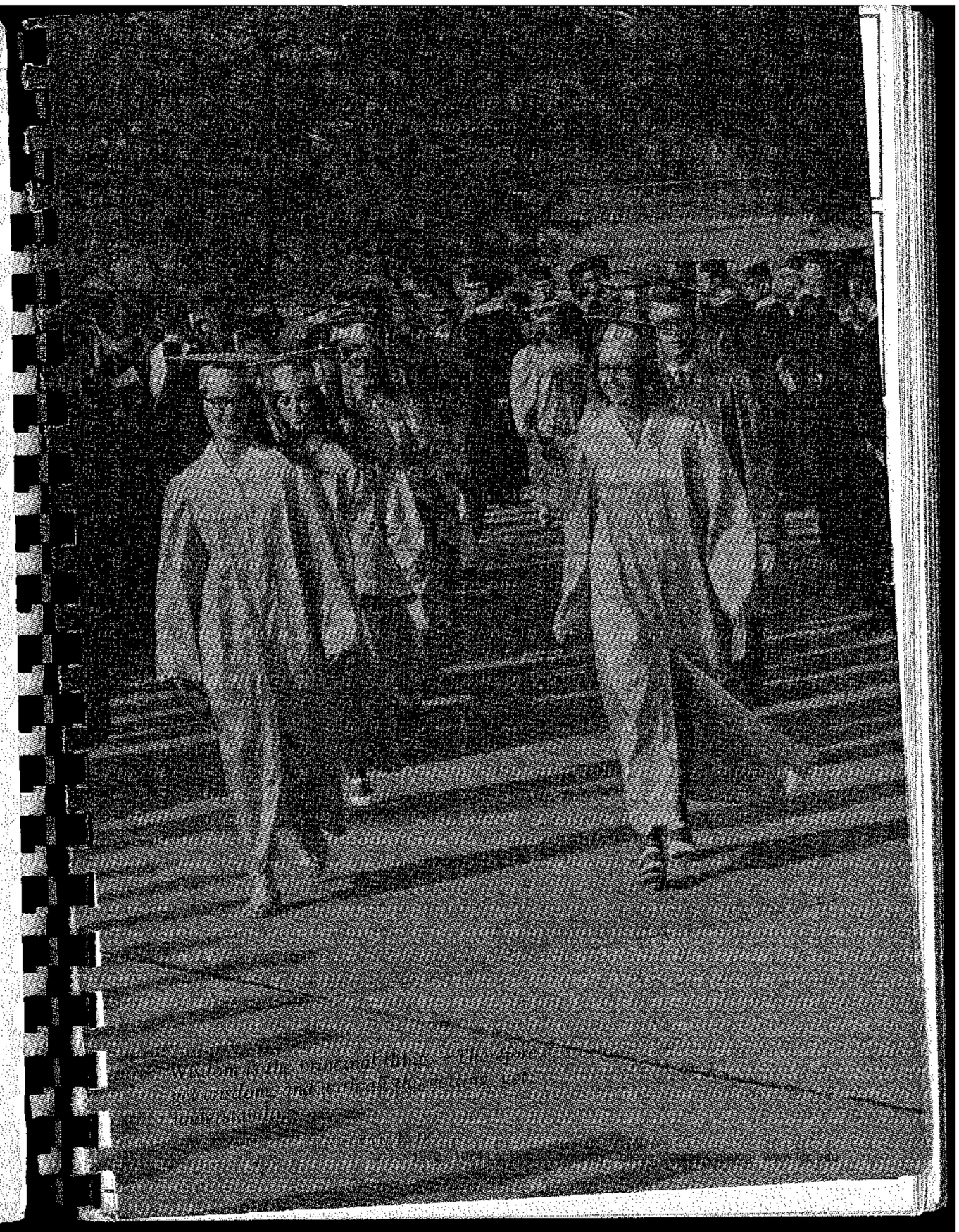

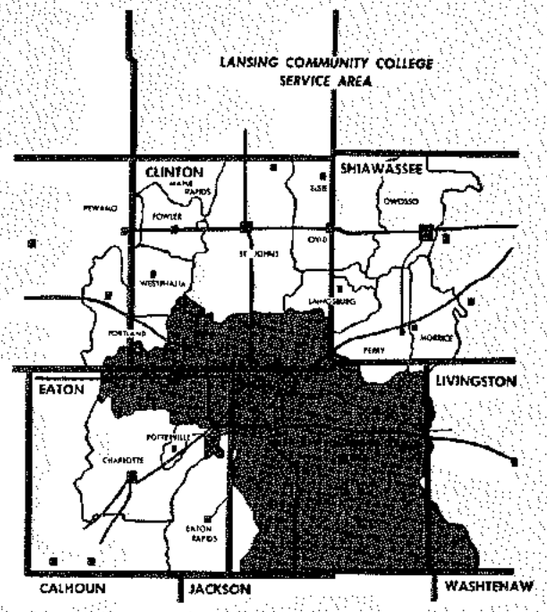

LANSING COMMUNITY COLLEGE

419 North Capitol Avenue
Lansing, Michigan
Telephone 373-7400

CATALOG NUMBER TWELVE
PUBLISHED JULY 1972

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1972 - 1974 Lansing Community College Course Catalog www.lcc.edu

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Dear Student:

At Lansing Community College you will find what many believe to be a new approach to higher education. We are developing educational methods tailored to the need of the community and to each student. We view this process of higher education as a challenge to the College and the student.

One of your advantages at Lansing Community College is the diversity of learning experiences. Many of our students attend College part time. Some take a single course or series of courses. This makes them aware of the many curriculums offered, and often provides a new goal or interest totally different from that envisioned prior to enrollment. The value of your experiences at Lansing Community College may give you the opportunity to find your own direction in education. We view education as a process that continues for a lifetime.

The catalog lists current offerings. Careful reading will give you an insight into the many and varied opportunities waiting for you at LCC. You set your own time schedule and your own goals. You are not pressed into a traditional educational mold at LCC.

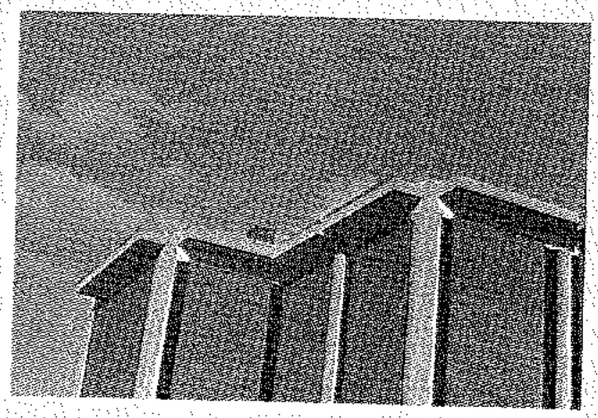
I am convinced that the future will offer more and more unstructured learning instead of the existing traditional methods of instruction. There will be more individual freedom and more avenues for development of greater competence, particularly in those areas most satisfying to each student.

These are some of the challenges you extend to us when you enroll. If you fail, we fail. I am confident that both you and Lansing Community College will benefit from your involvement here.

Sincerely,

Philip J. Gannon

Philip J. Gannon
President



The pillars of truth and the pillars of freedom—
they are the pillars of society.

Henrik Ibsen

LANSING COMMUNITY COLLEGE COMMITMENTS, GOALS, AND OBJECTIVES

Lansing Community College has evolved from a partnership of the community, students, faculty and staff. The college measures its vitality by how well it responds to the educational needs of the individual and the community. Its flexible programs and instructional techniques reflect the basic assumptions that learning is a lifelong process and that learners are individuals with different degrees of preparedness, different reasons for seeking instruction and different modes of learning.

The college is committed to community service programs, college transfer programs, and career training programs. The college believes that both the individual and his community are best served when the programs allow the student to integrate his learning with his experiences. The programs are designed to support and guide the student in his achievement of career, social and personal identity through his mastery of skills and his search for meaning and belief. Confronted by the values of his contemporaries and their heritage, he gains insight into his own values.

Consequently, the college is committed by purpose and process to a learning environment built on individualized instruction, a student-oriented faculty, an urban campus, and flexible programs. By maintaining open admissions, a relatively low cost tuition and fee structure, and an awareness of special group needs, the college endeavors to provide equal educational opportunity for all in its service district.

GOALS

The college concludes that it can best meet its commitment by accepting the following as its major goals:

1. To maintain continuous review and evaluation of the essentials for an effective learning environment—instruction, resources, and facilities—so that the learning programs have quality and relevance.

2. To maintain the development and support of an educational environment that permits an individual not only to acquire a mastery of skills for career or personal goals but also to enhance his identity by his search for the truth concerning his culture and heritage.

3. To provide student services including counseling, employment placement, financial aids, informational services, tutorial assistance, and college entry services according to the student's academic, vocational, and personal needs.

4. To provide opportunities for students to develop leadership and social inter-action skills through formal and informal student activities.

5. To provide general education for all students in the college.

6. To provide career-oriented programs for students now employed or contemplating employment in government, business, industry, and paraprofessional occupations.

7. To provide freshman and sophomore instruction in the arts, sciences, business, and other pre-professional programs.

8. To provide the curriculum opportunity for students to be graduated with associate degrees in arts, sciences, business and general education.

9. To provide special courses, programs or seminars—both on and off campus—in response to the immediate needs of the community.

10. To provide programs and activities that enrich the community's cultural life.

11. To make available the facilities and resources of the college to community groups to assist their organizational purposes.

OBJECTIVES

The objectives of the educational programs and services at Lansing Community College are detailed by the Divisions in their respective portions of this volume.

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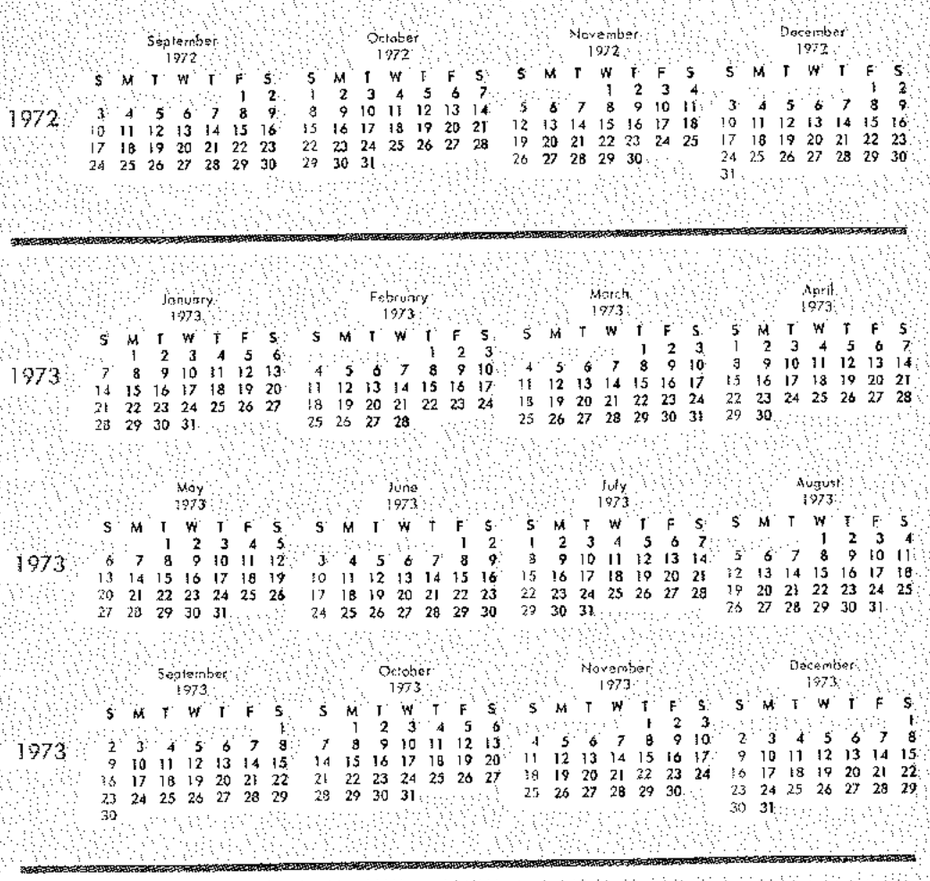

Lansing Community College Calendar—1972-1973

FALL TERM 1972

Faculty/Administration Days	September 18-22
Registration	September 25, 26
Preparation/Records Day	September 27
Classes Begin	September 28
Thanksgiving	November 23, 24
Last Day of Classes	December 8
Evaluation and Examination Period	December 11-15

WINTER TERM 1973

Registration	January 3, 4
Preparation/Records Day	January 5
Classes Begin	January 8
Last Day of Classes	March 16
Evaluation and Examination Period	March 19-23

SPRING TERM 1973

Registration	March 27, 28
Preparation/Records Day	March 29
Classes Begin	March 30
Memorial Day	May 28
Last Day of Classes	June 8
Evaluation and Examination Period	June 11-15
Graduation Day	June 10

SUMMER TERM 1973

Registration	June 20
Classes Begin	June 21
Independence Holiday	July 4
Last Day of Classes	August 16

Division of Student Personnel Services

Dean William Schaar

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

Divisional Service Objective:

The service objective is to assist each student to maximize his opportunity for full realization of his human potential, by providing a broad range of services to complement and supplement the academic program of the College. This service objective is accomplished through recruitment and admissions, through recreational and social experiences not necessarily tied to the classroom, through advisement and counseling services, and through supportive services to meet the special needs of the community college student.

Divisional Services

ADMISSIONS

Application for New Students

All persons eighteen years of age or older and persons graduated from high school are eligible for admission to Lansing Community College. Students in high school should refer to the statements regarding "advanced placement" in this Catalog. It is not a requirement for a person eighteen years of age or older to have graduated from high school in order to be admitted to Lansing Community College; however, the College encourages all students to complete their high school preparation.

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 application as early as possible to insure time for testing if requested, counseling, and registration. Directions for application follow:

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. (Students in high school or students who have graduated from high school in the past year) Mail or personally deliver the application and application fee to the high school to be completed and forwarded, with a high school transcript, to Lansing Community College.
4. Other applicants mail or personally deliver applications and application fee to the Student Records Office of the College. It is recommended, but not required, that a high school transcript be submitted with the application for the purpose of advising in course placement.
5. 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.

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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. The guest student also must complete pages 1 and 2 of the application for admission. 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.

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.

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.

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 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

Students registering late will be required to make up the work missed. All required credentials must be submitted prior to the day of enrollment.

Drops and Adds

Dropping or adding courses involves procedures which must be carried out by the students 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 following procedures outlined in the term class schedule. 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.

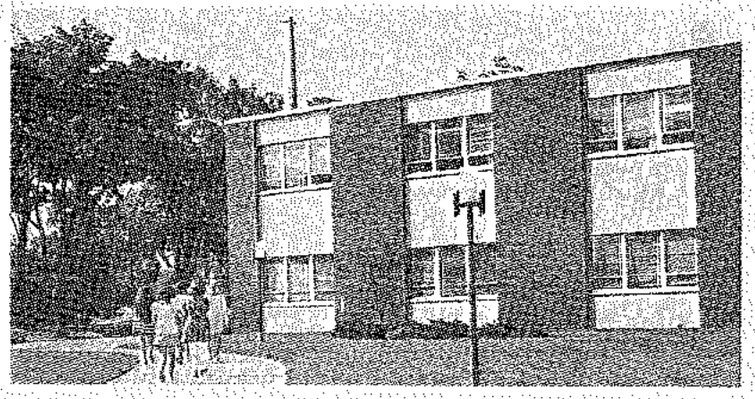
Credits

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 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-No Credit Grading

The credit (P)-no credit (Z) grading system has been initiated as an elective grading procedure to encourage students to expand their instructional background. Enrollment on the credit-no credit basis is open to all students as a student's option, subject to the following conditions:

1. Course prerequisites and other criteria for enrolling in any course shall be determined by the department or division offering the course. These prerequisites apply to both the letter and the P-Z systems.
2. The choice of letter or P-Z system does not affect admission to the course.
3. All courses in every department or division are available on a P-Z basis except courses:
   a. Listed in the student curricular guide as required courses, or
   b. Specifically excluded from P-Z enrollment by the department offering the course.
4. No student may enroll in more than one course in a single term on the P-Z system without his departmental chairman's permission, and he may not accumulate more than one-fourth of his total credits on a P-Z basis.



5. Choice of the P-Z system must be made during enrollment in consultation with the academic advisor. Following registration, this decision may not be changed after the first week of class. Changes must be in accord with the stated procedures for change in enrollment.

Grading procedure of the credit-no credit (P-Z) system:

1. Grades on the P-Z system are not included in computing the term or cumulative grade point average.
2. Enrollment in the P-Z system is recorded with the academic advisor and with the Registrar. The instructor's class list does not indicate which students are on the system.
3. When the course is completed, all students are graded on the regular letter system.
4. The Registrar then converts the regular letter grades to the P-Z system in accord with the definition of P and Z as shown below:
   a. P (credit)—credit is granted and represents a level of performance equivalent to a regular grade of 'C' or above.
   b. Z (no credit)—performance below a 'C' level, no credit is granted.
5. If the student changes his major, credits earned under the P-Z system which are required for the new major will be converted to the letter system by the Registrar. This is done at the request of the department of the new major.
6. If the student requires a regular letter grade for transfer purposes, or for maintenance of academic eligibility, he may petition the office of the Dean of Student Personnel Services.

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

Official transcripts of a student's record at Lansing Community College will be mailed to another institution at the written request of the student.

Each student is furnished one official transcript without charge. A fee of $1, which must be paid prior to mailing, is charged for each additional transcript. All transcript requests require 24 hours notice.

A student expecting to transfer to a four-year institution is advised to examine the current catalog of the college he plans to enter and to follow as closely as possible its recommendations for particular programs of study. More specific information about transferring credits may be obtained from any counselor.

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. Credits only, not grades, are transferred for 'C' or better courses. When the transferring overall g.p.a. of a student is at or above a 2.00 on a 4.00 scale ('C'), the 'D' grades will be accepted as credit. When the transferring overall g.p.a. of a student is below a 2.00 on a 4.00 scale, 'D' credits will be accepted upon request of the student. But the 'D' grade will be averaged in the student's Lansing Community College record. It will be the responsibility of the transferring student to request the office of the Registrar to evaluate 'D' credits. 'D' credits transferred to Lansing Community College have the same limitations in serving as prerequisites as do 'D' credits earned at 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 signed by the Registrar, has the school seal placed over his signature, and gives the date of the student's official withdrawal from the College.

Transcripts from Non-Accredited Institutions

A transcript from a non-accredited institution of higher education will be forwarded by the office of the Registrar to the chairman of the department in which the student has enrolled. The departmental chairman has four prerogatives for evaluating transcripts issued by non-accredited institutions and for granting credits toward graduation from Lansing Community College:

1. Credit may be granted if the student demonstrates skills commensurate with the performance required for satisfactory completion of existing courses.
2. Credit may be granted if review of the content, goals, and objectives of a particular course indicates that the course is on a par with existing courses of the College. It is the responsibility of the student to provide requested materials to enable proper evaluation.
3. Credit may be granted following a comprehensive examination to determine proficiency in a particular existing course.
4. Credit may not be granted.

The departmental chairman will return the transcript to the office of the Registrar and indicate in writing the credits granted and the course equivalency at Lansing Community College.

When two or more instructional departments are involved, the chairman of the department in which the student is enrolled will be responsible for consulting with the additional departmental chairmen. The written reply to the office of the Registrar will include the signatures of each involved departmental chairman.

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.

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. Have the approval of the faculty and the Board of Trustees.
7. 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.

Associate Degree in Arts and Science

The following additional conditions determine the awarding of the Associate Degree in Arts and Science:

I. The student must take a minimum of 12 credits each in Humanities, Freshman English, Science and Social Science. It is recommended that the 12 credits in Humanities be fulfilled by the sequence in Western Civilization (HUM 201, 202, 203). As an alternative the student may take a minimum of six credits in History (which may include History of Art) plus a minimum of six credits in Philosophy and/or Religion to fulfill the 12-credit Humanities requirements.

II. No more than 12 credits in other than traditional liberal arts course will apply toward this degree, unless specifically required by the curriculum guide. (e.g. courses in Principles of Economics and Fine Arts will be considered for liberal arts credit.)

III. Courses *for institutional credit only* will not apply toward the 90-credit total.

A student may appeal the decision not to grant a degree, based on violation of these conditions, to the Open Council of the Arts and Science Division. This council serves as a review committee and recommends appropriate action to the Dean of Arts and Sciences. Voting members of this council include involved departmental chairmen, faculty and student representatives.

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 12
Three-quarter time	9, 10, 11
Half-time	6, 7, 8

After enrollment, veterans should direct their inquiries concerning eligibility to the Student Records Office or to the Office of Veterans Services in the Student Development Center.

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.

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.

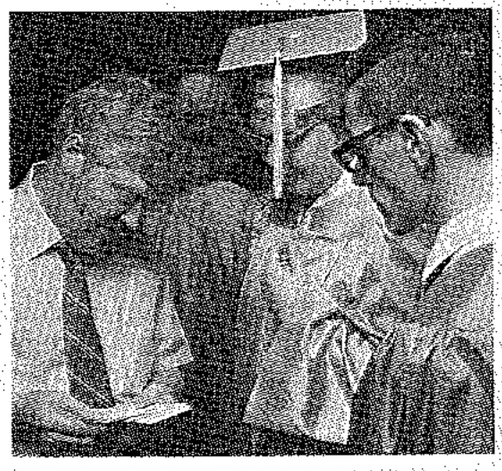
A full-year sequence is offered in each of the following:

English Composition—English 121, 122, 123—12 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



Residency

Eligibility for paying resident tuition is determined according to the following formula:

Before Acceptance into College

Students *under* 18 years of age qualify as residents if:

a. The student's parents or legal guardians have resided within the LCC district for at least six months immediately prior to the first day of classes.

b. The student is married and has resided within the LCC district at least six months immediately prior to the first day of classes.

c. The student is unmarried and is recongized as "emancipated" (receives no financial support from parent or legal guardian) and has resided within the LCC district for at least six months immediately prior to the first day of classes.

d. The student is enrolled under the provisions of Act 245, Public Acts of 1935, as amended by Act 371, Public Act of 1965 (students receiving benefits under the Michigan Veterans' Trust Fund).

e. The student is an employee of a business or industrial firm within the LCC district, and the employer, by written agreement, agrees to pay directly to the College all tuition and fees of the sponsored student for employer-approved classes.

Students *over* 18 years of age qualify as residents if:

a. The student has resided within the LCC district at least six months immediately prior to the first day of classes.

b. The student is an employee of a business or industrial firm within the LCC district, and the employer, by written agreement, agrees to pay directly to the College all tuition and fees of the sponsored student for employer-approved classes.

c. The student is enrolled under the provisions of Act 245, Public Acts of 1935, as amended by Act 371, Public Act of 1965 (students receiving benefits under the Michigan Veterans' Trust Fund).

After Acceptance into College

Students *under* 18 years of age qualify as residents if:

a. The student's parent or guardian has established residence within the LCC district for at least one year immediately prior to the date of petitioning for a change in residence status.

b. Student is married and has established residence within LCC district for at least one year prior to the date of petitioning for a change in residence status.

c. Student is unmarried and is recognized as "emancipated" and has established residence within the LCC district for at least one year prior to the date of petitioning for a change in residence status.

Students *over* 18 years of age qualify as residents if the student has established residence within the LCC district for at least one year prior to the date of petitioning for a change in residence status.

Petitioning for Change in Residence Status

The student is notified of his residency status upon acceptance into the College. If he can substantiate an error in his being coded as a non-resident, residency will be changed when proof of error is presented. If the student has attended the College under a non-resident code, he may change his residency status if he meets one of the qualifications listed above.

To effect a change in status, the student must (1) complete the appropriate form in the Student Records Office; (2) offer proof of residency, and (3) check with the Student Records Office after one week for validation.

Tuition Adjustment: If the student's claim for residency is validated and is applicable for the term of validation, he will receive a refund in the amount of the difference between resident and non-resident tuition. Adjustments in tuition due to change of residency are *not* retroactive.

A Non-Resident Owning Property in LCC District will receive credit for property taxes paid in support of the College by himself or his guardian. The taxes paid must be in support of the current academic year and the credit cannot exceed the differential between resident and non-resident tuition rates for the current academic year.

Tuition and Fees*

All tuition and fees must be paid at time of registration. The student who does not have full payment should contact the Financial Aids Office before beginning registration.

Tuition, Resident Students
- Per credit hour . . . . . $ 7.00
- Average Tuition per term (15 hours) $105.00

Tuition, Non-Resident
- Per credit hour . . . . . $ 13.00
- Average Tuition per term (15 hours) $195.00

Tuition, Out of State Students
- Charged per credit hour . . . . . $ 31.00
- Average Tuition per term (15 hours) $465.00

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

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

All tuition and fees must be paid at time of registration. Students who do not have full payment should contact the Financial Aids Office before beginning registration.

Tuition Refund Policy (All terms)

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

Refer to the current term schedule of courses for refund dates.

No refund other than one based on mathematical error will be given to a student for discrepancies in tuition after the end of the term in which the discrepancy occurred.

*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. The class schedule for each term will list all laboratory fees.

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 required work of a course. 'I' grades will remain as 'I' until the student has satisfactorily completed his work. It will be the responsibility of the student receiving an 'I' to consult with his instructor regarding the completion of his work. The student must satisfactorily complete his work before the closing date of the next term of attendance. 'I' grades will not be counted toward the establishment of an earned grade point average (G.P.A.) or toward graduation from the College.
- 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.
- R — Returning to course, no credit granted, for "open lab" courses only.

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.

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.

Course and Department Codes

ANT	Anatomy
ART	Art
AST	Astronomy
AT	Architectural Technology
ATR	Applied Technology Related
ATS	Applied Technology Seminars
AUT	Automotive
BIO	Biology
BTA	Building Trades Apprentice
BTJ	Building Trades Journeyman
BTR	Building Trades
BUS	Business
CCR	Court and Conference Reporting
CEM	Chemistry
CT	Civil Technology
DH	Dental Hygiene
DP	Data Processing
DS	Dental Science
DT	Drafting Technology
EC	Economics
ED	Education
ENG	English
ET	Electronics Technology
FBS	Foundations Biological Science
FC	Foundations of Conservation
FPS	Foundations of Physical Science
FRN	French
FST	Fire Science Technology
GE	Geology
GEO	Geography
GTR	General Trades
HAC	Heating, Air Conditioning, and Refrigeration
HMF	Hotel, Motel, and Restaurant Management
HST	History
HUM	Humanities
LA	Language Arts
LE	Law Enforcement
LT	Library Technician
MET	Meteorology
MIC	Microbiology
MT	Mechanical Technology
MTH	Mathematics
MUS	Music
NUR	Nursing
NS	Natural Science
PE	Physical Education
PHL	Philosophy
PHY	Physics
PLS	Political Science
PN	Practical Nursing
PSY	Psychology
REL	Comparative Religion
RN	RN Refresher
SA	Sociology and Anthropology
SC	Earth Science
SPA	Special Projects
SPH	Speech
SPN	Spanish
SPS	Student Personnel Services
SS	Social Science
ST	Systems Technology
STR	Service Trades Related
TEC	Technical Intern
THR	Dramatics
TT	Transportation Training

Department of Student Development Services

Chairman: Dr. Beverly J. Hunt

Dr. Hunt

The Department of Student Development Services provides supportive services to facilitate students' adjustment and functioning in college. Services include counseling; tutoring; testing; academic advising; information related to transfer and financial aid; recruitment; liason with community agencies, and orientation. These services are provided for students on an individual basis and through group work.

Academic Advising

Faculty advisors are assigned to all students. The Department of Student Development Services coordinates the advisor-advisee system in the College. 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.

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, and with social and emotional problems of a personal nature which tend to interfere with academic progress. The Department of Student Development Services maintains cooperative liaison with service agencies in the community and will, when appropriate, help students find needed services not available within the College.

College Transfer Articulation

The Department of Student Development 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.

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Educational-Vocational Information

The Department of Student Development 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 the three Counseling Service areas and in the main library.

Orientation

Lansing Community Colleges tries 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 students.

Special Counseling Services

A Special Counseling Service is maintained to serve the needs of students with typical problems referred to the College by the Department of Vocational Rehabilitation and by a number of State and Federally sponsored agencies. Problems of mobility, limited occupational choices related to physical handicaps and culturally oriented disadvantages are dealt with here. Prospective students not agency sponsored also are encouraged to use this service.

Student Development Center

The Student Development Center has been established to offer assistance to disadvantaged students, racial minorities and veterans. The Center provides assistance in testing, curriculum choices, occupational development, financial aid, tutorial services, counseling and guidance, job placement, work-study placement and social or emotional problems which may interfere with the student's successful academic experience.

The purpose of the Center is to encourage potential students to take advantage of the educational opportunities at Lansing Community College and to provide services to help these students achieve their educational and vocattional goals in college.

Veterans Services

The Veteran's Services office in the Student Development Center has been established to act as an intermediary for student veterans and the Veterans Administration. Veterans Services helps the veteran file applications for education, counseling, loans, tutorial assistance and/or any other entitlements allowed through the Veterans Administration. Any veteran in need of any assistance should contact this office.

Testing Services

A testing program designed to assist students in their educational and vocational development is an integral function of counseling services. Vocational and personality interest tests are frequently used by counselors as part of the counseling service if the student requests this service. As a community service to adult, non-high school graduates, the Department of Student Development Services also administers the General Educational Development Test (GED) for high school equivalency certificates. This service is provided at a nominal charge.

STUDENT DEVELOPMENT SERVICES

CLASS OFFERINGS

ORIENTATION SD 101-104

SD 101 Orientation
SD 102 Focus on Change - Fall term
SD 103 Focus on Change - Winter term
SD 104 Focus on Change - Spring term

INTER-PERSONAL SKILLS WORKSHOP SD 105-110

SD 105 Human Potential
SD 106 Advanced Human Potential
SD 108 Group Encounter

BEHAVIOR CHANGE WORKSHOPS SD 111-120

SD 111 Tech of Study
SD 112 Suc in Higher Ed
SD 113 Sem in Careers
SD 120 SDB Elimination

SD 296 Independent Study in Community Services
SD 297 Independent Study in Community Services
SD 298 Independent Study in Community Services
SD 299 Independent Study in Community Services

STUDENT FINANCIAL AID AND PLACEMENT

Neil Shriner

Administrative Officer: Neil Shriner

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.

Applicants must be accepted for admission and submit a financial aid application by April 1. Applicants making requests after April 1 may receive financial assistance if funds are available.

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. These include:

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.

High school students must register for the examination in September of the senior year.

Information and application procedures are available at high schools. This scholarship is renewable.

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.

Trustee Scholarships and Need Grants

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. An equal number of need grants are awarded to resident students who do not have funds for tuition and fees. Need grants are renewable, based on continuing need.

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.

Lansing Women's Club

A fund of $1,000 annually is used for Scholarships for girls with financial need and academic potential.

Hinman Foundation Grants

$10,000 is awarded each year for tuition and books for students who have financial need. These grants are renewable and recipients may continue to receive a Hinman grant upon transfer to Michigan State University, provided the financial need still exists.

John M. Sebeson Memorial Scholarship

Established by friends and the family of John Sebeson, associate professor of chemistry at LCC, a $300.00 award is made annually to a chemistry major on the basis of academic record and financial need.

Greater Lansing Foundation

This foundation contributes 12 scholarships of $500.00 each for students in the Health Sciences programs at LCC. Awards are made on the basis of financial need and academic proficiency. Applicants must be residents of the college district.

Martin Luther King Memorial Grant

Funds donated by local citizens enable the college to help students pay tuition if they would not otherwise be able to attend. Limited to district residents. Money available in the fund varies according to donations received.

Educational Opportunity Grants

As a part of the Higher Education Act 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 $1,500 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.

L.C.C. Veteran's Short Term Loan

Emergency short-term loans are granted to veterans who do not have funds for tuition and fees. These loans are approved on the basis of need.

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.

Tama Lee Bofysil Memorial Loan Fund

This loan fund was established in memory of Tama Lee Bofysil to help students pay for emergency educational needs, tuition, and books.

Law Enforcement Education Financial Aid

Lansing Community College is participating in the Law Enforcement Grant and Loan Program enacted by Congress in 1968 as explained below:

Grants

Students are eligible for grants if they are taking courses leading to a degree or certificate in an area relating to Law Enforcement, and provide tuition and fees not exceeding $200 a term for full-time and part-time students who are full-time employees of publicly funded Law Enforcement Agencies. Students must agree to remain in the service of the employing agency for two years following completion of the course of study or repay the full amount of the grant with 7% simple interest per annum at a minimum monthly rate of $50 per month, repayable quarterly.

Loans

A maximum of $1,800 is available to full-time students in courses leading to a degree or certificate in areas directly related to Law Enforcement. Repayment begins 6 months after the borrower terminates a full time course of study. Interest is 7% simple per annum on the unpaid balance, with minimum quarterly payments of $50 per month. Total amount of the loan plus interest is forgiven at the rate of 25% for each complete year of certified service as a full-time employee of a public law enforcement agency.

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.

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

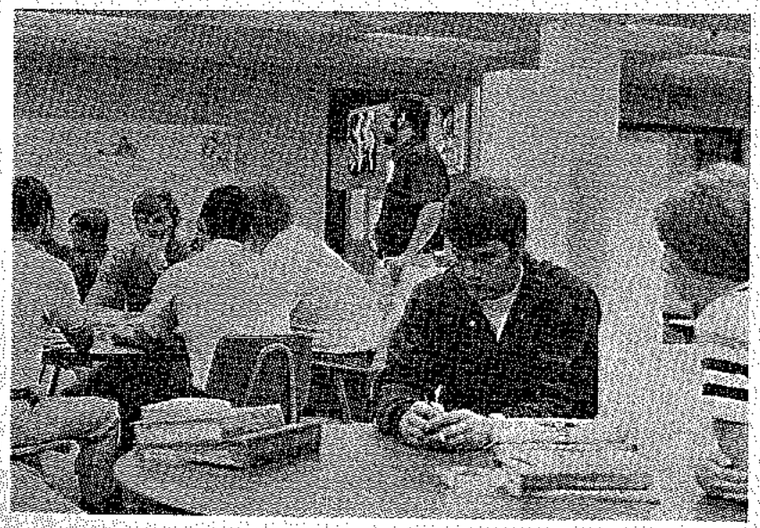
These grants are available to students transferring from Lansing Community College to eligible private, non-profit colleges and universities in Michigan. Additional information is available in Lansing Community College Financial Aid Office.

PLACEMENT OFFICE

The job placement office has on file a listing of current job openings in the College and in the Lansing area. Recruiting representatives from various companies throughout the United States schedule interviews through this office. Interview schedules are posted across the College campus and in the campus newspaper.

HOUSING

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



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STUDENT ACTIVITIES

William Zuhl

Administrative Officer: William A. Zuhl

Student activities at Lansing Community College are widely varied, providing social, cultural and recreational programs to help the student enrich his free time, and to complement his academic pursuits. Student activities reflect a total college involvement, for faculty, administrators and members of the community as well as for students. Programs offered by the Student Activities office are constantly expanded and diversified according to student interest and enthusiasm.

Fine Arts Cultural Program

Students at Lansing Community College are encouraged to attend and participate in programs of community fine arts groups: Lansing Civic Players, Community Circle Players, the Lansing Symphony, the Grand Ledge Players, the Town Hall Speakers Series, and others. Many students and faculty members perform in community theater productions and assist behind the scenes.

The Student Government sponsors a Film Series Program making many of the latest and best films available to students at no cost.

A number of trips are sponsored by Student Activities, including theater trips to plays in Detroit and to the Shakespearian festival in Stratford, Canada. A theater trip to New York is sponsored each term, and random tours of museums in Detroit, Toledo and Flint are also part of Student Activities scheduling.

A foreign travel program has made it possible, also, for students at Lansing Community College to travel abroad at a reasonable cost.

Student Government

The Preamble to the Constitution of the Student Government of Lansing Community College states: "We the students of Lansing Community College, in order to present the thinking of the student body to the faculty, administration, and students on issues of importance to students, inform students of college policies, programs and services, coordinate student activities, present programs which will contribute to the intellectual growth of students, and to develop citizenship and leadership training through its programs do hereby ordain and establish this constitution for the Lansing Community College Student Government."

The Student Government initiates consideration of student recommendations working cooperatively with students and administration on all matters of importance to the students of the College. The Student Government has an Advisory Committee to the Board of Trustees elected from the students at large and chaired by the President of the Student Government. They meet monthly with the members of the Board of Trustees to effect better understanding and communication between the students and the Board.

Student Organizations

Constitutions of student organizations at Lansing Community College are approved and passed by the Student Government and by the College administration before adoption. A list of current official student organizations appears in the Student Guide Book.

Student Newspaper

The Lookout is the weekly student publication on campus. Student reporters provide campus coverage and publish information of general interest to the campus community.

ATHLETICS

Athletics at Lansing Community College include two major programs: intramural athletics and intercollegiate athletics.

Intramural Athletics*

The intramural athletic program is designed to serve the leisure-time interest of Lansing Community College staff, faculty, and students. Activities are sponsored in twenty-plus sports throughout each school year. The program is flexible enough to permit expansion of current activities and to provide additional activities when sufficient interest is evident.

Since Lansing Community College does not carry insurance for participants in the intramural athletics program, each participant should carry his own insurance. (Information on the student insurance program is available through the Office of the Dean of Student Personnel Services, Room 210, Student Personnel Services Building).

The intramural calendar:

Fall Term	**Winter Term**	**Spring Term**
Bowling	Basketball	Badminton
Cross Country	Bowling	Bowling
Handball	Paddleball	Golf
Table Tennis	Swimming	Horseshoes
Touch Football	Table Tennis	Softball
Volleyball	Weight Lifting	Table Tennis
	Wrestling	Tennis
		Track

Intercollegiate Athletics*

Lansing Community College participates on a varsity level in cross country, basketball, wrestling, golf, tennis, and track. Representative teams from across the state of Michigan, especially from community colleges, are scheduled for these sports.

Lansing Community College also is a member of the National Junior College Athletic Association and the Michigan Junior-Community College Athletic Conference. These affiliations provide excellent competition and recognition on a state and national level.

National champions are determined each year at sites throughout the United States. The 1971-72 sites were:

Cross Country—Danville, Illinois
Basketball—Hutchinson, Kansas
Golf—Fort Meyers, Florida
Wrestling—Worthington, Minnesota
Tennis—Ocala, Florida
Track—Mesa, Arizona

*For additional information on the athletic programs, students may contact that Athletics Office (Room 215, Student Personnel Services Building), or call (517) 373-7130.

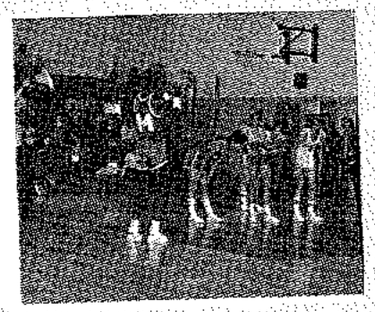
PHYSICAL EDUCATION

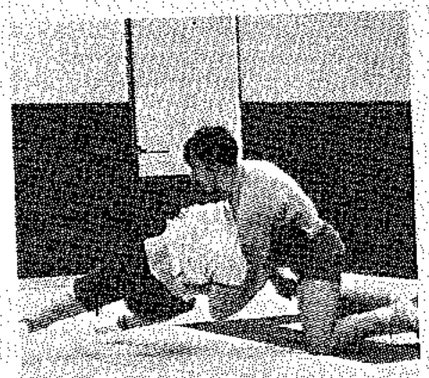
The physical education program at Lansing Community College offers students an opportunity to develop physical skills for maintenance of an acceptable level of physical fitness both while in college and afterward.

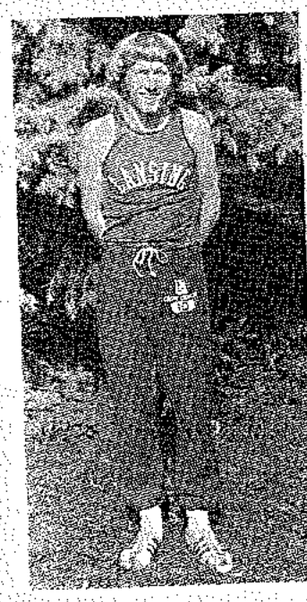
All physical education courses are transferable and all physical education grades are tabulated in determining grade point averages.

Physical education courses are offered in eight categories:

1. Fundamental
2. Swimming and Aquatic
3. Individual and Dual "Carry-Over"
4. Gymnastics
5. Team Sports
6. Combatives and Weight Training
7. Rhythmic
8. General







110 Fundamentals of Physical Education—Male **Two credits**

To provide an understanding of the physiology of physical activities, this class teaches the How and Why aspects of physical activity. The laboratory classes will place emphasis on the How. 2 (1-2)

111 Fundamentals of Physical Education—Female **Two credits**

See PE 110 Fundamentals of Physical Education—Male. 2 (1-2)

112 Health—Coed Three ~~One~~ credits

Covers contemporary health issues such as human sexuality, drug abuse, weight control. Student interest will dictate issues discussed. 1 (1-0)

115 Professional Orientation—Coed **One credit**

This overview of physical education for prospective physical education majors includes: The scientific basis for physical education; professional preparation programs available at Michigan universities; future employment possibilities, and professional opportunities offered for students, and the role of the physical educator in the public school system, community organizations, and research developments. 1 (1-0)

116 Community Recreation—Coed **One credit**

Provides exposure to the procedures, operations, facilities, and programs of the Lansing Parks and Recreation Department. Discusses and analyzes concepts of community recreation. 1 (1-0)

120 Beginning Swimming—Coed **One credit**

Instruction in the basic fundamentals and techniques of swimming, with emphasis on water adjustment, basic strokes, breathing, survival, and diving skills. 1 (0-2)

121 Intermediate Swimming—Coed **One credit**

Instruction in the various strokes and skills required to become a competent swimmer. Emphasis on review of basic fundamentals, with endurance work to prepare students for advanced levels of watermanship, for example, Senior Lifesaving. 1 (0-2)

122 Synchronized Swimming—Female **One credit**

Encompasses fundamental strokes, and elementary, intermediate, and advanced stunts. Routines are composed and performed in class. 1 (0-2)

123 Skin Diving—Coed **One credit**

Introduces basic skills and knowledge, including use of mask, fins, and snorkel. 1 (0-2)

220 Swimming—Life Saving—Coed **One credit**

Instruction in basic skills and knowledge of watermanship. Emphasis on personal safety, including self-survival, small craft safety, swimming, rescue skills, first aid, and resuscitation. Red Cross and YMCA certification is awarded upon successful completion of the course. 1 (0-2)

221 Water Safety Instructor—Coed **One credit**

Instruction in all phases of the Red Cross aquatic program, with emphasis on personal skills, knowledge and teaching ability for Red Cross lifesaving and water safety courses. 1 (0-2)

222 Lifeguard Training—Coed **One credit**

Covers all aspects of the skills and responsibilities needed by the lifeguard to insure the health and safety of aquatic program participants. 1 (0-2)

130 Beginning Archery—Coed **One credit**

Instruction in fundamentals, techniques, rules, and care of equipment. Introduces elements of tournament shooting, novelty shooting, and competition. 1 (0-2)

131 Badminton—Coed **One credit**

History, rules, and etiquette of the game. Students will learn the proper use of the equipment, fundamental skills, and game strategy. 1 (0-2)

132 Badminton—Male **One credit**

See PE 131 Badminton—Coed. 1 (0-2)

133 Badminton—Female **One credit**

See PE 131 Badminton—Coed. 1 (0-2)

134 Beginning Bowling—Coed **One credit**

Instruction will stress the basic skills of bowling with progress toward proficiency. Scoring skills are also covered. 1 (0-2)

135 Cross Country—Male **One credit**

Instruction in jogging or running, dependent on the physical fitness of student. Emphasizes development of training schedules for individuals to keep fit. 1 (0-2)

136 Beginning Golf—Coed **One credit**

Golf strokes, rules, and etiquette for beginners. Course work includes experience on the driving range and golf course. 1 (0-2)

137 Pool/Billiards—Coed **One credit**

Covers history, rules, and fundamentals, with emphasis on practice drills, positioning of cue ball, and variations of the game of pocket billiards. 1 (0-2)

138 Beginning Skiing—Coed **One credit**

Basic fundamentals and techniques of skiing, with individual instruction and emphasizing personal safety, skiing history, physics, and terminology. 1 (0-2)

139 Beginning Tennis—Coed **One credit**

Instruction for the beginner in the basic skills of tennis, including service, forehand and backhand strokes. Also teaches the rules and strategy of the game. 1 (0-2)

140 Track/Field—Male **One credit**

An introduction to the rules, techniques, and execution of the sport, this survey course covers the different events, and requires a reasonable amount of theoretical knowledge and practical execution. 1 (0-2)

141 Yoga—Coed **One credit**

An introduction to the philosophy and positions of yoga. Emphasis is on spine culture, rhythmic breathing, and a balanced development of mind and body. 1 (0-2)

142 Bicycling—Coed **One credit**

Acquaints students with the physical fitness value of bicycling and offers information which will give greater fulfillment to bicyclist. 1 (0-2)

143 Jogging—Coed **One credit**

Exposes students to the values of fitness offered by jogging. 1 (0-2)

239 Advanced Tennis—Coed **One credit**

Refines the skills of service, forhand and backhand strokes, and game strategy. 1 (0-2)

150 Beginning Gymnastics—Male **One credit**

Presents an introduction to the fundamentals of stunts, apparatus, and tumbling. 1 (0-2)

151 Beginning Gymnastics—Female **One credit**

See PE 150 Beginning Gymnastics—Male. 1 (0-2)

250 Advanced Gymnastics—Male **One credit**

Continuation of basic gymnastics stressing more specific skills, developing into routines. Special emphasis is placed upon advanced stunts. 1 (0-2)

251 Advanced Gymnastics—Female **One credit**

See PE 250 Advanced Gymnastics—Male. 1 (0-2)

160 Basketball—Male **One credit**

Teaches the fundamental skills and rules of the game, and considers the history and development of basketball as a team sport. 1 (0-2)

161 Basketball—Female **One credit**

See PE 160 Basketball—Male. 1 (0-2)

162 Soccer—Male **One credit**

This introduction to the basic skills and techniques involved in the game includes the history, development, rules, and strategy of soccer. 1 (0-2)

163 Softball—Male **One credit**

Teaches the rules; throwing; catching; fielding, and batting, with emphasis on correct methods of playing the various positions and offensive and defensive team strategy. 1 (0-2)

164 Softball—Female **One credit**

See PE 164 Softball—Male. 1 (0-2)

165 Touch Football—Male **One credit**

Covers the history, rules, strategy, and individual techniques of the sport. 1 (0-2)

166 Volleyball—Male **One credit**

Introduces skills, game stragety, history, rules and values of volleyball. 1 (0-2)

167 Volleyball—Female **One credit**

See PE 167 Volleyball—Male. 1 (0-2)

260 Advanced Basketball—Male **One credit**

Expands the knowledge and improves the ability of those who wish to excel in basketball beyond the beginning level. 1 (0-2)

170 Fencing—Coed — **One credit**

Instruction in fundamental techniques and rules in the art of fencing, including care of equipment. One course objective is development of grace and poise. 1 (0-2)

171 Judo—Male — **One credit**

The rules, theory, and application of judo both as a sport and for self-defense. Presents the history and principles of judo, as well as techniques of falling, throwing, holding and choking. 1 (0-2)

172 Self-Defense—Coed — **One credit**

This course for the male or female living in an urban society is designed to develop confidence and skills in the art of self-defense through the use of judo techniques. 1 (0-2)

173 Weight Training—Male — **One credit**

Emphasizes the importance of physical fitness as it is achieved through weight training. Instruction includes various training methods, principles, and program designs. 1 (0-2)

174 Wrestling—Male — **One credit**

Teaches the fundamental takedowns and breakdowns; offensive and defensive moves from the standing and the referee's position; pinning holds; escapes; and various combinations of the above. 1 (0-2)

175 Karate—Coed — **One credit**

Develops skills in punching with fists and hands; kicking with feet and knees, and essential body movement in combat. 1 (0-2)

180 Creative Dance—Female — **One credit**

A focus on qualitative, expressive aspects of movement through an introduction to movement technique, methods of abstraction and the elements of composition of simple studies. 1 (0-2)

181 Social Dance—Male — **One credit**

Distinguishes various rhythms, tempos, and styles, and satisfactory response to each: waltz, foxtrot, swing, and South American dance steps (tango, rhumba, and cha cha). Includes practice in correct procedure in dance situations and other social gatherings. 1 (0-2)

182 Social Dance—Female — **One credit**

See PE 181 Social Dance—Male. 1 (0-2)

183 Social/Square Dance—Male — **One credit**

A beginning dance class to present the basic steps and variations of the foxtrot, waltz, tango, cha cha, samba and swing, and the basic skills and patterns used in square dancing. 1 (0-2)

184 Social/Square Dance—Female — **One credit**

See PE 183 Social/Square Dance—Male. 1 (0-2)

185 Square Dance—Male — **One credit**

Development of the basic skills and patterns used in square dancing. 1 (0-2)

186 Square Dance—Female — **One credit**

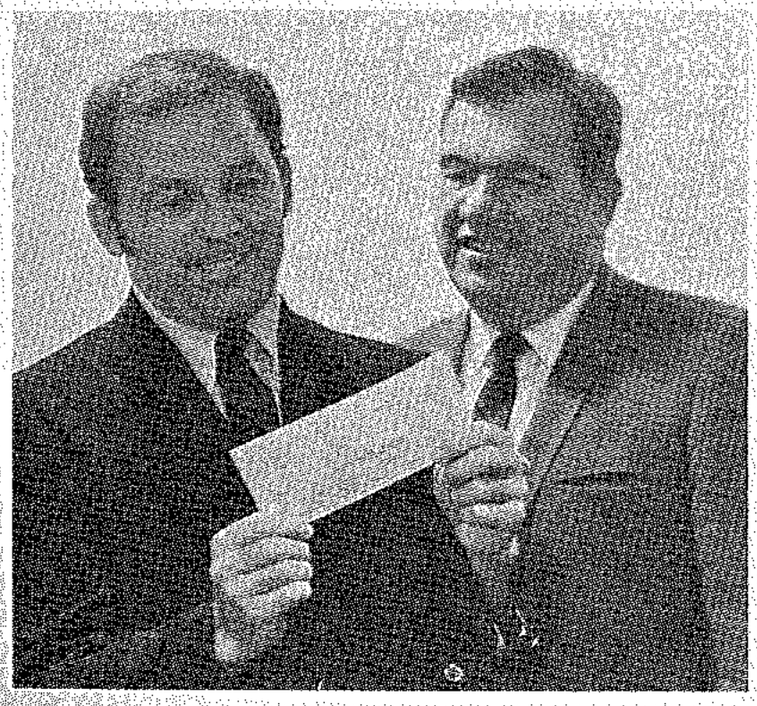
See PE 185 Square Dance—Male. 1 (0-2)

190 Hunting—Coed — **One credit**

This course is concerned with hunting safety; hunting techniques; knowledge of game laws, and markmanship. 1 (0-2)

191 Trap-Skeet—Coed — **One credit**

Develops, through practice, the skills and knowledge necessary to successfully participate in trap-skeet shooting. 1 (0-2)



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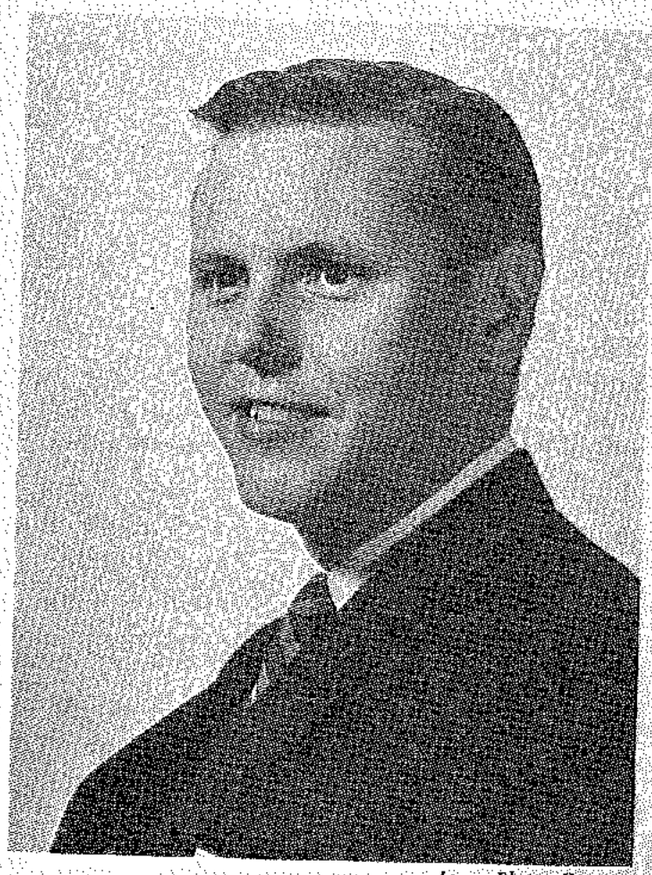
Division of Learning Resources



James Platte, Director

The services of the Division of Learning Resources are provided by the Department of Library Services and the Department of Instructional Media, and are administered by a staff of librarians, media specialists, library and media technicians, and student assistants.

The objectives of the Division are:

1. To acquire, produce and organize materials and equipment into a collection of resources that facilitate communication, individual learning, and effective instruction, recognizing the varied modes and levels of learning and the scope of modern instructional alternatives.
2. To administer a system of resources circulation that provides maximum use by all students and faculty.
3. To promote an effective learning environment in the libraries, the media centers, and the classrooms through instructing students in critical use of materials and by supporting the development of instructional strategies that demand the learner's use of resources.

Department of Library Services

Chairman: Ellen Person

The Department of Library Services has two major centers, the Arts and Science Library in the Division of Arts and Science Building, and the Dwight Rich Memorial Library (Business & Technology) in Old Central. These centers offer students and faculty the use of nearly 50,000 books and 500 periodicals as well as information stored on microfilm, audiotape, and phonodisc. College catalogs, art print and picture collections, annual reports of corporations, study collection of children's literature, Spanish language publications, Black Studies materials, pamphlet files, and newspapers on microfilm also reflect efforts to assemble a library responsive to student and curriculum needs. Faculty and library staff select the best of current materials on a continuing basis to keep information up-to-date and to present varying viewpoints on subjects and issues. Most materials are arranged in Dewey Decimal Classification order on open shelves. The card catalogs in each library index the entire collection by author, title, and subject.

Ellen Person

Other facilities and services of the libraries include conference and typing rooms, and carrels designed for individual study and audio programming. Microfilm reader-printer and photocopy machines provide low-cost copies. The Library Services staff of reference librarians and library technicians assist in student study by organizing reserve readings, providing reference services, and by giving individual and group instruction in library use. Interloan service is provided through the cooperation of the State of Michigan Library and the Michigan State University Library.

The library technical services are located in a wing of Dwight Rich Memorial Library. The staff (a technical services librarian and library technicians) order, index and process all material ordered by the libraries; receive and distribute all library mail and maintain a supply, bindery, order, mending and card duplication center. Central records of the total collection of the library services department are housed in this area.

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Department of Instructional Media

Dale Dunham

Chairman: Dale Dunham

The Department of Instructional Media provides services from two audio-visual distribution centers, a foto-grafik center, an audio and television production center, an AV maintenance center, and a planetarium multi-media center.

The audio visual distribution centers, located in both Old Central and the Arts and Science Building exist, primarily, to provide assistance to the faculty, enhancing classroom effectiveness with media.

The Production Foto-grafik Center produces 8mm and 16mm movies, and various forms of photography and graphic arts, for new and continuing audio-visual-tutorial (AVT) and programmed instruction.

The Audio and Television Production Center in the Arts and Science Building provides original audio production and educational programming to the entire college population, through carrels located in the Arts and Science Library. A library of 3,000 audio tapes and 1,500 records are available on a regular checkout basis for both student and faculty. The televiston service programs from eight to sixteen hours of educational television into CAS classrooms each day, and a library of 200 video tapes is available to the faculty.

The Instructional Media Department also is responsible for the maintenance of all audio visual equipment and of audio-visual-tutorial (AVT) laboratories within the college.

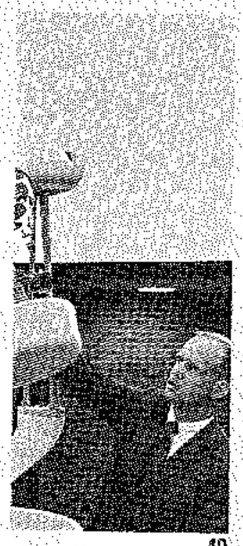
Faculty receive assistence from the coordinator of Instructional Development as they employ current instructional technology in the development of courses and programs.

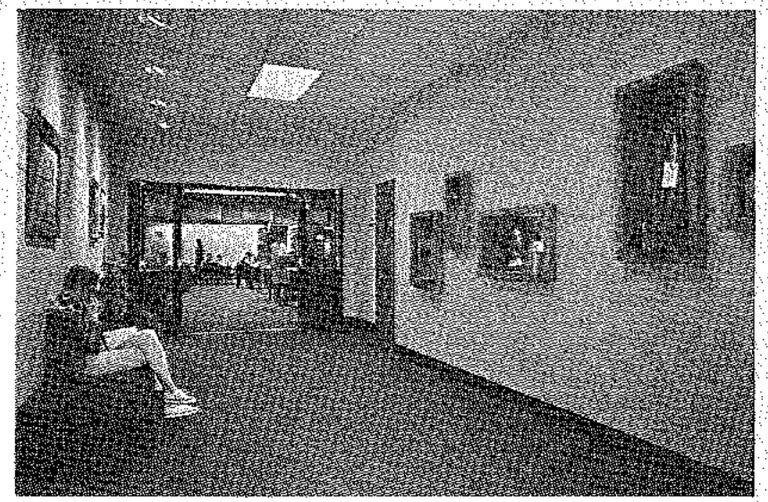
Planetarium

The Planetarium Multi-Media Center, as part of the Division of Learning Resources, represents a focal point for emerging activities in interdisciplinary education. It offers enhancement of classroom instruction to the departments of humanities, language arts, science, mathematics, and social science, and provides service to the other departments of the college, to the students, and to the community at large through special request programming.

The planetarium, with its auxiliary and special effects equipment, is capable of portraying some of the mystery and drama of the heavens, as well as the traditional offerings of planetaria. With a Spitz A-4 projector, planetarium programs may portray the appearance of the sky from any vantage point on earth in the past, present, or future.

The staff of the Planetarium Multi-Media Center is fundamentally concerned with helping students to understand and appreciate the difficulties faced by astronomers of the past who sorted through enormous amounts of data to provide our reasonably clear picture of the earth's place in the universe. To accomplish this objective, the program of the center concentrates on the interralationships existing within the universe.





Library Technology

The Library Technician

For the friendly, outgoing student with intellectual curiosity, many career possibilities are available through training as a library technician. The library technician is concerned with service to people, and is prepared to make materials available for information and for pleasure.

A library technician may be employed in school, public, academic or special libraries. Work may include ordering and preparing printed and audiovisual materials to be borrowed by library users. Technicians also work with the public and with librarians at circulation and information desks. They plan and assemble displays, exhibits and varied library programs. In some libraries, responsibility for maintenance, scheduling and production of audiovisual equipment and materials is assigned to technicians. The technician may also supervise other technicians, student aides and clerical personnel.

Work of the library technician varies according to the size of the library. In a large library the technician is usually assigned to one department, while duties in a small library may range widely.

Library Technology at Lansing Community College

The Department of Library Services offers library technology courses each term. The LT courses may be taken in any order, but students need departmental approval to register for LT 205 and LT 246. The student's elective program should provide either an agreeable career alternative, articulation with his preferred senior college program, or a combination of business and liberal arts courses for a general knowledge background. Students in library technology must present evidence of satisfactory typing skill or successfully complete a typing course.

Upon application, the Michigan Department of Education Bureau of Library Service grants a Library Technician Certificate to students successfully completing the two-year library technician program including at least five library technology courses. Lansing Community College grants a certificate to students successfully completing the one-year curriculum. Students are urged to consult with a counselor or the department in planning their programs.

Library Technology, One Year Certificate

		Fall Term	Credit Hours
LT	101	Library Resources	3
LT	201	Technical Services	4
ENG	121	Freshman English	4
SS	101	Social Science I	4
			15
		Winter Term	
LT	103	Public Service	4
LT	246	Library Practice or	
LT	205	Library Studies	3
ENG	122	Freshman English	4
PSY	201	Introduction to Psychology	4
			15
		Spring Term	
LT	203	Audiovisual Services;	4
		Recommended elective	4
ENG	123	Freshman English or	
ENG	124	Freshman English	4
		Recommended elective	3
			15

Recommended Electives:

BUS	109	Secretarial Machines	2
BUS	101	Intermediate Typewriting	3
BUS	220	Office Management I	3
BUS	215	Business Law I	3
BUS	223	Management and Supervisory Development	3
BUS	118	Introduction to Business	3
BUS	229	Public Relations	3
BUS	210	Principles of Accounting	4
BUS	110	Applied Accounting	4
DP	131	Survey of Data Processing	3
ENG	221	The Twentieth Century American Novel	3
ENG	240	The Film as Art	3
HUM	250	Survey of American Philosophy	3
HUM	260	Contemporary Social Philosophy	3
HUM	203	Religion in American Life	3
HUM	175	Introduction to Music Literature	3
ART	101	Design I—Introduction to Drawing	3
GEO	201	World Regional Geography	4
GEO	202	Geography of North America	3
GEO	203	Economic Geography	3
PSY	152	Applied Psychology	3
PSY	201	Introduction to Psychology	3
PSY	204	Educational Psychology	3
THR	220	Introduction to Theatre Arts	3
LT	110	Introduction to Photography	3

Library Technology, Associate Degree (8 pt. hold)

Library Technology, Associate Degree

Freshman Year		Fall Term	Credit Hours
LT	101	Library Resources	3
ENG	121	Freshman English	4
NS	101	Botany-Zoology	4
SS	101	Social Science I	4
			15
		Winter Term	
LT	103	Public Service	4
ENG	122	Freshman English	4
GEO	101	Principles of Geography or Geography elective	3-4
SS	102	Social Science II	4
			15-16
		Spring Term	
ENG	123	Freshman English or	
ENG	121	Freshman English	4
NS	103	Astrology-Geology or science elective	4
SS	103	Social Science III or	
SS	101	American Government	4
		Recommended elective	3
			15

Sophomore Year		Fall Term	Credit Hours
LT	201	Technical Services	4
		Psychology Elective	4
HUM	201	Western Civilization I	4
		Recommended elective	3
			15
		Winter Term	
LT	246	Library Practice or	
LT	205	Library Studies	3
		English elective	3
		Recommended elective	3
HUM	202	Western Civilization II	4
		Recommended elective	3
			16
		Spring Term	
LT	203	Audiovisual Services	4
		Recommended elective	3
HUM	203	Western Civilization III	4
SPH	104	Fundamentals of Speech	3
			14

Recommended Electives:

BUS	109	Secretarial Machines	2
BUS	101	Intermediate Typewriting	3
BUS	220	Office Management I	3
BUS	215	Business Law I	3
BUS	223	Management and Supervisory Development	3
BUS	118	Introduction to Business	3
BUS	229	Public Relations	3
BUS	210	Principles of Accounting	4
BUS	110	Applied Accounting	4
DP	131	Survey of Data Processing	3
ENG	211	The Twentieth Century American Novel	3
ENG	240	The Film as Art	3
HUM	250	Survey of American Philosophy	3
HUM	260	Contemporary Social Philosophy	3
HUM	203	Religion in American Life	3
HUM	175	Introduction to Music Literature	3
ART	101	Design I—Introduction to Drawing	3
GEO	201	World Regional Geography	4
GEO	202	Geography of North America	3
GEO	203	Economic Geography	3
PSY	152	Applied Psychology	3
PSY	201	Introduction to Psychology	3
PSY	204	Educational Psychology	3
THR	220	Introduction to Theatre Arts	3
LT	110	Introduction to Photography	3

101 Library Resources — **Three credits**

An introduction to contemporary patterns of library services. Library career opportunities are examined with emphasis on library technicians. Students learn basic resources and services common to most libraries by solving problems through library inquiry. Students become familiar with resources of area libraries. Required.

103 Public Service — **Four credits**

A review of information work with readers in public, school, academic and special libraries familarizes students with specialized reference materials. Topics such as public relations, inter-library cooperation, and work with children are considered. Methods and materials used to organize and circulate library collections are studied. Required.

110 Introduction to Photography — **Three credits**

History of photography; general principles of the "technically-perfect negative"; familiarization with materials and operation of the 35mm camera. Black and white contact and enlargement printing, starting with unexposed film, exposing and processing, and using the enlarger to produce a finished enlargement. Must have 35mm camera to enroll. Not required.

201 Technical Services — **Four credits**

Study of the organization of a technical services department emphasizes the relationships between ordering and cataloging work. Aims toward giving an understanding and simple application of Dewey Decimal and Library of Congress classification schemes. Cataloging instruction emphasizes unit card preparation, printed cards, cataloging tools, subject heading, cuttering, card catalog maintenance and filing. Classification and cataloging of non-book materials are included. Practice in physical preparation and maintenance of materials is provided. Required.

203 Audiovisual Services — **Four credits**

Exploration of the use and handling of newer media at all levels of library service. Students learn to operate equipment and prepare simple audiovisuals. Ordering, organizing and circulating AV materials and equipment are studied. Required.

205 Library Studies — **One-three hours—variable credit**

A topically varied seminar-style course designed to meet special needs of individuals and specialized interests of those preparing to work in libraries. Prerequisite: Departmental approval. Either 205 or 246 is required.

246 Library Practice — **Three credits**

An opportunity to integrate and apply previous course work during a minimum of 80 hours work in an area library. A series of planning and evaluation sessions with course advisor are included. Prerequisite: Departmental approval. Either 246 or 205 is required.

To burn always with this hard, gemlike flame, to maintain this ecstasy, is success in life.

Walter Pater

DIVISION OF ARTS AND SCIENCE

Department of Humanities

Department of Language Arts

Department of Mathematics

Department of Science

Department of Social Science

Division of Arts and Science

Dean Sam Kintzer

Philosophy

The Division of Arts and Science confronts the student with the full scope of man's knowledge about himself and his world. Through the understanding of past and present social, cultural, and intellectual forces, the student is better equipped to make the contribution of responsible citizenship in a democratic society and to prepare for the fast-changing world of the last quarter of the twentieth century.

Purposes

Purposes of this division of Lansing Community College, simply stated, are:

To provide general education for all students regardless of curricula.

To offer freshman and sophomore liberal arts courses paralleling the first two years of university training.

To award associate degrees in arts and associate degrees in science to a student who earns 90 credits of study and who also meets the academic requirements for graduation as stated by the college.

To offer pre-professional curricula enabling students to transfer after two years of study to advanced training at four-year colleges and universities.

To provide a program of study through which the student is assisted to develop an awareness of himself and his value system.

To encourage the student to search for truth in the heritages of our civilization and of other cultures so that he may comprehend the dignity of man.

To facilitate the attainment of these goals the division of arts and sciences:

- Provides students with an array of instructional environments: independent study, off-campus courses in the field and community, individualized self-paced learning courses, audio-visual-tutorial studies, lecture-discussion, and seminar classes.
- Provides students with courses during the day and evening permitting an appropriate schedule selection for those students who need to spend part of each day at work to earn tuition and expenses. Those individuals fully employed during the daytime, whether at a job or in the home, may begin their college education or take courses for personal enrichment by enrolling in a variety of evening courses.
- Recognizes that thoughtful understanding of the issues of concern of the closing decades of the twentieth century requires of each individual that he read, write, and speak with clarity and sophistication. To accomplish this, the division provides for all students with problems in communication such courses as will assist them to read with mature comprehension and to write and speak effectively.
- Establishes honors courses, invites guest speakers, holds special workshops and seminars for the academically able student with a wider range of interest. Programs of this kind are also made available to residents of the community to serve a continuing education need.

High School Honors Institute

Each summer the Division of Arts and Science offers an opportunity for advanced study to outstanding high school juniors and seniors of the Lansing area. Zoology, geology, foreign languages, and foreign studies have been some of the courses offered in the past. For further information, the student interested in this program should contact the college admissions officer or his high school principal as to the courses offered in a particular summer.

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.

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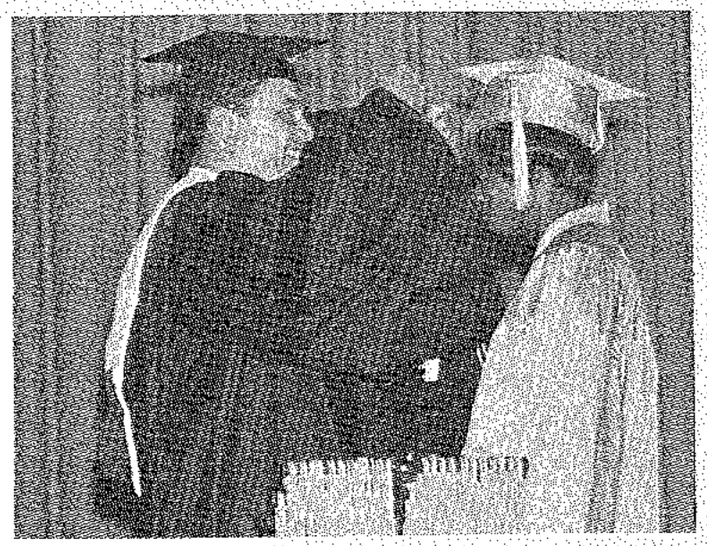

Associate Degree Programs

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

The division confers the Associate in Arts, Associate in Science, and Associate General. The requirements for these degrees are as follow:

1. The student is required to take at least 12 credits in each of the following areas: Humanities, Freshman English, Science, and Social Science.
   a. It is recommended that the requirement of 12 credits in Humanities be fulfilled by the sequence in Western Civilization, HUM 201, 202, 203. As an alternate to the preceding recommendation, students who do not choose to follow this recommendation are required to take not less than eight credits in history, which may include history of art and not less than four credits in Philosophy and/or Religion in fulfillment of the requirement of 12 credits in the humanities.
   b. It is required that the 12 credits in science be fulfilled by a minimum of four credits in Biological Science and four credits in Physical Science.
2. No more than 12 credits outside of traditional liberal arts would be accepted toward a degree except where specifically required by curriculum guides. Courses such as Principles of Economics and Fine Arts will be considered as Liberal Arts.
3. Courses for institutional credit only will not be included in the 90 credit total.

The student who seeks an Associate Degree without a major may elect the following program. The electives should be selected in consultation with the student's counselor prior to registration. A minimum of ninety credit hours is required for an Associate Degree.

Associate in Arts Degree

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
NS		Natural Science	4
SS	101	Social Science I	4
		Elective	3-4
PSY	101	Orientation	1
PE	101	or 111 Physical Education	2
			18-19
		Winter Term	
ENG	122	Freshman English	4
NS		Natural Science	4
SS	102	Social Science II	4
		Elective	3-4
PE	102	Physical Education Elective*	1
			16-17
		Spring Term	
ENG	123	Freshman English OR	
ENG	124	Freshman English	4
NS		Natural Science	4
SS	103	Social Science II	4
		Elective	3-4
			15-16

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization	4
		Electives	11
			15
		Winter Term	
HUM	202	Western Civilization	4
		Electives	11
			15
		Spring Term	
HUM	203	Western Civilization	4
		Electives	11
			15

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

*Elective may be taken any term.

Associate in Arts—American Studies Major

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
SS	101	Social Science I	4
		Natural Science**	4
HST	111	American History I	4
SO	101	Orientation	1
			17
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
		Natural Science**	4
HST	112	American History II	4
PE	110	Physical Education	2
			18
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
		Natural Science**	4
HST	210	Studies in American History	4
		Physical Education Elective	1
			17

Sophomore Year		Fall Term	Credit Hours
HST	150	Afro-American History	4
SS	275	Contemporary Social Problems	3
ENG	250	Masterpieces of American Literature	3
		Electives	6
			16
		Winter Term	
HST	160	Modern Mexico	3
PLS	150	American Political Parties and Elections	3
ENG	260	Survey of Afro-American Literature	3
		Electives	6
			15
		Spring Term	
HST	170	The Indians of North America	3
PLS	210	Contemporary Political Affairs	3
		Electives	9
			15

Recommended Electives:

Humanities

HUM 201-202-203
Western Civilization I, II, III . . . 12
PHL 230 Survey of American Philosophy . . . 4
REL 203 Religion in American Life . . . 4

Language Arts

ENG 210 The 19th Century American Novel . 3
ENG 211 The 20th Century American Novel . 3

Students desiring to change their curriculum are required to consult with a counselor in Counseling Services.

*Elective may be taken any term.

**Natural Science consists of: NS 101 Botany-Zoology, NS 102 Chemistry-Physics, NS 103 Astronomy-Geology. It is not necessary to take these in sequence.

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Associate in Arts — Humanities Major with emphasis in History

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
SS	101	Social Science I	4
HST	111	American History I	4
		Elective	3-4
SO	101	Orientation	1
			16-17
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
HST	112	American History II	3
		Elective	3-4
PE	110	or 111 Physical Education	2
			16-17
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
HST	210	Studies in American History	4
		Elective	3-4
		Physical Education Elective*	1
			16-17

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization I	4
		Natural Science**	4
		Foreign Language***	4
		Elective	3-4
			15-16
		Winter Term	
HUM	202	Western Civilization II	4
		Natural Science**	4
		Foreign Language***	4
		Elective	3-4
			15-16
		Spring Term	
HUM	203	Western Civilization III	4
		Natural Science**	4
		Foreign Language***	4
		Elective	3-4
			15-16

Associate in Arts — Humanities Major with emphasis in Philosophy and/or Religion

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
		Natural Science**	4
SS	101	Social Science I	4
SO	101	Orientation	1
		Elective(s)	3-4
			16-17
		Winter Term	
ENG	122	Freshman English	4
		Natural Science**	4
SS	102	Social Science II	4
PE	110	or 111 Physical Education	2
		Elective(s)	3-4
			17-18
		Spring Term	
ENG	123	Freshman English	4
		Natural Science**	4
SS	103	Social Science III	4
		Physical Education Elective*	1
		Elective(s)	3-4
			16-17

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization I	4
		Foreign Language***	4
PHL	201	Philosophy	4
		Elective(s)	3-4
			15-16
		Winter Term	
HUM	202	Western Civilization II	4
		Foreign Language***	4
PHL	202	Philosophy	4
		Elective(s)	3-4
			15-16
		Spring Term	
HUM	203	Western Civilization III	4
		Foreign Language***	4
PHL	203	Philosophy	4
		Elective(s)	3-4
			15-16

*Elective may be taken any term.

**Natural Science consists of NS 101 Boiling Zoology, NS 102 Chemistry Physics, NS 103 Astronomy Geology. It is not necessary to take these in sequence.

***Student may substitute an elective if he has transferred the equivalent of year's college work in one language.

Students desiring to change their curriculum are required to consult with a counselor in Counseling Services.

Associate in Arts — Language Arts Major with emphasis in English

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
NS		Natural Science	4
SS	101	Social Science I	4
PE	110	or 111 Physical Education	1
	101	Foreign Language	4
			17
		Winter Term	
ENG	122	Freshman English	4
NS		Natural Science	4
SS	102	Social Science II	4
PE		Physical Education Elective*	1
	102	Foreign Language	4
			17
		Spring Term	
ENG	123	Freshman English	4
NS		Natural Science	4
SS	103	Social Science III	4
	103	Foreign Language	4
			16

Sophomore Year		Fall Term	Credit Hours
ENG	201	Introduction to Literature	3
HUM	201	Western Civilization	4
	201	Foreign Language	4
		Elective	3
			14
		Winter Term	
ENG	202	Introduction to Literature	3
ENG	260	Survey of Afro-American Literature	3
HUM	202	Western Civilization	4
	202	Foreign Language	4
			14
		Spring Term	
ENG	203	Introduction to Literature	3
HUM	203	Western Civilization	4
	203	Foreign Language	4
		Elective	3
			14

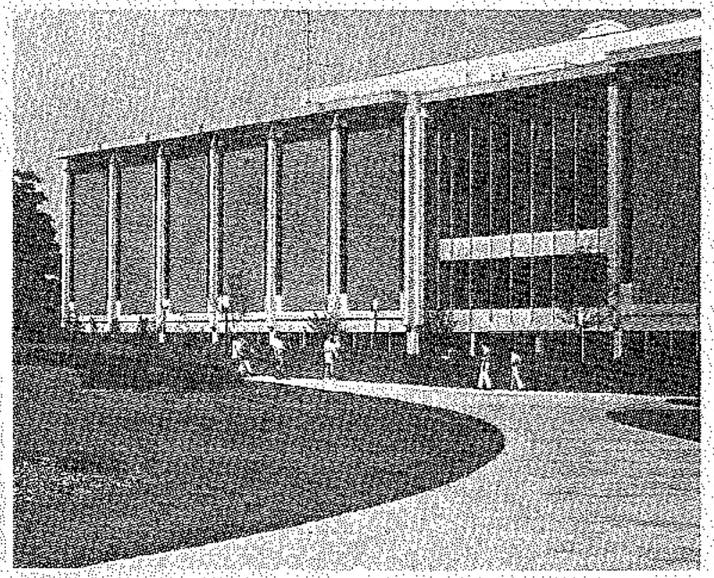
*Elective may be taken any term.

Electives:

1. Highly Recommended: HST 130 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
ENG	230	HST	111, 112, 210
ENG	210, 211**	PLS	250, 271
ENG	290	SS	270

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



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

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
ENG 230	Introduction to English Linguistics	3
101	Foreign Language	4
SS 101	Social Science I	4
PE 110	or 111 Physical Education	2
		17
	Winter Term	
ENG 122	Freshman English	4
SPH 104	Fundamentals of Speech	3
102	Foreign Language	4
SS 102	Social Science II	4
PE	Physical Education Elective*	1
		16
	Spring Term	
ENG 123	Freshman English	4
SPH 105	Voice and Articulation	3
103	Foreign Language	4
SS 103	Social Science III	4
		15

Sophomore Year	Fall Term	Credit Hours
NS	Natural Science	4
201	Foreign Language	4
HUM 201	Western Civilization	4
	Elective	3
		15
	Winter Term	
NS	Natural Science	4
202	Foreign Language	4
HUM 202	Western Civilization	4
ENG 260	Survey of Afro-American Literature	3
		15
	Spring Term	
NS	Natural Science	4
203	Foreign Language	4
HUM 203	Western Civilization	4
	Elective	3
		15

Electives:

1. Highly Recommended:
   HST 150 Afro-American History (4)
   SS 270 Introduction to Anthropology (4)
2. Recommended: (Required for Pre-Teaching Programs):
   PSY 201 Introduction to Psychology (4)
   PSY 204 Educational Psychology (3)
3. Recommended:
   ENG 201, 202, 203
   PHIL 201, 202, 203
   HST 111, 112, 210

Associate in Arts — Language Arts Major with emphasis in Speech

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
SS 101	Social Science I	4
SPH 104	Fundamentals of Speech	3
NS	Natural Science	4
PE 110	or 111 Physical Education	1
		16
	Winter Term	
ENG 122	Freshman English	4
SS 102	Social Science II	4
SPH 105	Voice and Articulation	3
NS	Natural Science	4
PE	Physical Education Elective*	1
		16
	Spring Term	
ENG 123	Freshman English	4
SPH 201	Interpretive Reading	3
SS 103	Social Science III	4
NS	Natural Science	4
		16

*Elective may be taken any term.

Sophomore Year	Fall Term	Credit Hours
ENG 230	Introduction to English Linguistics	3
HUM 201	Western Civilization	4
SPH 202	Discussion and Debate	3
ENG 201	Introduction to Literature	3
	Elective	3
		16
	Winter Term	
SPH 220	Introduction to Theater Arts	3
ENG 202	Introduction to Literature	3
ENG 260	Survey of Afro-American Literature	3
HUM 202	Western Civilization	4
	Elective	3
		16
	Spring Term	
ENG 290	Shakespeare	3
SPH 221	Play Production	3
HUM 203	Western Civilization	4
ENG 203	Introduction to Literature	3
	Elective	3
		16

Electives:

1. Highly Recommended:
   HST 150 Afro-American History (4)
2. Recommended (Check individual Transfer Programs):
   PSY 201 Introduction to Psychology (4)
   PSY 204 Educational Psychology (3)
3. Recommended:
   HST 111, 112, 210
   PHIL 201, 202, 203
   SS 270
   Foreign Language 101, 102, 103

Associate in Arts — Psychology Major

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
SS 101	Social Science I	4
HUM 201	Western Civilization I	4
PSY 101	Orientation*	1
PE	Physical Education*	1-2
	Elective***	4
		18-19
	Winter Term	
ENG 122	Freshman English	4
SS 102	Social Science II	4
HUM 202	Western Civilization II	4
PE	Physical Education*	1
PSY 201	Introduction to Psychology	4
		17
	Spring Term	
ENG 123	Freshman English	4
SS 103	Social Science III	4
HUM 203	Western Civilization III	4
PE	Physical Education*	1
	Elective***	4
		17

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

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

A

MTH 164	College Algebra & Trigonometry I	3
MTH 165	College Algebra & Trigonometry II	5

B

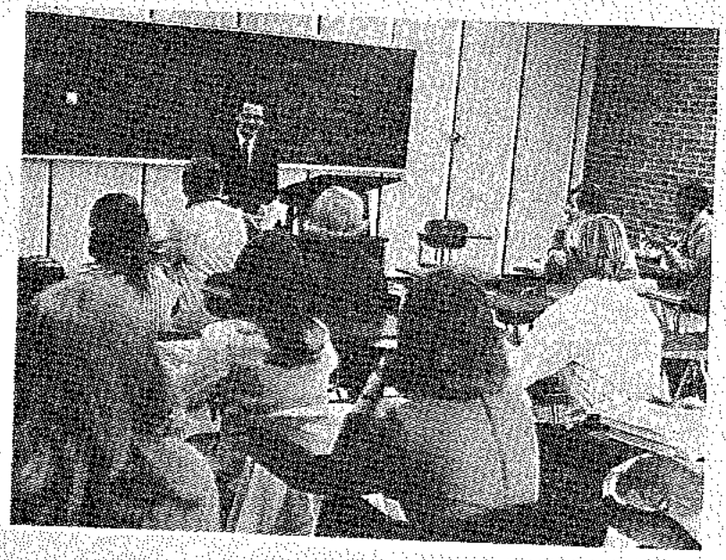
MTH 102	Introductory Algebra	3
MTH 158	Descriptive Statistics	3

Psychology. Select three courses from the following:

PSY 202	Psychology of Personality	3
PSY 203	Social Psychology	3
PSY 204	Educational Psychology	3
PSY 205	Growth & Development	3

Social Science. Select three courses from any of the following: Political Science 200, 210, 260, 270; Sociology and Anthropology 200, 220, 234, 255, 270, 271; Geography 101, 201, 202, 203.

Optional selection of 8 to 10 hours.



Associate in Arts — Social Science Major

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 and lectures, as well as the applied areas within the college and the larger community.

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
SS	101	Social Science I	4
HUM	201	Western Civilization I	4
PSY	101	Orientation*	1
PE	110	or 111 Physical Education*	2
		Elective**	1
			16
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
HUM	202	Western Civilization II	4
PE		Physical Education*	1
PSY	201	Introduction to Psychology	4
			17
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
HUM	203	Western Civilization III	4
		Elective***	4
			16

Sophomore Year		Fall Term	Credit Hours
HIST	130	Afro-American History	4
NS		Natural Science**	4
		Electives***	8
			16
		Winter Term	
NS		Natural Science**	4
		Electives***	11
			15
		Spring Term	
NS		Natural Science**	4
		Electives***	11
			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

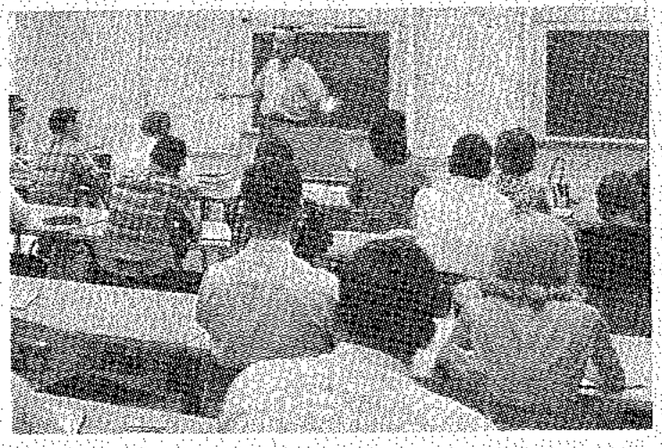
*** Electives should be selected from the following categories:

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, 240, 260, 271.
B. Sociology and Anthropology: 200, 220, 234, 235, 270, 271.

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



Associate in Science Degree

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
MTH	161	College Algebra & Trig. I	5
		Science Electives	4-5
PSY	101	Orientation	1
PE	110	or 111 Physical Education	2
			16-17
		Winter Term	
ENG	122	Freshman English	4
MTH	165	College Algebra & Trig. II	5
		Science Elective	4-5
PE		Physical Education Elective*	1
		Elective	3
			17-18
		Spring Term	
ENG	123	Freshman English	4
		Science Mathematics	9-10
		Elective	3
			16-17

* Elective may be taken any term.

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization	4
SS	101	Social Science I	4
		Science or Math. Elective	8
			16
		Winter Term	
HUM	202	Western Civilization	4
SS	102	Social Science II	4
		Science or Math Elective	8
			16
		Spring Term	
HUM	203	Western Civilization	4
SS	103	Social Science III	4
		Science or Math Elective	8
			16

Associate in Science — Biology Major

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
MTH	164	College Algebra & Trig. I	5
BIO	107	General Biology I	4
PSY	101	Orientation	1
PE	110	or 111 Physical Education	2
			16
		Winter Term	
ENG	122	Freshman English	4
MTH	165	College Algebra & Trig. II	5
BIO	108	General Biology II	4
PE		Physical Education Elective*	1
		Elective	3
			17
		Spring Term	
ENG	123	Freshman English	4
BIO	109	General Biology III	4
		Math or Science Elective	5
			13

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization	4
SS	101	Social Science I	4
CEM	111	General Chemistry	5
		Elective	4
			17
		Winter Term	
HUM	202	Western Civilization	4
SS	102	Social Science II	4
CEM	112	General Chemistry	5
		Elective	4
			17
		Spring Term	
HUM	203	Western Civilization	4
SS	103	Social Science III	4
CEM	113	Qualitative Analysis	5
		Elective	4
			17

Recommended Electives

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

* Prerequisite Trigonometry or approval of the department.

** Prerequisite MTH 213 or approval of the department.

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Associate in Science — Chemistry Major

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
MTH 164	College Algebra & Trig I	5
CEM 111	General Chemistry	5
PSY 101	Orientation	1
PE 110 or 111	Physical Education	2
		17
	Winter Term	
ENG 122	Freshman English	4
MTH 165	College Algebra & Trigonometry II	5
CEM 112	General Chemistry	5
PE	Physical Education*	1
		15
	Spring Term	
ENG 123	Freshman English	4
CEM 113	General Chemistry	5
	Math of Science Electives	3
		11

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
SS 101	Social Science I	4
CEM 201	Organic Chemistry	5
	Elective	4
		17
	Winter Term	
HUM 202	Western Civilization	4
SS 102	Social Science II	4
CEM 202	Organic Chemistry	5
	Elective	4
		17
	Spring Term	
HUM 203	Western Civilization	4
SS 103	Social Science III	4
CEM 203	Organic Chemistry	5
	Elective	4
		17

*Elective may be taken any term.

Associate in Science — Earth Science

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
MTH 164	College Algebra & Trigonometry I	5
SO 101	Orientation	1
CEM 111	General Chemistry*	5
	Physical Education	2
		17
	Winter Term	
ENG 122	Freshman English	4
MTH 165	College Algebra & Trigonometry II	5
CEM 112	General Chemistry	5
	Physical Education Elective*	1
		15
	Spring Term	
ENG 123	Freshman English	4
GLG 210	Physical Geology	4
CEM 113	Qualitative Analysis	5
		17

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization I	4
SS 101	Social Science I	4
GLG 211	Historical Geology	4
PHY 201	Physics**	4
		16
	Winter Term	
HUM 202	Western Civilization II	4
MET 112	Introduction to Meteorology	4
PHY 202	Physics	4
AST 201	Introduction to Astronomy	4
		16
	Spring Term	
HUM 203	Western Civilization III	4
SS 101	American Government	5
PHY 203	Physics	4
	Science or Math Elective	4
		16

RECOMMENDED ELECTIVES

MTH 213	Analytical Geometry & Calculus I	5
MTH 214	Analytical Geometry & Calculus II	5
MTH 215	Analytical Geometry & Calculus III	5
BIO 107	General Biology I	4
BIO 108	General Biology II	4
BIO 109	General Biology III	4
BIO 201	Zoology I	4
BIO 202	Zoology II	4
BIO 203	Botany	4

*Elective may be taken any term.

Associate in Science — Physics Major

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
MTH 150	College Algebra and Trig	5
CEM 111	General Chemistry	5
PSY 101	Orientation	1
PE 110 or 111	Physical Education	2
		17
	Winter Term	
ENG 122	Freshman English	4
MTH 213	Analytical Geometry & Calculus I	5
CEM 112	General Chemistry	5
PE	Physical Education Elective*	1
	Elective	3
		18
	Spring Term	
ENG 123	Freshman English	4
MTH 214	Analytical Geometry & Calculus II	5
CEM 113	General Chemistry	5
	Elective	3
		17

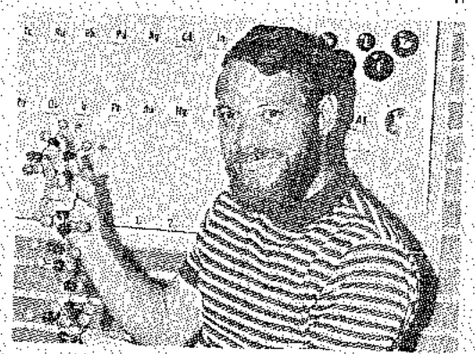
Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
SS 101	Social Science I	4
PHY 211	Physics	4
MTH 215	Analytical Geometry & Calculus III	5
		17
	Winter Term	
HUM 202	Western Civilization	4
SS 102	Social Science II	4
PHY 212	Physics	4
MTH 216	Analytical Geometry & Calculus IV	5
		17
	Spring Term	
HUM 203	Western Civilization	4
SS 103	Social Science III	4
PHY 213	Physics	4
MTH 234	Theory of Matrices (Recommended)	4
		16

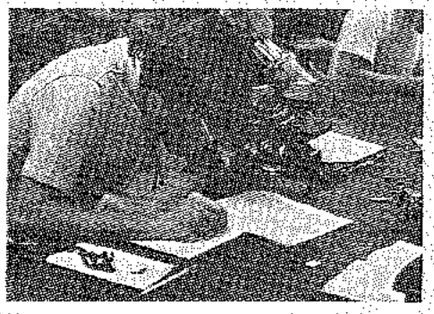
*Elective may be taken any term.

Associate in Science — Mathematics Major

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
MTH 164	College Algebra and Trigonometry I	5
SS 101	Social Science I	4
PSY 101	Orientation	1
PE 110 or 111	Physical Education	2
		16
	Winter Term	
ENG 122	Freshman English	4
MTH 165	College Algebra and Trigonometry II	5
SS 102	Social Science II	4
PE	Physical Education Elective*	1
	Elective	2
		16
	Spring Term	
ENG 123	Freshman English	4
SS 103	Social Science III	4
MTH 213	Analytical Geometry & Calculus I	5

Sophomore Year	Fall Term	Credit Hours
HUM 201	Western Civilization	4
MTH 214	Analytical Geometry & Calculus II	5
NS	Natural Science	4
	Elective	2
		15
	Winter Term	
HUM 202	Western Civilization	4
MTH 215	Analytical Geometry & Calculus III	5
NS	Natural Science	4
	Elective	4
		17
	Spring Term	
HUM 203	Western Civilization	4
MTH 216	Analytical Geometry & Calculus IV	5
NS	Natural Science	4
MTH 234	Theory of Matrices	4
		17





Pre-Professional Program

The pre-professional curriculums offered by the College of Arts and Science 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.

Admission 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	Freshman English	4
MTH 164	College Algebra & Trigonometry	5
CEM 111	Inorganic Chemistry	5
BIO 107	General Biology I	4
		18
	Winter Term	
ENG 122	Freshman English	4
MTH 165	College Algebra & Trigonometry II	5
CEM 112	Inorganic Chemistry	5
BIO 108	General Biology II	4
		18
	Spring Term	
ENG 123	Freshman English	4
CEM 113	Inorganic Chemistry	5
BIO 109	General Biology III	4
PSY 201	Intro. to Psychology	4
		17

Sophomore Year	Fall Term	Credit Hours
CEM 201	Organic Chemistry	5
SS 101	Social Science I	4
HUM 201	Western Civilization	4
	Elective	3-4
		16-17
	Winter Term	
CEM 202	Organic Chemistry	5
SS 102	Social Science II	4
HUM 202	Western Civilization	4
	Elective	3-4
		16-17
	Spring Term	
CEM 203	Organic Chemistry	5
SS 103	Social Science III	4
HUM 203	Western Civilization	4
	Elective	3-4
		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

Pre-Dentistry

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
ENG 121	Freshman English	4
BIO 201	Zoology	4
SS 101	Social Science I	4
CEM 111	Inorganic Chemistry	5
PE 110	or 111 Physical Education	2
		20
	Winter Term	
ENG 122	Freshman English	4
BIO 202	Zoology	4
SS 102	Social Science II	4
CEM 112	Inorganic Chemistry	5
PE	Physical Education Elective*	1
		18
	Spring Term	
ENG 123	Freshman English	4
BIO 203	Botany	4
SS 103	Social Science III	4
CEM 113	Qualitative Analysis	5
		17

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

Pre-Law

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English	4
HST 111	American History	4
SS 101	Social Science I	4
	Foreign Language	4
PSY 101	Orientation	1
		17
	Winter Term	
ENG 122	Freshman English	4
HST 112	American History	4
SS 102	Social Science II	4
	Foreign Language	4
PE	Physical Education Elective*	1
		17
	Spring Term	
ENG 123	Freshman English	4
HST 210	Studies in American History	4
SS 103	Social Science III	4
	Foreign Language	4
		16

Sophomore Year	Fall Term	Credit Hours
PHL 201	Philosophy	4
EC 201	Economics	3
HUM 201	Western Civilization	4
NS	Natural Science	4
	Elective	3
		18
	Winter Term	
PHL 202	Philosophy	4
EC 202	Economics	3
HUM 202	Western Civilization	4
NS	Natural Science	4
	Elective	3
		18
	Spring Term	
PHL 203	Philosophy	4
EC 203	Economics	3
HUM 203	Western Civilization	4
NS	Natural Science	4
	Elective	3
		18

*Elective may be taken any term.

Recommended Electives:

Literature
Language
Accounting
Psychology
Speech
Geography

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Pre-Medical

Medical school applicants must present at least 90 semester hours of credit. Two-thirds of these, or 90 term hours, may be taken at Lansing Community College.

Pre-medical students should be familiar with the requirements of the medical school of their choice and adjust their programs of study accordingly — in consultation with their advisers. The University of Michigan School of Medicine, for example, requires facility with a foreign language.

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
ENG 121	Freshman English	4
SS 101	Social Science I	4
BIO 201	Zoology	5
CEM 111	General Chemistry	4
		18
	Winter Term	
ENG 122	Freshman English	4
SS 102	Social Science II	4
BIO 202	Zoology	5
CEM 112	General Chemistry	4
PE	Physical Education Elective*	1
		18
	Spring Term	
ENG 123	Freshman English	4
SS 103	Social Science III	4
BIO 203	Botany	5
CEM 113	Qualitative Analysis	4
		17

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

Pre-Mortuary Science

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

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

Freshman Year	Fall Term	Credit Hours
PSY 101	Orientation	1
SS 101	Social Science I	4
CEM 101	Introduction to Chemistry	3
ENG 121	Freshman English	4
PE 110	or 111 Physical Education	2
	Elective	3
		18
	Winter Term	
ENG 122	Freshman English	4
SS 102	Social Science II	4
CEM 102	Introduction to Chemistry	3
MTH 102	Intermediate Algebra	5
PE	Physical Education Elective*	1
		17
	Spring Term	
ENG 123	Freshman English	4
SS 103	Social Science III	4
CEM 103	Introduction to Chemistry	3
	Electives	4
		15

*Elective may be taken any term.

Sophomore Year	Fall Term	Credit Hours
PSY 201	Psychology	4
BIO 201	Zoology	4
	Electives	8
		16
	Winter Term	
PSY 202	Psychology of Personality	3
BIO 202	Zoology	4
	Electives	8
		15
	Spring Term	
ENG 101	Speech	3
PSY 203	Social Psychology	3
	Electives	8
		14

Recommended Electives:
- Accounting
- Humanities
- Social Sciences
- Science
- Mathematics

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
ENG 121	Freshman English	4
CEM 111	Inorganic Chemistry	5
SS 101	Social Science I	4
PSY 201	Introduction to Psychology	4
PSY 101	Orientation	1
PE 110	or 111 Physical Education	2
		20

Freshman Year	Winter Term	Credit Hours
ENG 122	Freshman English	4
CEM 112	Inorganic Chemistry	5
SS 102	Social Science II	4
	Social Science Elective	4
PE	Physical Education Elective*	1
		18

Freshman Year	Spring Term	Credit Hours
ENG 123	Freshman English	4
CEM 113	Qualitative Analysis	5
SS 103	Social Science III	4
	Electives	4
		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
ENG 124	Freshman Composition	4
CEM 111	Inorganic Chemistry	5
SS 101	Social Science I	4
NS	Natural Science	4
PSY 101	Orientation	1
PE 110	or 111 Physical Education	2
		20

Freshman Year	Winter Term	Credit Hours
ENG 122	Freshman English	4
CEM 112	Inorganic Chemistry	5
SS 102	Social Science II	4
NS	Natural Science	4
PE	Physical Education Elective*	1
		18

Freshman Year	Spring Term	Credit Hours
ENG 123	Freshman English	4
CEM 113	Qualitative Analysis	5
SS 103	Social Science III	4
NS	Natural Science	4
		17

*Elective may be taken any term.

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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
PSY	101	Orientation	1
ENG	121	Freshman English	4
CEM	111	Inorganic Chemistry	5
SS	101	Social Science I	4
PSY	201	Psychology	4
PE	110	or 111 Physical Education	2
			20

Freshman Year		Winter Term	Credit Hours
ENG	122	Freshman English	4
CEM	112	Inorganic Chemistry	5
SS	102	Social Science II	4
PSY	202	Psychology of Personality	3
PE	102	Physical Education Elective*	1
			17

Freshman Year		Spring Term	Credit Hours
ENG	123	Freshman English	4
CEM	113	Qualitative Analysis	5
SS	103	Social Science III	4
PSY	203	Social Psychology	3
			16

Pre-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
ENG	121	Freshman English	3
BIO	201	Zoology	4
SS	101	Social Science I	4
PSY	101	Orientation	1
PE	110	or 111 Physical Education	1
SPH	104	Speech Fundamentals	3
			16

Freshman Year		Winter Term	Credit Hours
ENG	122	Freshman English	3
BIO	202	Zoology	4
SS	102	Social Science II	4
PE	102	Physical Education	1
NS	102	Chem-Physics	4
			16

Freshman Year		Spring Term	Credit Hours
ENG	123	Freshman English	3
BIO	203	Botany	4
SS	103	Social Science III	4
NS	103	Astronomy-Geology	4
PE	103	Physical Education	1
			16

Pre-Optometry

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

Students may take either 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
ENG	121	Freshman English	4
CEM	111	Inorganic Chemistry	5
PE	110	or 111 Physical Education	2
PSY	101	Orientation	1
MTH	164	College Algebra & Trig. I	5
			17
		Winter Term	
ENG	122	Freshman English	4
CEM	112	Inorganic Chemistry	5
PE		Physical Education Elective*	1
SS	101	Social Science I	4
MTH	165	College Algebra & Trig. II	5
			19
		Spring Term	
ENG	123	Freshman English	4
CEM	113	Qualitative Analysis	5
		Elective	3
			12

Sophomore Year		Fall Term	Credit Hours
CEM	201	Organic Chemistry	5
PHY	201	Physics	4
EC	201	Economics	3
BIO	201	Zoology	4
			16
		Winter Term	
CEM	202	Organic Chemistry	5
PHY	202	Physics	4
EC	202	Economics	3
BIO	202	Zoology	4
			16
		Spring Term	
CEM	203	Organic Chemistry	5
PHY	203	Physics	4
EC	203	Economics	3
SS	104	American Government	4
BIO	203	Botany	4
			20

*Elective may be taken any term.

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
ENG	121	Freshman English	4
CEM	111	Inorganic Chemistry	5
MTH	164	College Algebra & Trigonometry I	5
		Foreign Language	4
PE	110	or 111 Physical Education	2
PSY	101	Orientation	1
			21
		Winter Term	
ENG	122	Freshman English	4
CEM	112	Inorganic Chemistry	5
MTH	165	College Algebra & Trigonometry II	5
		Foreign Language	4
PE		Physical Education Elective*	1
			19
		Spring Term	
ENG	123	Freshman English	4
CEM	113	Qualitative Analysis	5
		Foreign Language	4
			13

Sophomore Year		Fall Term	Credit Hours
SS	101	Social Science I	4
CEM	201	Organic Chemistry	5
PSY	201	Intro. to Psychology	4
BIO	201	Zoology	4
			17
		Winter Term	
SS	102	Social Science II	4
CEM	202	Organic Chemistry	5
BIO	202	Zoology	4
		Elective	3
			16
		Spring Term	
SS	103	Social Science III	4
CEM	203	Quantitative Analysis Organic Chemistry	5
PSY	203	Social Psychology	3
BIO	203	Botany	4
		Elective	3
			19

*Elective may be taken any term.

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Pre-Social Work

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.

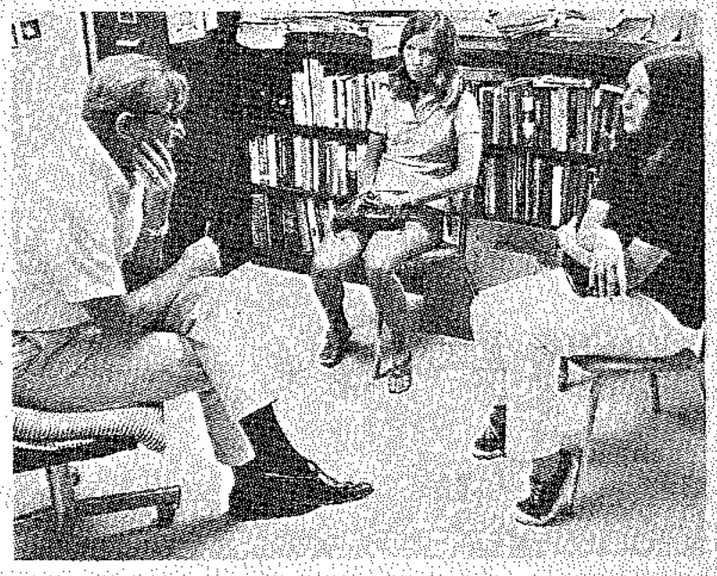
Freshman Year		Fall Term	Credit Hours
PSY	101	Orientation*	1
ENG	121	Freshman English	4
SS	101	Social Science I	4
		Foreign Language	4
		Elective	4
			17
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
PSY	201	Introduction to Psychology	4
		Foreign Language	4
			16
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
PSY	202	Psychology of Personality	3
		Foreign Language	4
			15

Sophomore Year		Fall Term	Credit Hours
HST		Afro-American History	4
HUM	201	Western Civilization I	4
NS	101	Botany-Zoology	4
		Elective	4
			16
		Winter Term	
SS	253	Social Problems	3
HUM	202	Western Civilization II	4
NS	102	Chemistry-Physics	4
		Electives	4
			15
		Spring Term	
SS	251	Marriage and Family	3
HUM	203	Western Civilization III	4
NS	103	Astronomy-Geology	4
		Electives	4
			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 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
ENG	121	Freshman English	4
SS	101	Social Science I	4
NS		Natural Science	4
ED	150	Introduction to Education	3
PSY	101	Orientation*	1
PE	101	Physical Education*	1
			17
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
NS		Natural Science	4
SPH	104	Fund. of Speech	3
PE	102	Physical Education*	1
			16
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
NS		Natural Science	4
MTH	200	Arithmetical Foundations	5
PE	103	Physical Education*	1
			18

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization	4
PSY	201	Introduction to Psychology	4
ENG	230	Introduction to English Linguistics	3
GEO	201	World Regional Geography	3
		Electives	2
			16
		Winter Term	
HUM	202	Western Civilization	4
PSY	204	Education Psychology	3
FPS	212	Foundations of Physical Science	4
		Electives	4
			15
		Spring Term	
HUM	203	Western Civilization	4
PSY	205	Human Growth & Development	3
FBS	211	Foundations of Biological Science	4
		Electives	4
			15

Recommended Electives

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

Biological Sciences
Physical Sciences
Mathematics 201
Social Sciences
Humanities
Language Arts
Art
Music

Pre-Teaching

Secondary

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
SS	101	Social Science I	4
PE	101	Physical Education*	1
		Electives	8
			17
		Winter Term	
ENG	122	Freshman English	4
SS	102	Social Science II	4
PE	102	Physical Education*	1
		Electives	8
			17
		Spring Term	
ENG	123	Freshman English	4
SS	103	Social Science III	4
PE	103	Physical Education*	1
		Electives	8
			17

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization	4
NS		Natural Science	4
PSY	201	Introduction to Psychology	4
		Electives	4
			16
		Winter Term	
HUM	202	Western Civilization	4
NS		Natural Science	4
PSY	204	Educational Psychology	3
		Electives	5
			16
		Spring Term	
HUM	203	Western Civilization	4
NS		Natural Science	4
PSY	205	Human Growth and Development	3
		Electives	4
			15

*Optional

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Electives

The electives should be selected from the following disciplines:

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

Pre-Teaching

Teacher Assistant Curriculum

The Teacher Assistant Program prepares students primarily for service in the elementary grades. It has four purposes: (1) to provide trainees with skills for working with children which will permit the most advantageous use of the professional abilities of the teacher; (2) to prepare trainees to become effective members of a differentiated staff; (3) to provide an entry level to full teacher certification by means of a career development process; (4) to enable pre-teaching candidates to obtain early experiences in the schools in order to facilitate insightful career decisions. Training in the schools takes place under the supervision of fully certificated personnel.

The Teacher Assistant Program has three divisions: Teacher Aide, Teacher Assistant, and Teacher Associate. Each of the divisions is described below.

PART I: TEACHER AIDE

This program leads to the Certificate of Program Completion, Teacher Aide. It consists of 30 credit hours combining academic courses with courses which are task-oriented with clear performance goals.

Summer Pre-Session			Credit Hours
SO	101	Student Orientation	1
ED	150	Introduction to Education	3
ED	101	Curriculum Reinforcement	3
			7

Fall Term			Credit Hours
SS	101	Social Science I	4
ED	102	Curriculum Reinforcement	1
ED	201	Teacher Aide Practicum	3
			8

Winter Term			Credit Hours
PSY	201	Introduction to Psychology	4
ED	103	Curriculum Reinforcement	1
ED	202	Teacher Aide Practicum	3
			8

Spring Term			Credit Hours
SPH	104	Principles of Speech	3
		OR	
MTH	200	Arithmetical Foundations	5
ED	104	Curriculum Reinforcement	1
ED	203	Teacher Aide Practicum	3
			7-9

All practicum courses include one hour formal class meeting and two hours directed field experience in the schools.

PART II: TEACHER ASSISTANT

Students desiring to meet requirements for the one-year Certificate, Teacher Assistant, must complete Part I Teacher Aide courses in addition to courses listed below.

Fall Term			Credit Hours
SO	101	Student Orientation	1
ED	150	Introduction to Education	3
ED	101	Curriculum Reinforcement	3
ED	102	Curriculum Reinforcement	1
ED	201	Teacher Aide Practicum	3
ENG	121	Or ENG 101	4
			15

Winter Term			
SS	101	Sociology	4
ED	103	Curriculum Reinforcement	1
ED	202	Teacher Aide Practicum	3
PSY	201	Introduction to Psychology	4
ENG	122	Or ENG 102	4
			16

Spring Term			
SPH	101	Principles of Speech	3
		OR	
MTH	200	Arithmetical Foundations	5
PSY	201	Educational Psychology	3
ED	104	Curriculum Reinforcement	1
ED	203	Teacher Aide Practicum	3
ENG	123	Or ENG 103 Communication III	4
			14-16

All practicum courses include one hour formal class meeting and two hours directed field experience in the schools.

PART III: TEACHER ASSOCIATE

Candidates for the Associate Degree, Teacher Associate, must complete both Part I and II and the courses listed below. Students desiring to transfer to a four-year college or university are advised to see a counselor.

Freshman Year	Fall Term		Credit Hours
SO	101	Student Orientation	1
ED	150	Introduction to Education	3
ED	101	Curriculum Reinforcement	3
ED	102	Curriculum Reinforcement	1
ED	201	Teacher Aide Practicum	3
ENG	121	Or ENG 101	4
			15

Winter Term			
SS	101	Sociology	4
ED	103	Curriculum Reinforcement	1
ED	202	Teacher Aide Practicum	3
PSY	201	Introduction to Psychology	4
ENG	122	Or ENG 102	4
			16

Spring Term			
SPH	101	Principles of Speech	3
		OR	
MTH	200	Arithmetical Foundations	5
PSY	201	Educational Psychology	3
ED	104	Curriculum Reinforcement	1
ED	203	Teacher Aide Practicum	3
			14-16

Sophomore Year	Fall Term		Credit Hours
NS	101	Botany-Zoology	4
HUM	201	Western Civilization I	4
ENG	230	Introduction to English Linguistics	3
GEO	201	World Regional Geography	4
			15

Winter Term			
FPS	212	Foundations of Biological Science	4
NS	102	Chemistry-Physics	4
HUM	202	Western Civilization II	4
SS	102	Economics	4
			16

Spring Term			
FPS	211	Foundations of Physical Science	4
SS	103	Political Science	4
HUM	203	Western Civilization	4
NS	103	Astronomy-Geology	4
			16

All practicum courses include one hour formal class meeting and two hours directed field experience in the schools.

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
ENG	121	Freshman English	4
		Natural Science**	4
SS	101	Social Science I	4
SO	101	Orientation	1
		Elective(s)	3-4
			16-17
		Winter Term	
ENG	122	Freshman English	4
		Natural Science**	4
SS	102	Social Science II	4
PE	110 or 111	Physical Education	2
		Elective(s)	3-4
			17-18
		Spring Term	
ENG	123	Freshman English	4
		Natural Science**	4
SS	103	Social Science III	4
		Physical Education Elective***	1
		Elective(s)	3-4
			16-17

Sophomore Year		Fall Term	Credit Hours
HUM	201	Western Civilization I	4
		Foreign Language*	4
PHL	201	Philosophy	3
		Elective(s)	3-4
			14-15
		Winter Term	
HUM	202	Western Civilization II	4
		Foreign Language*	4
PHL	202	Philosophy	3
		Elective(s)	3-4
			14-15
		Spring Term	
HUM	203	Western Civilization III	4
		Foreign Language*	4
PHL	203	Philosophy	3
		Elective(s)	3-4
			14-15

*Student may substitute an elective if he has transferred the equivalent of year's college work in one language.

**Natural Science consists of: NS 101 Botany-Zoology, NS 102 Chemistry-Physics, NS 103 Astronomy-Geology. It is not necessary to take these in sequence.

***Elective may be taken any term.

Pre-Veterinary Science

Freshman Year		Fall Term	Credit Hours
ENG	121	Freshman English	4
SS	101	Social Science I	4
CEM	111	Inorganic Chemistry	5
NS		Natural Science	4
PE	101	Physical Education	1
PSY	101	Orientation	1
			19
		Winter Term	
ENG	122	Freshman English	4
CEM	112	Inorganic Chemistry	5
NS		Natural Science	4
PE	102	Physical Education	1
MTH	180	College Algebra & Trigonometry	5
			19
		Spring Term	
ENG	123	Freshman English	4
CEM	113	Qualitative Analysis	5
NS		Natural Science	4
SS	102	Social Science II	4
PE	103	Physical Education	1
			18

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

Students desiring to change their curriculum are required to consult with a counselor in Counseling Services.

Department of Humanities

Chairman: Dr. Joseph L. Anderson

Dr. Anderson

Humanities

130 Introduction to Art — **Three credits**

Selected works of art from the fields of painting, sculpture, and architecture are examined. The relationships between the works of art, the artist, and the social matrix are analyzed. Not open to art majors. 3 (3-0)

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. 3 (3-0)

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. 3 (3-0)

152 History of Art III — **Three credits**

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)

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. Relates man's creative works to his beliefs and values showing how others have understood themselves and how this understanding has shaped our views and our condition. 4 (4-0)

202 Western Civilization II — **Four credits**

Continuation of Humanities 201. Europe from the early medieval period, Renaissance and Reformation, Commercial Revolution and Expansion Overseas, nation-state building, science and secularism, to 1715 A.D. 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)

203 Western Civilization III — **Four credits**

Continuation of Humanities 202. The French Revolution and its aftermath in the nineteenth and twentieth centuries: democracy, nationalsim, 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)

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.

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294, 295, 296 Seminar: Special Subjects — **Credits variable, two-four**

Special seminars drawn from any area within the disciplines of history, philosophy, or religion. There will be a descriptive sub-title each time the course is offered. The course may be repeated for additional credit for each new sub-title. Credits are variable from 2-4. Prerequisites, as individually listed for each offering.

297, 298, 299 Independent Study — **Variable credit**

Special research project and/or individual readings. Credits vary from two to four. Prerequisite: arrangement with an individual instructor and approval by the department chairman.

History

104 Recent European and World History — **Four credits**

Study of contemporary European history in its world setting since 1945, stressing the most recent political, economic, military, and diplomatic events and cultural trends of significance. 4 (4-0)

111 American History I — **Four credits**

First of a series of two courses. Traces the origins of the history of the United States from its European beginnings through the Civil War. 4 (4-0)

112 American History II — **Four credits**

Continuation of History 111. The United States from the Reconstruction to the present. Prerequisite: History 111 or approval of the department. 4 (4-0)

150 Afro-American History — **Four credits**

Traces the developments which led to the African slave trade, the slave systems in North and South America, the cultural heritage of the black man in the Americas, and the problems of race in the North American culture. 4 (4-0)

160 Modern Mexico — **Four credits**

Political, social, economic and intellectual developments in Mexico since 1850. Particular emphasis on the Revolution of 1910 and relationships with the United States in the 20th Century. 4 (4-0)

210 Studies in American History — **Four credits**

Covers problems of research, writing, philosophy of history and interpretation, involving a detailed examination of a particular area of American history. Prerequisite: History 112 and approval of the instructor. 4 (4-0)

270 The Modern Middle East — **Four credits**

Historical survey of the region extending from the eastern Mediterranean to eastern Iran, with the main emphasis upon the contemporary Middle East. Ethnic, social, and political diversities of the states in the area will be traced as a background to the smoldering, even explosive, character of Middle Eastern rivalries and problems. 4 (4-0)

275 Modern East Asia — **Four credits**

Traces the transformation of East Asia in the modern era, including an introduction to the cultural, religious, and political traditions of its peoples. Emphasis will be placed on the development of China and Japan and their differing responses to the modern challenge: an analysis of the impact of the West and its role in the transformation. 4 (4-0)

Philosophy

101 Principles of Right Reason — **Four credits**

An introduction to the elements of reasoning. Emphasis is placed on learning to recognize and develop logically valid arguments, and discerning how arguments follow from one to another and fit together systematically in writing or discussion. In addition, the distinction is made between deductive and inductive augmentation. 4 (4-0)

201 Survey of Western Philosophy I — **Four 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. 4 (4-0)

202 Survey of Western Philosophy II — **Four credits**

Continuation of Philosophy 201. Devotes special attention to the philosophies of the Medieval, Renaissance, and Early Modern Periods. It is recommended that Philosophy 201 be taken prior to this course. 4 (4-0)

203 Survey of Western Philosophy III — **Four credits**

Continuation of Philosophy 202. Devotes special attention to the philosophies of the eighteenth, nineteenth and twentieth centuries. It is recommended that Philosophy 202 be taken prior to this course. 4 (4-0)

250 Survey of American Philosophy — **Four credits**

Examination of key concepts in American philosophy with special emphasis on the pragmatic school of thought. 4 (4-0)

260 Contemporary Social Philosophy — **Four credits**

Survey of current trends in social philosophy with emphasis on prevalent assumptions about "human nature" and how such assumptions may influence theories or methods. Scholars to be discussed include such as Marcuse, Fromm, Galbraith, Skinner, McLuhan, Jaspers, and Toulmin. 4 (4-0)

270-Philosophy of Science Four credits

Religion

150 Major Religions of the World — **Four credits**

Survey of the main aspects of the thought and cultural contributions of the major modern religions: Hinduism, Buddhism, Judaism, Christianity, and Islam. Emphasis is upon deepening our understanding of ourselves and others through new appreciation of the role of religion in the development of man's culture and values. 3 (3-0)

201 Religions of Asia — **Four credits**

Survey of the traditional religions of Asia, with primary emphasis on the contemporary role and influence of these religions in the modern world. 4 (4-0)

203 Religion in American Life — **Four credits**

The changing role of religion in the history of the United States from Columbus to the present day. Emphasis on contemporary institutional and theological trends in relation to American culture and society. 4 (4-0)

211 The Bible: Old Testament — **Four credits**

The origin and development of Hebrew religion and Judaism as reflected in the canon of the Hebrew Bible (Old Testament). 4 (4-0)

212 The Bible: New Testament — **Four credits**

A study of Christian origins and beliefs as reflected in the literature of the New Testament, viewed on its original historical setting. 4 (4-0)

Department of Language Arts

Chairman: Hugh Schram

Hugh Schram

English

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 Efficient Speed Reading — **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)

101 Fundamentals of English I — **Four credits**

For students who feel basic inadequacies in the language or whose past academic performance indicates the need for a thorough review of grammar, sentence structure, vocabulary building, research techniques, and the basic elements of composition. Relies heavily upon programmed laboratory instruction with emphasis upon student-instructor conferences. By progressing at his own rate, the student may complete the course whenever he has covered the prescribed material. Upon completion of this course, the student may take English 121 or 122, depending upon his grades and the recommendation of his instructor. Prerequisite: English 101. 4 (0-4)

102 Fundamentals of English II — **Four credits**

Sequel to English 101 for students who need more than one term of English fundamentals. Relies heavily upon programmed laboratory instruction with emphasis upon student-instructor conferences. By progressing at his own rate, the student may complete the course whenever he has covered the prescribed material. Upon completion of this course, the student may take English 121 or 122, depending upon his grades and the recommendation of his instructor. Prerequisite: English 101. 4 (0-4)

121 Freshman English — **Four credits**

Primarily concerned with developing the student's analytical and critical reading and writing skills. The student learns to organize ideas clearly and cogently in shorter papers. The student is introduced to the library and basic research techniques. Prerequisite: Satisfactory score on English Placement Test. 4 (4-0)

122 Freshman English — **Four credits**

A continuation of English 121. Reading and writing skills are further developed and special attention is given to the careful reading of the short story. The introduction to research techniques is continued from English 121. Prerequisite: English 121. 4 (4-0)

123 Freshman English — **Four credits**

English 123 is an alternate course to English 124. The student may choose either English 123 or English 124 to complete his Freshman English requirements. English 123 continues the development of the student's skills in writing and thinking in a logical, organized and coherent manner, while acquainting him with a variety of literary genres. The student's writing assignments vary in length and the research techniques previously introduced are developed further in a formal paper. Prerequisite: English 121 and English 122. 4 (4-0)

124 Freshman English — **Four credits**

English 124 is an alternate course to English 123. The student may choose either English 123 or English 124 to complete his Freshman English requirements. Devoted to the research paper, English 124 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 and English 122. 4 (4-0)

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)

207 Introduction to Journalism I — **Three credits**

A course designed to introduce the student to newspaper writing, its style, structure, and problems. Topics to be studied include the following: A Comparison of News and Literary Writing, The Journalist, The Canons of Journalism and Press Criticism, The News Operation, The Style Sheet and Headline Schedule, Uses of Language, Clear Writing, Basic News Structure, Writing the Lead, Writing the Head. The student will spend a minimum of four hours weekly on the student newspaper as arranged. 3 (3-0)

208 Introduction to Journalism II — **Three credits**

A continuation of English 207. Topics to be studied include the following: Making News Fit Space, Rewriting, Human Interest in the News, Kinds of News (society, sports, disaster, etc.), News of Speeches and Meetings, Interviews, News Conferences, Using the Pica Rule, Pictures and Cutlines, Using the Copyreading Symbols, Proofreading, Editing. The student will spend a minimum of four hours weekly on the student newspaper as arranged. Prerequisite: English 207 or the approval of the department.

209 Introduction to Journalism III — **Three credits**

A continuation of English 208. Topics to be studied include the following: Writing Feature Stores, Writing Editorials, Writing Reviews, Newspaper Advertising, Makeup, Typography, Printing Machines and Processes, Ethical Problems, Legal Problems. The student will spend a minimum of four hours weekly on the student newspaper as arranged. Prerequisite: English 208 or the approval of the department.

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 the 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 read novels by such authors as Anderson, Faulkner, Hemingway, Salfnger, 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)

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 for continuing education without college credit. (0-3)

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 (5-1)

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 (5-1)

RUS 101, 102, 103 - Elem. Russian Four credits

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)

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. 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)

203 Advanced Public Speaking Three credits

204 Human Communication " "

Special Courses

294, 295, 296 Language Arts — **Credits variable, one-three**

Special seminars or workshops on any area within the disciplines of language, literature, communication, the mass media, speech, 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.

297, 298, 299 Independent Study in English — **One-three credits**

Special research project and/or individual readings in English. Credits variable from one to three (Eng. 297, one credit; 298, two; 299, three). Prerequisite: Arrangement with an instructor and approval by the department chairman before registration. Enrollment restricted to students having a grade-point average of at least 3.0 in English courses.

016 - Slide Rule One credit *
020 - Desk Computer Two "
030 - Trigonometry Two "
040 - Logarithms Two "

Department of Mathematics

Chairman: Clarence A. Powers

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

Clarence Powers

009 Basic Arithmetic — **Five institutional credits**

Available only in the Mathematics Laboratory. Review of fundamental processes with integers, common fractions, decimal fractions and percentage. Includes work with word problems designed to promote good reasoning. Five class hours. 5 (5-0)

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**

Available only in the Mathematics Laboratory. Same courses as 011 Beginning Algebra but uses programmed or audio-visual materials in a laboratory approach. Recommended for students with no previous work in algebra. Prerequisite: Proficiency in basic arithmetic. Five class hours. 5 (5-0)

013 Geometry — **Five institutional credits**

Available only in the Mathematics Laboratory. 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)

095 Mathematics Laboratory — **Five credits**

This is a facility rather than a course. Courses available include 009, 012, 013 and 102 with placement in the specific course determined by testing and interview as part of the laboratory procedure. Tuition paid is applied to the first course assigned. Features include open registration; individualization of course content, rate of progress, assistance and completion; tuition by the course rather than by the term; choice of programmed or audio-visual text materials, and flexibility in scheduling. No prerequisite. Five class hours. 5 (5-0)

102 Intermediate Algebra — **Five credits**

Available in the Mathematics Laboratory or as a conventional class. 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)

MTH 156 – Basic Statistics Three credits

159 Descriptive Statistics — Five credits

This introductory course provides a non-theoretical overview of the field of statistics so that the student may be able to immediately apply some of the basic statistical concepts and tools. Topics include measurement error, selected distributions, measures of central tendency and variation, correlation, validity and reliability of data, sampling and tests of inference. Prerequisite: Math 102 or equivalent. 5 (5-0)

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 the 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)

170 Intro. to Statistics Five

164 College Algebra and Trigonometry I — Five credits

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)

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)

213 Analytic Geometry and Calculus I — Five credits

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. 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)

MTH 236, 237, 238, 239 & 240 – Honors Seminar in Math – 2 cr. ea.

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Dr. Shull

Department of Science

Chairman: Dr. David L. Shull

Astronomy

201 Introduction to 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 (3-3)

Biology

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 kingdom. 4 (2-4)

108 General Biology **Four credits**

Continuation of Biology 107. Prerequisite: Biology 107 or consent of department. 4 (2-4)

109 General Biology **Four credits**

Continuation of Biology 108. Prerequisite: Biology 108 or consent of department. 4 (2-4)

150 Anat. & Physiology 5 Four credits

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 5 ~~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**

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 morphological study of plants. The course deals with plant structures and life cycles, considering their ontological and evolutionary development. No prerequisites. NS 101 or Biology 107 recommended.

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 (3-1)

190 Concepts in Biochemistry **Four credits**

An introduction for the student who needs to understand chemistry as it applies to life processes. Deals with enzymes, amino acids, nucleic acids, blood and urine chemistry. Emphasizes other physiological and pathological applications. Prerequisite: High school chemistry within past three years, or Chemistry 010, or approval of department. 4 (3-3)

101 An Introduction to Inorganic Chemistry I **Four credits**

The Chemistry 101, 102 and 103 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.

Chemistry 101 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)

111 General Chemistry I (Inorganic) — **Five credits**

First of a series of three courses designed to give an introduction in depth to general college chemistry for those students who plan to enter the fields of engineering, the physical sciences, medicine and pharmacy. Covers atomic and molecular structure, chemical bonding, nomenclature and stoichiometry, gas laws, solutions and the solid state, the kinds, types and states of matter, oxidation-reduction, the descriptive chemistry of hydrogen, oxygen and water, the periodic classification of the elements and the descriptive chemistry of the noble gases Groups I, VI, and VII. Prerequisites: The satisfactory completion of high school chemistry or the equivalent, high school algebra or approval of the department. 5 (3-6)

112 General Chemistry II — **Five credits**
(And introduction to quantitative analysis in the laboratory)

Continuation of Chemistry 111. Includes an introduction to electrochemistry, kinetics, chemical equilibrium and thermodynamics and the descriptive chemistry of Groups II, III, IV and V. Prerequisites: Chemistry 111 (or Cem 101 and 102) or approval of the department. 5 (3-6)

113 General Chemistry III — **Five credits**
(And introduction to qualitative analysis in the laboratory)

Continuation of Chemistry 112. Includes solubility product constants, an introduction to coordination complex and ligand field theory, colloids, the Phase Rule, an introduction to organic chemistry and biochemistry, modern concepts of nuclear structure and the fundamental particles, natural radioactivity and nuclear reactions, instruction in use of chemical literature. Prerequisite: Chemistry 112 or approval of the department. 5 (3-6)

(4) (4) (3)
241, 242, 243 Organic Chemistry
251 Organic Chemistry I Five credit

252 ~~202~~ **Organic Chemistry II** — **Five credits**

Continuation of Chemistry 201. Topics include spectroscopy, aromatic compounds, organic halides, alcohols, ethers and phenols with special emphasis on reaction mechanism, preparation and synthetic utility. Prerequisite: Chemistry 201, with a grade of C or better. 5 (3-6)

253 ~~203~~ **Organic Chemistry III** — **Five credits**

Continuation of Chemistry 202. Topics include carbonyl compounds, organic nitrogen compounds, organic nitrogen compounds, carbohydrates, amino acids and heterocyclics with special emphasis on structure, mechanism, preparation, reaction and synthetic utility of these families. Prerequisite: Chemistry 202 with a grade of C or better. 5 (3-6)

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 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 recommended. 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 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

221
~~210~~ ~~Physical Geology~~ Geology I Physical 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. 3 (2-3)

222
~~211~~ ~~Historical Geology~~ Geology II Prin. of Earth History 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)

223 Geology III - Prin. of Earth History II

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.*

123
~~101~~ **Natural Science (Botany-Zoology)** **Four credits**

The course introduces the student to several basic principles of life. The topics studied include: Characteristics of life, cell structure and function, cell chemistry, photosynthesis and respiration, asexual and sexual reproduction, mitosis and meiosis, genetics, evolution and ecology. 4 (2-4)

121
~~102~~ **Natural Science (Chemistry-Physics)** **Four credits**

Introduces the fundamental laws, theories, and principles of chemistry and physics. Includes such topics as kinetic, atomic and molecular theory, the periodic system, the laws of chemical combinations and the gas laws. Some modern applications of electronics, mechanics, heat, sound and light will be studied. No prerequisite. One year of high school algebra or Mathematics 011 is recommended. 4 (2-4)

123
~~103~~ **Natural Science (Astronomy-Geology)** **Four credits**

Topics include rocks and minerals, geological processes, formations, earth history past and present, the solar system, and the universe. 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 (2-4)

OCEANOLOGY
225 Basic Oceanology + Limnology 4 cr.

Physics

291 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

294, 295, 296 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)

297, 298, 299 Independent Sutudy 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)

Department of Social Science

Chairman: Dr. William Heater

Dr. 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. Other courses, such as PLS 200, SA 200, or Economics 101, 201 or 202 may not be considered as substitutes for courses in this sequence. Students in curricula 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 Introduction to Social Science I — **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 Introduction to Social Science II — **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 Introduction to Social Science III — **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 Honors Section of Introduction to Social Science II — **Four credits**

Same as SS 102, but taught on an advanced level in a seminar. Outstanding students will be enrolled by invitation only. Students will be notified of their eligibility before registration. 4 (4-0)

113 Honors Section of Introduction to Social Science III — **Four credits**

Same as SS 103, but taught on an advanced level in a seminar. Outstanding students will be enrolled by invitation only; they will be notified of their eligibility before registration. 4 (4-0)

Education

Teacher Assistant Course

101 Curriculum Reinforcement — **Three credits**

Role orientation of the teacher aide as a significant person in the reinforcement of the school curriculum. Includes theory and methods of preparing audio-visual materials in support of instruction. Introduction to school records, safety, discipline and permissible first aid. Techniques of assisting teachers through dramatic play and story telling. No prerequisite. 3 (3-0)

102 Curriculum Reinforcement — **One credit**

Methods of assisting the teacher in modern math, reading, reading readiness and phonics. Growth in knowledge of classroom songs and games. Prerequisite: ED 101, or departmental approval. 1 (1-0)

103 Curriculum Reinforcement — **One credit**

Continuation of ED 102 with addition of the elements of school methods used in measuring and evaluating child development. Prerequisite: ED 102 or departmental approval. 1 (1-0)

104 Curriculum Reinforcement — **One credit**

Techniques of assisting teachers through home visitations, parent-teacher, teacher aide conferences. Continued growth in elementary art techniques, group singing and other musical activities. Prerequisite: ED 103 or departmental approval. 1 (1-0)

150 Introduction to Education — **Three credits**

An introduction to teaching as a profession and education as a career. Included is an overview of the foundations, philosophy, history and organization of education as a human endeavor. Current issues and trends in education are examined. Students are offered an opportunity to assist teachers in the schools. No prerequisite. 3 (3-0)

201 Teacher Aide Practicum — **Three credits**

Seminar course to provide opportunities for teacher aides to discuss problems and topics relevant to their academic and field experiences. Includes the application of Education 101 to the school setting. Prerequisite: ED 101, or departmental approval. 3 (1-2) (Two credit hours for directed field experience.)

202 Teacher Aide Practicum — **Three credits**

Seminar course to provide teacher aides with opportunities to explore and discuss problems and topics relevant to academic and work experiences. Includes the application of understanding gained through Psychology 201 and other subjects applied to the school setting. Prerequisite: Psy 201, ED 101 or departmental approval. 3 (1-2) (Two credit hours for directed field experience.)

203 Teacher Aide Practicum — **Three credits**

Seminar course for teacher aides to discuss problems and topics relevant to academic and work experiences. Emphasizes application of learning gained through Education 104, Speech 104 and other subjects as they relate to the function of the teacher aide in the schools. Prerequisite: ED 104 or departmental approval. 3 (1-2) (Two credit hours for directed field experience.)

261, 262, 263 - Early Childhood Education I, II, III Four credits

Geography

Four

101 Principles of Geography — **Three credits**

Specific geographic principles course which emphasizes the physical forces on a worldwide 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)

201 World Regional Geography — **Four credits**

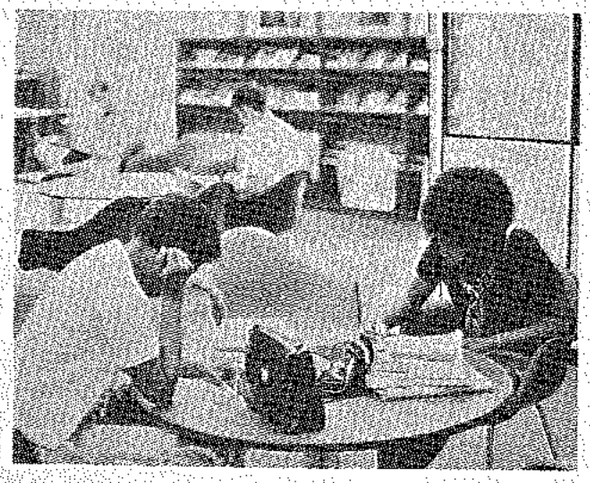
Describes and anlyzes human and natural resources of countries and cultures of the world with major emphasis on their distribution over the surface of the earth. No prerequisite. 4 (4-0)

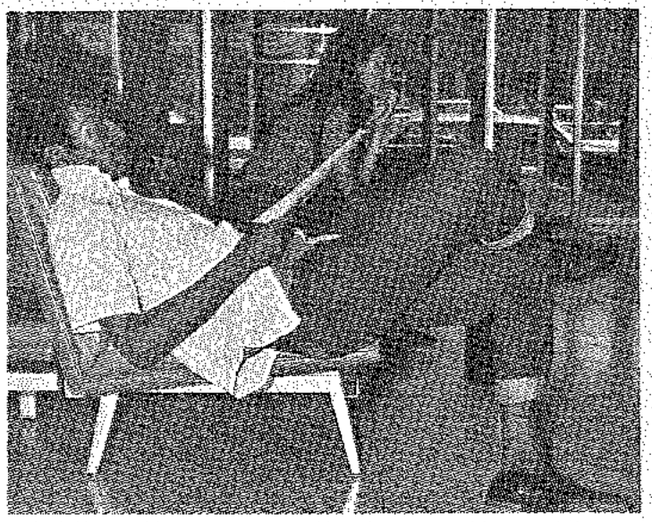
202 Geography of North America — **Three credits**

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

150 American Political Parties and Elections — **Three credits**

Deals with the origins, structure and functions of political parties; examines the American political system in terms of citizen concern about the community and government, and serves as a guide to political action by the citizenry. 3 (3-0)

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)

205 STATE & LOCAL GOVERNMENT — Four credits

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 — FOUR ~~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, 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

100 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 201.) No prerequisite. 3 (3-0)

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 201.) 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 — FOUR ~~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 — FOUR ~~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 and Social Science 101. 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)

FOUR.

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

160 Contemporary Chicano Problems Three credits

170 The Indians of North America — Three credits

This course describes the major cultures of the continent on the eve of European contact. The various groups considered illustrate the relationship between culture and the natural world as well as the stages of cultural evolution. Attention is given to the history of Indian affairs and to the needs of contemporary Indians. 3 (3-0)

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

An overview of sex role definitions and the accompanying changes in the structure and functions of the institutions of marriage and the family in contemporary American society. Prerequisite: Social Science 101 and Psychology 201. 3 (3-0)

255 Contemporary Social Problems — Three credits

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 — Four credits

Fields, methods, and findings of the science of man. Primary attention given to literature of culture. Historical development of anthropological theory and methodology will be surveyed. Students will research a cross-cultural study. Prerequisite: Social Science 101. 4 (4-0)

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)

294, 295, 296 Seminar in Special Subjects — Credits variable

Special seminars drawn from any area within the disciplines of anthropology, economies, 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 for each new sub-title. Prerequisite: As determined by each individual offering. (Credits variable from 2 to 4.)

297, 298, 299 Independent Study — Credits variable

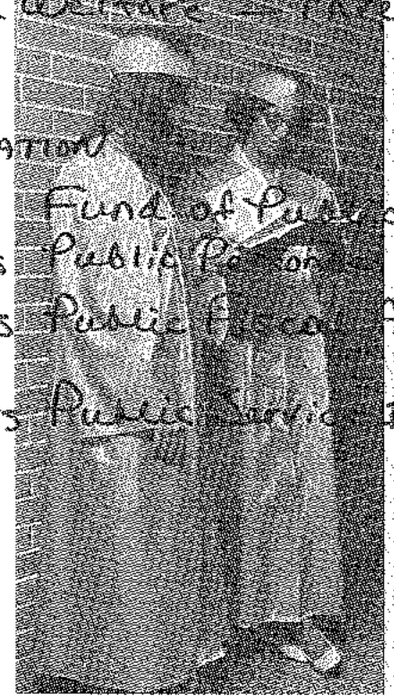
Special research project and/or individual readings. Prerequisite: Permission of faculty member and departmental chairman. (Credits variable from 2 to 4).

SOCIAL WORK

SW 200 - Intro. to S.W. Field Placement - One credit
SW 101 - Intro. to Social Work - Three credits
SW 201, 211, 221 - Soc. Work Field Placement - Five credits
SW 203 - Soc. Work Interviewing - Three credits
SW 205 - Social Welfare - Three credits

PUBLIC ADMINISTRATION

PS 201 - 4 credits Fund. of Public Admin.
PS 202 - 4 credits Public Personnel Admin.
PS 203 - 4 credits Public Fiscal Admin.
PS 221 - 4 credits Public Service Internship



To acquire a knowledge of the world might be defined as the aim of all education...
Arthur Schopenhauer

DIVISION OF BUSINESS

Department of Accounting and Office Programs

Department of Management and Marketing

Division 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.

Objectives

The primary objective of programs in the Division of Business is to develop the proper combination of knowledge, values, tools, and skills with business principles. It is the function of the faculty to instruct in these needed ingredients and their application, to develop through research and innovation new and better methods, and to develop ways to apply these methods to business problems. The objective is not only to teach students the basic fundamentals, but also to provide them with needed tools for application.

The Business Division seeks to facilitate the professional growth of the individual as a productive member of a business organization. The education provided is both broad preparation and vocational development, with the latter cast at a level of the highest attainment of those skills which are recognized as either semi-professional or professional in character. Business education at Lansing Community College further deals with the relationships, techniques, attitudes, and knowledge necessary for an individual to understand the social institution of business and successfully adjust himself to it.

Specific objectives are:

I. To provide pre-professional and career-oriented students with a personalized process of instruction as developed by a teaching oriented faculty.

II. To make all educational subject matter meaningful to the individual by structuring and focusing it around a career development theme. The division will prepare persons completing its programs with the knowledge and skills necessary to pursue further education or enter the labor market with a marketable skill.

III. To provide an educational system which uses and coordinates its activities with community resources.

IV. To provide or make available to all students the guidance, counseling and instruction needed to develop self-awareness and self-direction; to expand occupational awareness and aspirations and to develop appropriate attitudes about the personal and social significance of work.

V. To perform articulation and assure students of services for placing every person in the next step in his development whether it be employment or further education. The division will also provide a flexible educational system which provides for re-entry into the educational system from the world of work.

VI. To provide opportunities for individuals to gain knowledge and skills deemed necessary for personal development and for upgrading and updating in one's occupation, profession and/or avocation.

Community Services

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

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

Changes have occurred with increasing incidence during the last few years that require better educated personnel, and there is every indication that the rate of

change will increase. The College, in cooperation with business, industry, and government in the Lansing area, has scheduled courses for employees who want to improve their understanding of the more important aspects of their occupation and their employer's business. The College stands ready to develop, for specific requirements, programs ranging from single session meetings to those requiring numerous hours for completion.

Cooperative Internship

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.

Department of Accounting and Office Programs

Dr. Edwards

Chairman: Dr. Ronald K. Edwards

The Department of Accounting and Office Programs holds a basic belief in the individual student with the appropriate program, and the concerned teacher. Its philosophy is deeply oriented in the conviction that the method of instruction should be a system that recognizes the total person—his needs, abilities, and motivations. This philosophy is reflected in the Department's policy of maintaining small class sizes for traditional classes and the development of individualized instructional techniques, each of which provides the opportunity for maximum student-teacher contact in the learning situation.

The specific objectives of the Accounting and Office Programs Department lie within this philosophy and reflect the objectives of the Business Division and Lansing Community College as a whole. They are:

I. To maintain a personalized process of instruction that emphasizes learning and helps to develop integrity, loyalty, and dependability in the students' lives and in future job responsibilities.

II. To keep subject matter current and practical in relation to present business practices so that new learning can be applied to an actual job situation with a minimum of substitution or deviation from classroom activities.

III. To use the expertise, facilities, and realism of a wide variety of community resources in preparing students for the various levels and types of careers in business.

IV. To provide academic advising to all students, and to assure students the guidance and counselling necessary to develop a self-awareness and self-direction in order to expand occupational aspirations and acquire appropriate attitudes about the personal and social significance of work.

V. To assure students of services for placing them in the next stage of development whether it be employment or further education. To provide appropriate courses of immediate value for persons re-entering the educational system from the world of work.

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.

Accounting

One-Year Certificate Program

The Accounting Curriculum offers courses to serve students preparing for preprofessional 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.

Required Courses			Credit Hours
BUS	117	Business Mathematics	3
BUS	118	Introduction to Business	4
ACC	210	Principles of Accounting I	4
ACC	211	Principles of Accounting II	4
ACC	212	Principles of Accounting III	4
BUS	107	Business Machines I	3
BUS	108	Business Machines II	3
BUS	113	Applied Business Law	3
EC	101	Applied Economics	3
ENG	111	Communications	3
		or	
ENG	121	Freshman English	4

Recommended Electives			Credit Hours
BUS	101	Intermediate Typing	3
BUS	204	Business Correspondence	3
BUS	220	Office Management	3
PSY	152	Applied Psychology	3
DP	132	Basic Cobol	3
BUS	130	Introduction to Marketing	3

Two-Year Associate Degree Program

The two-year accounting program offers job opportunities 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.

Required Courses			Credit Hours
SPS	101	Orientation	1
SS	104	American Government	4
EC	201	Principles of Economics I	4
EC	202	Principles of Economics II	4
BUS	117	Business Mathematics	3
BUS	215	Business Law I	3
BUS	216	Business Law II	3
ACC	210	Principles of Accounting I	4
ACC	211	Principles of Accounting II	4
ACC	212	Principles of Accounting III	4
ACC	220	Intermediate Accounting I	4
ACC	221	Intermediate Accounting II	4
ACC	222	Intermediate Accounting III	4

Recommended Electives			Credit Hours
ACC	230	Cost Accounting I	4
ACC	231	Cost Accounting II	4
ACC	240	Federal Income Tax	4
BUS	118	Introduction to Business	4
ENG	11	Communications I	3
		or	
ENG	121, 122, 124 sequence		12
BUS	204	Business Correspondence	3
DP	132	Basic Cobol	3
BUS	240	Office Internship	3

Other Electives			Credit Hours
BUS	101	Intermediate Typing	3
BUS	107	Business Machines I	3
BUS	108	Business Machines II	3
BUS	130	Introduction to Marketing	4
BUS	220	Office Management I	3
DP	133	Systems & Applications	3
EC	203	Business Economics History	3
PSY	153	Applied Psychology	3
PHL	101	Principles of Right Reasoning	3

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 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	111	Communications I or	
ENG	121	Freshman English	3-4
BUS	101	Typing II	3
CCR	101	Machine Shorthand I	6
SPS	101	Orientation	1
			13-14

Winter Term			
SS	101	Social Science I	4
CCR	102	Machine Shorthand II	6
BUS	102	Typing III	3
			13

Spring Term			
SS	104	American Government	4
CCR	103	Machine Shorthand III	6
BUS	215	Business Law I	3
			13

Summer Term			
CCR	104	Machine Shorthand IV	6
BUS	216	Business Law II	3
			9

Sophomore Year

Fall Term			Credit Hours
CCR	201	Court Reporting I	10
ACC	210	Principles of Accounting I	4
			14

Winter Term			
CCR	202	Court Reporting II	10
EC	201	Principles of Economics I	4
			14

Spring Term			
CCR	203	Court Reporting III	10
CCR	240	Court Practice	4
			14

Summer Term*			
CCR	204	Machine Shorthand Speed Building	4
CCR	241	Court Practice	4
			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 121	Freshman English or	
ENG 111	Communications I	3-4
BUS 117	Business Mathematics	3
BUS 118	Introduction to Business	4
SPS 101	Orientation	1
ACC 210	Principles of Accounting	4
		15-16

Winter Term		
BUS 101	Typing II	3
BUS 107	Business Machines I	3
BUS 113	(Applied) Business Law	3
EC 101	Applied Economics	3
PSY 152	Applied Psychology	3
		15

Spring Term		Credit Hours
BUS 102	Typing III	3
BUS 108	Business Machines II	3
BUS 109	Secretarial Machines	2
BUS 119	Office Methods	3
BUS 242	Office Internship or Elective	3
		14

Recommended Electives

BUS 220	Office Management I	3
BUS 204	Business Correspondence	3
BUS 229	Public Relations	3

Office Management

Two-Year Associate Degree Program

The Office Management curriculum offers opportunities 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.

Fall Term		Credit Hours
BUS 117	Business Mathematics	3
BUS 118	Introduction to Business	4
ENG 121	Freshman English	4
ACC 210	Principles of Accounting I	4
		15

Winter Term		
SS 101	Social Science I	4
BUS 101	Typing II	3
BUS 107	Business Machines I	3
ACC	Principles of Accounting II	4
		14

Spring Term		
BUS 102	Typing III	3
BUS 108	Business Machines II	3
ACC 212	Principles of Accounting III	4
PSY 152	Applied Psychology	3
SPH 104	Principles of Speech	3
		16

Recommended Electives

BUS 119	Office Methods	3
BUS 225	Principles of Management	3
SS 102	Social Science II*	4
SS 103	Social Science III*	4

Fall Term		Credit Hours
BUS 215	Business Law I	3
BUS 220	Office Management I	3
DP 131	Survey of Data Processing	3
BUS 240	Office Internship or Elective	3
	Business Elective	3
		15

Winter Term		
BUS 216	Business Law II	3
BUS 221	Office Management II	3
BUS 224	Personnel Management	3
BUS 241	Office Internship or Elective	3
EC 201	Principles of Economics I	4
		16

Spring Term		
BUS 109	Secretarial Machines	2
BUS 204	Business Correspondence	3
BUS 242	Office Internship or Elective	3
EC 201	Principles of Economics II	4
SS 104	American Government	4
		16

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

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Legal Assistant

Two-Year Associate Degree Program

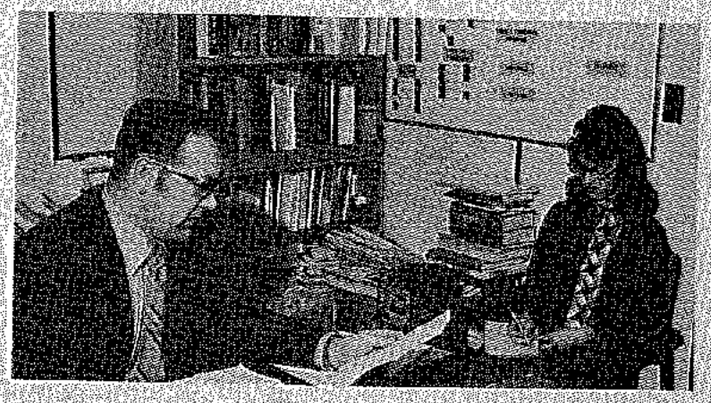
A legal assistant is a para-professional in the field of law. He will work for a lawyer or law firm performing many duties from office management to preparing case materials for trial. The majority of the graduates will seek employment with legal firms. Opportunities will be available, however, for legal assistants in banks, real estate offices, welfare offices, credit and collection agencies, insurance companies, title insurance companies, abstract offices, and government agencies. The suggested curricular guide provides needed background in legal procedures and also allows for ample elective choices to attain individual goals.

Freshman Year	Fall Term	Credit Hours
ENG 121	Freshman English I	4
SS 101	Social Science I	4
LAW 101	Business Law I	3
BUS 101	Typing II	3
		14
	Winter Term	
ACC 210	Principles of Accounting I	4
LAW 102	Business Law II	3
SS 104	American Government	4
ENG 122	Freshman English II	4
		15
	Spring Term	
ENG 124	Freshman English III	4
ACC 211	Principles of Accounting II	4
LAW 190	Legal Research	4
EC 101	Applied Economics	3
		15

Sophomore Year	Fall Term	Credit Hours
LAW 210	Pre-Trial Procedure	4
ACC 240	Federal Income Tax	4
BUS 240	Office Internship	3
	Elective	4
		15
	Winter Term	
LAW 211	Trial and Appellate Procedure	4
BUS 220	Office Management	3
BUS 204	Business Correspondence	3
BUS 241	Office Internship	3
	Elective	3
		16
	Spring Term	
LAW 212	Legal Field Specialties	4
BUS 221	Office Management	3
BUS 242	Office Internship	3
	Electives	5-6
		15-16

Recommended Electives

BUS 102	Typewriting III	3
BUS 104	Shorthand I	4
BUS 105	Shorthand II	4
SS 220	Juvenile Delinquency	3
SPH 104	Principles of Speech	3
LE 201	Introduction to Criminal Invest.	5
LE 202	Criminal Law & Proc.	5
LE 206	Police Interview & Interrogation	3
LE 207	Narcotic Drug Seminar	3



Legal Secretary

Two-Year Associate Degree Program

The Legal Secretarial Program presents opportunities for students wishing to specialize in 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
BUS 104	Beginning Shorthand*	4
BUS 117	Business Mathematics	3
ENG 121	Freshman English	4
SS 101	Social Science I**	4
		15
	Winter Term	
BUS 101	Typing II	3
BUS 105	Intermediate Shorthand*	4
BUS 107	Business Machines I	3
BUS 118	Introduction to Business	4
		14
	Spring Term	
BUS 102	Typing III	3
BUS 106	Advanced Shorthand I	4
BUS 109	Secretarial Machines	2
ACC 210	Principles of Accounting I	4
	Elective	3
		16

Sophomore Year	Fall Term	Credit Hours
BUS 201	Transcription	4
BUS 215	Business Law I	3
EC 201	Principles of Economics I	4
PSY 153	Applied Psychology	3
BUS 240	Office Internship or Elective	3
		17
	Winter Term	
BUS 202	Shorthand Speedbuilding	4
BUS 204	Business Correspondence	3
BUS 216	Business Law II	3
EC 202	Principles of Economics II	4
BUS 241	Office Internship or Elective	3
		17
	Spring Term	
SS 104	American Government	4
SPH 104	Principles of Speech	3
BUS 203	Secretarial Training	3
BUS 205	Legal Shorthand	2
BUS 242	Office Internship or Elective	3
		15

Recommended Electives

BUS 108	Business Machines II	3
BUS 220	Office Management	3
ACC 211	Principles of Accounting II**	4
ACC 212	Principles of Accounting III**	4
ENG 122	Freshman English**	4
ENG 123	Freshman English** or	4
ENG 124	Freshman English**	4
SS 102	Social Science**	4
SS 103	Social Science**	4

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

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

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Medical Secretary

Two-Year Associate Degree Program

Preparing the student wishing 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
ENG	121 Freshman English	4
BUS	101 Beginning Shorthand*	4
BUS	117 Business Mathematics	3
ANT	201 Anatomy & Physiology I	4
		15
	Winter Term	
BUS	101 Typing II	3
BUS	103 Intermediate Shorthand*	4
BUS	107 Business Machines I	3
ANT	202 Anatomy & Physiology II	4
		14
	Spring Term	
BUS	102 Typing III	3
BUS	106 Advanced Shorthand*	4
PSY	132 Applied Psychology	3
SS	104 American Government	4
		14
	Recommended Electives	
BUS	118 Introduction to Business	4
BUS	220 Office Management I	3
ENG	122 Freshman English	4
ENG	124 Freshman English	4

Sophomore Year	Fall Term	Credit Hours
BUS	109 Secretarial Machines	2
BUS	201 Transcription	4
BUS	215 Business Law I	3
BUS	240 Office Internship or Elective	3
	Business Elective	3
		15
	Winter Term	
BUS	202 Shorthand Speedbuilding	4
BUS	216 Business Law II	3
ACC	110 Applied Accounting I	4
EC	101 Applied Economics	3
BUS	241 Office Internship or Elective	3
		17
	Spring Term	
BUS	203 Secretarial Training	3
BUS	204 Business Correspondence	3
BUS	207 Medical Terminology	2
SPH	101 Principles of Speech	3
BUS	242 Office Internship or Elective	3
		14

*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 Transcriptionist

One-Year Certificate Program

This program permits the student to learn medical typing productivity, combining medical terminology knowledge with office procedures to prepare for a typist position allied to the medical field in a hospital or clinic.

	Fall Term	Credit Hours
ENG	121 Freshman English	4
BUS	101 Typing II	3
ANT	201 Anatomy & Physiology	4
BUS	220 Office Management I	3
		14
	Winter Term	
ENG	122 Freshman English	4
BUS	103 Typing II	3
ANT	202 Anatomy & Physiology	4
BUS	109 Secretarial Machines	2
PSY	251 Applied Psychology	3
		16

	Spring Term	
ENG	124 Freshman English	4
BUS	119 Business Methods	3
BUS	207 Medical Terminology	2
BUS	242 Internship	4
BUS	204 Business Correspondence	3
		17

Secretarial Science

Two-Year Associate Degree Program

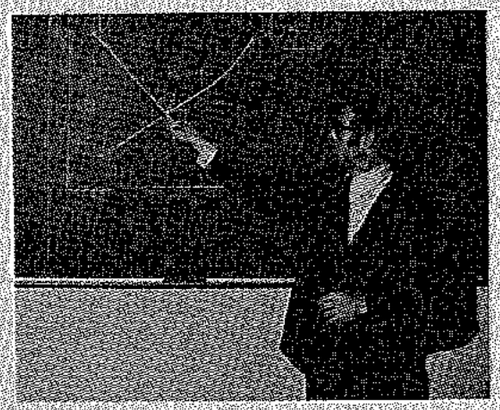
The two-year Secretarial Science program will assist the student for placement in the many interesting and challenging positions in business, from senior stenographer to executive secretary. The program provides the skills necessary for entrance-level jobs, and sufficient background in related areas to enable the serious graduate to advance rapidly.

Freshman Year	Fall Term	Credit Hours
ENG	121 Freshman English	4
BUS	118 Introduction to Business	4
BUS	101 Beginning Shorthand*	4
BUS	117 Business Mathematics	3
SPS	101 Orientation	1
		16
	Winter Term	
PSY	132 Applied Psychology	3
BUS	103 Intermediate Shorthand*	4
BUS	101 Typing II	3
BUS	107 Business Machines I	3
BUS	109 Secretarial Machines	2
		15
	Spring Term	
BUS	106 Advanced Shorthand*	4
BUS	103 Typing III	3
SPH	101 Speech	3
SS	104 American Government	4
		14
	Recommended Electives	
BUS	108 Business Machines II	3
BUS	130 Introduction to Marketing	4
ACC	212 Principles of Accounting III**	4
BUS	240 Office Internship	3
BUS	Federal Income Taxes	4
ENG	122 Freshman English**	4
ENG	123 Freshman English** or	4
ENG	124 Freshman English**	4
DP	131 Survey of Data Processing	3
SS	101 Social Science I**	4
SS	102 Social Science II**	4

Sophomore Year	Fall Term	Credit Hours
BUS	201 Transcription	4
ACC	210 Principles of Accounting I	4
EC	201 Principles of Economics I	4
BUS	215 Business Law I	3
		15
	Winter Term	
BUS	202 Shorthand Speedbuilding	4
ACC	211 Principles of Accounting II	4
BUS	216 Business Law II	3
EC	202 Principles of Economics II	4
		15
	Spring Term	
BUS	203 Secretarial Training	3
BUS	204 Business Correspondence	3
BUS	220 Office Management I	3
BUS	242 Office Internship or Elective	3
		15

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

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



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.

		Credit Hours
Fall Term		
BUS 104	Beginning Shorthand I*	6
BUS 117	Business Mathematics	3
BUS 118	Introduction to Business	1
ENG 111	Communications I	3
		14
Winter Term		
BUS 101	Typing II	3
BUS 105	Shorthand II*	4
BUS 107	Business Machines I	3
BUS 113	Applied Business Law	3
EC 101	Applied Economics	3
		16
Spring Term		
BUS 102	Typing III	3
BUS 106	Shorthand III*	4
BUS 109	Secretarial Machines	2
BUS 119	Office Methods	3
ACC 210	Principles of Accounting I	4
		16
Recommended Electives		
PSY 152	Applied Psychology	3
SS 101	Sociology	3
BUS 201	Transcription	1
BUS 202	Shorthand Speedbuilding	1

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

Department of Management and Marketing

Chairman, James E. Person

James Person

The Management and Marketing Department, consistent with other departments and goals of Lansing Community College as a whole, has a basic commitment to the following objectives:

I. The Management and Marketing Department will provide to pre-professional and career-oriented students a personalized process of instruction as developed by learning-oriented faculty. This faculty will maintain constant evaluation and assessment of themselves and their methods to provide understanding and analysis of our system's responses to student needs.

II. The Department will make all educational subject matter more meaningful and relevant to the individual by structuring and focusing it around a career development theme. The department will provide all persons completing its programs with the knowledge and skills necessary to pursue further education or enter the labor market with a marketable skill.

III. The Management and Marketing Department will provide an educational system which utilizes and coordinates its activities with community resources being responsive to needs of the business, industrial, and governmental community.

IV. The Management and Marketing Department will provide or assure availability to all its students the guidance, counseling and instruction needed to develop self-awareness and self-direction; to expand occupational awareness and aspirations, and to develop appropriate attitudes about the personal and social significance of work.

V. The Management and Marketing Department will perform articulation to assure students of services for placing every person in the next step in his development whether it be employment or further education. The department will also provide a flexible educational system which provides for reentry into the educational system from the world of work.

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
BUS 118	Introduction to Business	4
BUS 233	Management & Supervisory Development	3
BUS 228	Human Relations	3
DP 131	Survey of Data Processing	3
ENG 121	Freshman English or	
BUS 236	Communications in Business Management	3-4
		16-17

	Winter Term	
BUS 130	Introduction to Marketing	4
BUS 224	Personnel Management	3
BUS 229	Public Relations	3
EC 201	Principles of Economics	6
		16

	Spring Term	
BUS 223	Principles of Management	3
BUS 210	Principles of Accounting I	4
	Electives	8
		15

Recommended Electives:

BUS 120 Sales
BUS 121 Retailing
BUS 131 Advertising
BUS 191 Management Independent Study
BUS 192 Management Independent Study
BUS 193 Management Independent Study
BUS 194 Management Independent Study
BUS 222 Small Business Management
BUS 227 Safety Management
BUS 228 Human Relations
BUS 232 Sales Management
BUS 233 Occupational Safety Laws
BUS 234 Human Relations for Safety
BUS 235 Managerial Marketing
BUS 216 Managerial Internship
BUS 260 Trans. & Traffic Mgmt. (All)
BUS 271 Real Estate Essentials
BUS 275 Life Insurance Essentials
BUS 276 Consumer Insurance
BUS 211 Principles of Accounting II
BUS 212 Principles of Accounting III
BUS 213 Business Law
BUS 220 Office Management
DP 133 Systems and Applications
EC 202 Principles of Economics II

(Industrial Supervision electives may be offered as needed.)

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
BUS 118	Introduction to Business	4
DP 131	Survey of Data Processing	3
ENG 121	Freshman English or	4
BUS 236	Communications in Business Management	3
SO 101	Orientation	1
	Elective	3
		14-15

	Winter Term	
BUS 120	Sales	3
BUS 130	Introduction to Marketing	4
BUS 229	Public Relations	3
BUS 228	Human Relations	3
	Elective	3
		16

	Spring Term	
BUS 232	Sales Management or	3
BUS 235	Managerial Marketing	4
SS 104	American Government or	
SS 103	Political Science	4
	Electives	7-8
		15

Sophomore Year	Fall Term	Credit Hours
BUS 223	Management and Supervisory Development	3
BUS 290	Management Internship or Elective	3
BUS 210	Principles of Accounting I	4
EC 201	Principles of Economics	4
	Elective	3
		17

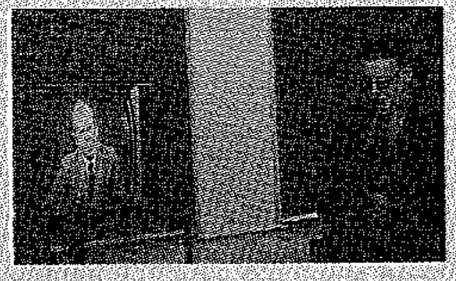
	Winter Term	
BUS 224	Personnel Management	3
BUS 291	Management Internship or Elective	3
BUS 211	Principles of Accounting II	4
EC 202	Principles of Economics	4
		14

	Spring Term	
BUS 223	Principles of Management	3
BUS 292	Management Internship or Elective	3
BUS 212	Principles of Accounting III	4
	Elective	4
		14

Recommended Electives:

BUS 121 Retailing
BUS 131 Advertising
BUS 132 Retail Advertising
BUS 191 Management Independent Study
BUS 192 Management Independent Study
BUS 193 Management Independent Study
BUS 194 Management Independent Study
BUS 222 Small Business Management
BUS 227 Safety Management
BUS 233 Occupational Safety Laws
BUS 234 Human Relations for Safety
BUS 260 Trans. & Traffic Mgmt. (All)
BUS 271 Real Estate Essentials
BUS 275 Life Insurance Essentials
BUS 276 Consumer Insurance
BUS 213 Business Law
BUS 220 Office Management
BUS 293 Management Internship
BUS 923 Management by Objectives
DP 110 Fortran
DP 171 Cobol
DP 133 Forms Design and Control
DP 134 Standards of Documentation
ENG 122 Freshman English*
ENG 124 Freshman English*
PSY 201 Introduction to Psychology
SPH 104 Fundamentals of Speech

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



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Marketing

Certificate Program

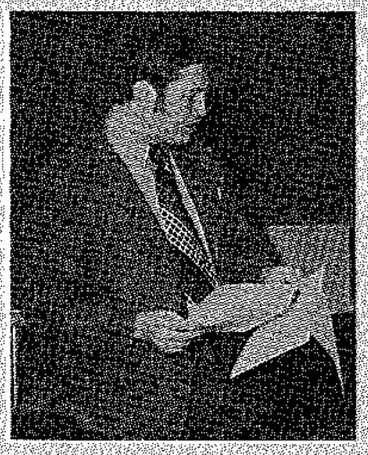
A condensed one-year curriculum in Marketing is offered for qualified students. The courses are designed to meet the needs of students and business. The curriculum has special value to those already employed who desire upgrading or promotion. A certificate is granted to those students successfully completing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

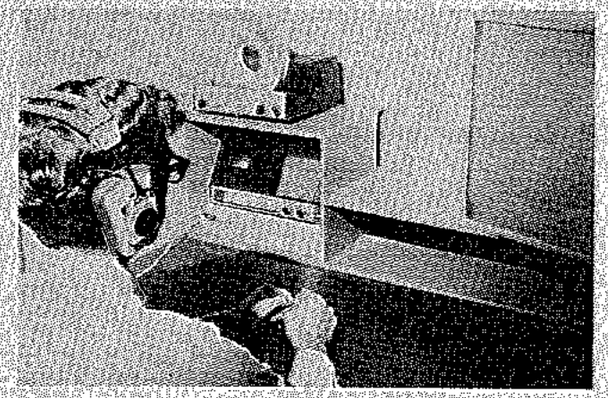
Electives may be chosen from the courses listed in the course description section of the college catalog. Staff advisors in Business will recommend electives to students in accord with their needs and goals.

	Fall Term	Credit Hours
BUS 118	Introduction to Business	4
BUS 223	Management and Supervisory Development	3
BUS 117	Business Mathematics or equivalent	3
DP 131	Survey of Data Processing	3
ENG 121	Freshman English or	4
BUS 236	Communications in Business and Management	3
		16-17

	Winter Term	
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

	Spring Term	Credit Hours
BUS 131	Advertising	3
BUS 235	Managerial Marketing	4
BUS 246	Marketing Internship or	
BUS 232	Sales Management	3
BUS 222	Small Business Management or	3
EC 201	Principles of Economics	4
		13-14





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
BUS 118	Introduction to Business	4
BUS 117	Business Mathematics or equivalent	3
DP 131	Survey of Data Processing	3
ENG 121	Freshman English or	4
BUS 236	Communications in Business and Management	3
SO 101	Orientation	1
		14-15

	Winter Term	
BUS 120	Sales	3
BUS 121	Retailing	3
BUS 130	Introduction to Marketing	4
BUS 229	Public Relations	3
	Elective	3
		16

	Spring Term	
BUS 131	Advertising	3
BUS 235	Managerial Marketing	4
SS 104	American Government or	
SS 103	Social Science III	4
	Elective	3
		14

Sophomore Year	Fall Term	Credit Hours
BUS 223	Management and Supervisory Development	3
BUS 246	Marketing Internship or Elective	3
BUS 210	Principles of Accounting I	4
EC 201	Principles of Economics	4
	Elective	3
		17

	Winter Term	
BUS 224	Personnel Management	3
BUS 247	Marketing Internship or Elective	3
BUS 211	Principles of Accounting II	4
EC 202	Principles of Economics II	4
		14

	Spring Term	
BUS 223	Principles of Management	3
BUS 232	Sales Management	3
BUS 248	Marketing Internship or Elective	3
BUS 212	Principles of Accounting III	4
	Elective	3
		16

Recommended Electives:

BUS 125 Christmas Sales Training
BUS 133 Retail Advertising
BUS 191 Management Independent Study
BUS 192 Management Independent Study
BUS 193 Management Independent Study
BUS 194 Management Independent Study
BUS 222 Small Business Management
BUS 228 Human Relations
BUS 271 Real Estate Essentials
BUS 273 Life Insurance Essentials
BUS 276 Consumer Insurance
DP 110 Fortran
DP 133 Systems and Applications
ENG 122 Composition*
ENG 124 Composition*
PSY 201 Introduction to Psychology

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

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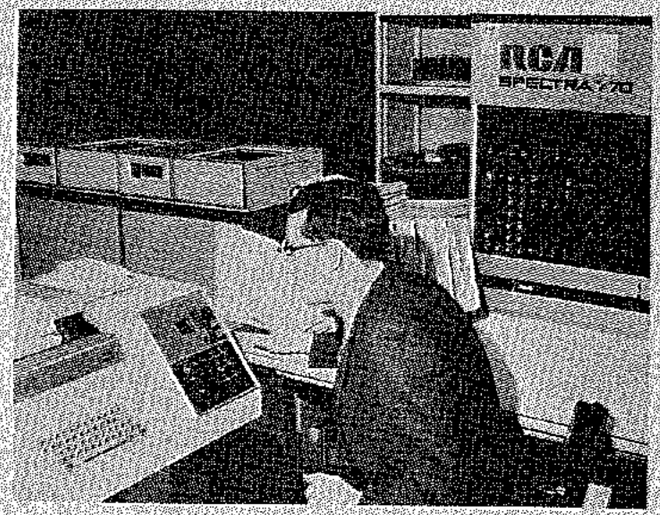


Data Processing

Certificate Program

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

Course Number	Course Title	Credit Hours
	Fall Term	
DP 161	Introduction to Electronic Computers	3
DP 171	Basic Cobol	3
MTH 102	Intermediate Algebra*	5
ENG 121	Freshman English	4
SPS 101	Orientation	1
		16
	Winter Term	
DP 110	Fortran	3
DP 162	Operations I	3
DP 172	Cobol Applications	3
DP 182	Assembly I	3
BUS 230	Introduction to Marketing**	4
		16
	Spring Term	
DP 163	Operations II	3
DP 173	Advanced Cobol	3
DP 183	Assembly II	3
ACC 210	Principles of Accounting I	4
	Elective	3
		16

*or MTH 164 College Algebra & Trig I.
**or MTH 165 College Algebra & Trig II.

Data Processing

Associate Degree Program

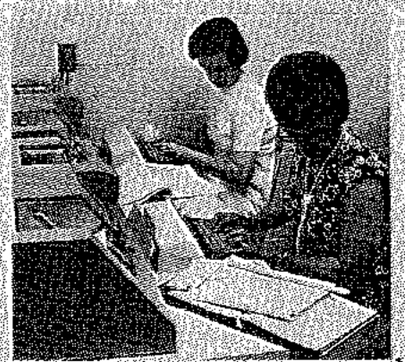
The Data Processing curriculum at Lansing Community College is designed to provide trained graduates capable of meeting the ever increasing demand of the modern business world. Graduates will have acquired an understanding of the concepts, principles, and techniques of data processing together with a 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
DP	161	Introduction to Electronic Computers	3
DP	171	Basic Cobol	3
MTH	102	Intermediate Algebra (1*)	5
ENG	121	Freshman English	4
SPS	101	Orientation	1
			16
		Winter Term	
DP	110	Fortran	3
DP	162	Operations I	3
DP	172	Cobol Applications	3
DP	182	Assembly I	3
BUS	230	Introduction to Marketing (3*)	4
			16
		Spring Term	
DP	163	Operations II	3
DP	173	Advanced Cobol	3
DP	183	Assembly II	3
MTH	158	Descriptive Statistics (3*)	5
			14

Sophomore Year		Fall Term	Credit Hours
DP	134	Standards of Document	3
DP	251	Business & Electronic DP Systems	5
ACC	210	Principles of Accounting I	4
BUS	223	Management & Supervisory Development (4*)	3
			15
		Winter Term	
DP	252	Advanced Techniques of DP	3
SPH	104	Principles of Speech (5*)	3
BUS	113	Introduction to Business (6*)	4
ACC	211	Principles of Accounting II	4
			14
		Spring Term	
DP	240	DP Internship or Field Project (3*)	3
DP	253	Assembly Language & Software	5
ACC	212	Principles of Accounting III	4
SS	104	American Government	4
			16

(1*) or MTH 164 College Algebra & Trig I.
(2*) or MTH 165 College Algebra & Trig II.
(3*) or MTH 160 Statistics
(4*) or EC 201 Principles of Economics I
(5*) or Approved Elective
(6*) or EC 202 Principles of Economics II



Hotel-Motel and Food Service Management

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

Fall Term		Credit Hours
HMF 112	Basic Food Management	5
HMF 101	Introduction to Hospitality Industry	4
HMF 201	Food Service Operations	3
HMF 213	Hospitality Merchandising	3
		15

Winter Term		
HMF 203	Nutrition & Man	3
HMF 123	Food Production & Practice	5
HMF 222	Food and Labor Cost Control	3
BUS 117	Business Mathematics or Equivalent	3
		14

Spring Term		Credit Hours
HMF 221	Hospitality Management	3
HMF 224	Catering & Beverage Management	3
HMF 215	Advanced Food Production	5
HMF 226	Quantity Food Purchasing and Menu Design	5
		16

Food Specialist—Associate Degree Program

Freshman Year	Fall Term	Credit Hours
HMF 112	Basic Food Management	5
HMF 101	Introduction to Hospitality Industry	4
ENG 121	Freshman English or	
BUS 236	Communications in Business and Management	4
SO 101	Orientation	1
		14

Winter Term		
HMF 123	Food Production and Practice	5
DP 131	Survey of Data Processing OR	3
DP 171	Basic Cobol	
BUS 118	Introduction to Business	4
BUS 130	Introduction to Marketing	3
		15

Spring Term		
HMF 215	Advanced Food Production	5
ENG 122	Freshman English	3-4
HMF 134	Internship and Seminar	3
SS 101	American Government	4
		16

Sophomore Year	Fall Term	Credit Hours
HMF 222	Food & Labor Cost Control	3
HMF 201	Food Service Operation	3
BUS 223	Management and Supervisory Development	3
ACC 210	Principles of Accounting I	4
		17

Winter Term		
HMF 203	Nutrition & Man	4
HMF 212	Maintenance and Equipment	4
HMF 213	Merchandising for Hospitality Industry	3
	Electives	6
		17

Spring Term		
HMF 224	Catering and Beverage Control	3
HMF 226	Quantity Food Purchasing and Menu Design	5
HMF 221	Hospitality Management	3
EC 201	Principles of Economics I	4
		15

Recommended Electives

BUS 222 Small Business Management
BUS 224 Personnel Management
BUS 225 Principles of Management
BUS 228 Human Relations
HMF 230 Tourism
HMF 235 Bartending
HMF 236-60 Gourmet Foods
EC 202 Principles of Economics II
ENG 122 Freshman English
ENG 124 Freshman English

Hotel-Motel Management Specialist—Certificate Program

Fall Term		Credit Hours
HMF 101	Introduction to Hospitality Industry	4
HMF 201	Food Service Operations	3
HMF 202	Hotel-Motel Housekeeping	3
HMF 112	Basic Food Management	5
		15

Winter Term		
HMF 212	Maintenance and Equipment	4
HMF 213	Merchandising for the Hospitality Industry	3
HMF 123	Food Production and Practice	5
HMF 222	Food and Labor Cost Control	3
		15

Spring Term		Credit Hours
HMF 221	Hospitality Management	3
HMF 223	Front Office Procedure	4
BUS 117	Business Mathematics or equivalent	3
ENG 121	Freshman English or Communications	3
HMF 234	Financial Control & Management	3
		16

Hotel-Motel Management Specialist—Associate Degree Program

Freshman Year	Fall Term	Credit Hours
HMF	Introduction to Hospitality Industry	4
BUS 117	Business Mathematics or equivalent	3
ENG 121	Freshman English or Business Communications	4
BUS 236	Communications in Business and Management	4
SO 101	Orientation	1
HMF 112	Basic Food Management	5
		12

Winter Term		
HMF 212	Maintenance and Equipment	4
BUS 118	Introduction to Business	4
DP 131	Survey of Data Processing	3
	Electives	6
		17

Spring Term		
HMF 123	Food Production and Practice	5
BUS 130	Introduction to Marketing	3
HMF 134	Internship and Seminar	3
SS 101	American Government	4
		15

Recommended Electives for Transfer Students:

HMF 230 Tourism
BUS 222 Small Business Management
BUS 224 Personnel Management
BUS 228 Human Relations
ENG 222 Freshman English
ENG 224 Freshman English
EC 202 Economics II
PSY 201 Introduction to Psychology

Sophomore Year	Fall Term	Credit Hours
HMF 201	Food Service Operation	3
HMF 202	Hotel-Motel Housekeeping	3
BUS 223	Management and Supervisory Development	3
BUS 210	Principles of Accounting	4
		13

Winter Term		
EC 201	Economics	4
HMF 213	Merchandising for Hospitality Industry	3
HMF 214	Law as Related to Innkeeping	3
BUS 211	Principles of Accounting II or substitute	4
HMF 230	Apartment Management and Leasing	3
		17

Spring Term		
HMF 221*	Hospitality Management	3
HMF 222	Food and Labor Cost Control	3
HMF 223	Front Office Procedure	4
HMF 234	Financial Control and Management	3
		13

*BUS 202 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.

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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.)

Freshman Year		Fall Term	Credit Hours
LE	101	Introduction to Law Enforcement and Criminal Justice	5
ENG	121	Freshman English	4
PE	110	Physical Education	2
SS	101	Social Science I	4
			15
		Winter Term	
LE	102	Police Organization and Administration	5
ENG	122	Freshman English	4
BUS		Typewriting	3
SS	102	Social Science II	4
			16
		Spring Term	
LE	103	Theory of Patrol	5
ENG	123	Freshman English	4
		OR	
ENG	124	Freshman English	
PE		Physical Education	1
SS	103	Social Science III	4
		OR	
SS	104	American Government	4
			14

Sophomore Year		Fall Term	Credit Hours
LE	201	Introduction to Criminal Investigation	5
ACC	210	Principles of Accounting I or approved elective*	4
SPH	104	Principles of Speech	3
SS	220	Juvenile Delinquency	3
			15
		Winter Term	
LE	202	Criminal Law & Procedures	5
ACC	211	Principles of Accounting II or approved elective*	4
PSY	201	Introduction to Psychology or approved elective*	4
			17
		Spring Term	
LE	203	Crime Prevention	5
LE	204	Highway Traffic Administration	5
ACC	212	Principles of Accounting III or approved elective*	4
PE		Physical Education	1
			15

Recommended Electives

LE	205	Legal & Criminal Behavior	3
LE	206	Police Interviewing & Interrogation	3
LE	240	Law Enforcement Internship	3
LE	207	Narcotic Drug Seminar	2
LE	208	Organization of Criminal Activities	3

Certificate Program

Students who are presently engaged in law enforcement work will receive a certificate upon successful completion of the 38 hours of work in the field of law enforcement.

			Credit Hours
LE	101	Introduction to Law Enforcement	5
LE	102	Police Organization and Administration	5
LE	103	Theory of Patrol	5
LE	201	Introduction to Criminal Investigation	5
LE	202	Criminal Law and Procedures	3
LE	203	Crime Prevention	5
SS	220	Juvenile Delinquency	3
LE	204	Traffic Law and Accident Investigation	5

Recommended Electives:

LE	205	Legal and Criminal Behavior	3
LE	206	Police Interviewing and Interrogation	3
LE	240	Law Enforcement Internship	3

Law Enforcement, Natural Resources Officer Option, Associate Degree

Freshman Year		Fall Term	Credit Hours
LE	101	Introduction to Law Enforcement and Criminal Justice	5
ENG	121	Freshman English	4
PE	110	Physical Education	2
NS	101	Natural Science (Botany/Zoology)	4
			15
		Winter Term	
LE	102	Police Organization & Administration	5
ENG	122	Freshman English	4
NS	102	Natural Science (Chemistry-Physics)	4
		Typewriting	3
			16
		Spring Term	
LE	103	Theory of Patrol	5
ENG	123	Freshman English	4
		OR	
ENG		Freshman English	4
PE		Self Defense I	1
NS	103	Natural Science (Astronomy/Geology)	4
			14

Sophomore Year		Fall Term	Credit Hours
FC	210	Foundation of Conservation	4
LE	201	Introduction to Criminal Investigation	5
SS	101	Social Science I	4
HUM	201	Western Civilization I	4
			17
		Winter Term	
LE	202	Criminal Law & Procedures	5
PSY	201	Introduction to Psychology	4
SS	102	Social Science II	4
HUM	202	Western Civilization II	4
			17
		Spring Term	
SS	103	Social Science III	4
		OR	
SS	104	American Government Ecology	4
HUM	203	Western Civilization	4
PE		Self Defense II	1
SPH	104	Fundamentals of Speech	3
			16

Highly recommended additional courses

Legal & Criminal Behavior	3
Interviewing & Interrogation	3

Candidates are to sign a statement the first term of their training which clearly states the maximum age, the minimum physical qualifications and any other limitations or restrictions for the selection of Natural Resource Officers within the state.

The Natural Resources Officer program offers two options:

Option 1

Conservation Officer Internship. Eight weeks assigned to a supervising Senior Conservation Officer or a District Field Office Law Division Supervisor. During the internship the candidate will:

1. Study the organization and staffing of the State Department of Natural Resources.
2. Study State Conservation Law.
3. Review game and fish identification.
4. Visit when feasible and become familiar with the services of the Sheriffs Office, the State Police and the Scientific Crime Detection Laboratory services available to law enforcement officers within the state.
5. Visit where feasible and become familiar with the functions and services of all Divisions of the State Department of Natural Resources such as Fire, Game, Fish, Lands and Water Resources.
6. Maintain liaison with Lansing Community College and submit the appropriate reports of the internship activities.
7. Be evaluated by the Internship supervisor and Lansing Community College.

Upon satisfactory completion of the internship the candidate will receive fifteen credits and a Certificate of Completion for the internship phase of the Natural Resources Officers course.

Option 2

Transfer as a Junior to a four year institution offering a Bachelors Degree in Law Enforcement/Law Enforcement Administration.

Banking Management

Certificate and associate degree programs in Banking Management are conducted at Lansing Community College under the sponsorship of the college and the American Institute of Banking. A.I.B. members also may achieve the AIB Basic and Standard Certificate under the program. The local chapter of the AIB serves as the advisory committee for the program to assure continued relevancy for each course.

AIB Basic Certificate

Course Number	Course Title	Credit Hours LCC	Credit Hours AIB
	Fall Term		
AIB 101	Principles of Bank Operations	3	2
ACC 210	Principles of Accounting*	4	2*
BUS 118	Introduction to Business	4	2
DPB 131	Fundamentals of Bank Data Processing	3	2
		14	8
	Winter Term		
EC 201	Principles of Economics I	4	2
AIB 102	Effective English	3	2
BUS 224	Personnel Management	3	2
ACC	Principles of Accounting Elective	4	2*
		14	8
	Spring Term		
AIB 103	Bank Letters & Reports	3	2
ACC 211	Principles of Accounting*	4	2*
AIB 206	Money & Banking	3	2
	Electives	7	
		17	6

Recommended Electives

BUS 131 Advertising
BUS 220 Office Management
BUS 225 Principles of Management (ZAIB cr.)
BUS 228 Human Relations
BUS 229 Public Relations
DP 132 Cobol
ACC 212 Principles of Accounting III
ACC 250-1-2 Intermediate Accounting
BUS 230 Marketing
BUS 271 Real Estate
BUS 290 Management Internship
BUS 291 Management Internship
BUS 292 Management Internship
EC 202 Principles of Economics II

Other electives may be selected with departmental approval.

AIB Standard Certificate

Freshman Year	Course Title	Credit Hours LCC	Credit Hours AIB
	Fall Term		
AIB 101	Principles of Bank Operation	3	2
ACC 210	Principles of Accounting*	4	2*
BUS 118	Introduction to Business	4	2
AIB 131	Fundamentals of Bank Data Processing	3	2
		14	8
	Winter Term		
EC 201	Principles of Economics I	4	2
AIB 102	Effective English	3	2
BUS 225	Principles of Management	4	2
ACC	Principles of Accounting	4	2*
		14	8
	Spring Term		
AIB 103	Bank Letter & Reports	3	2
ACC 211	Principles of Accounting*	4	2*
AIB 206	Money & Banking	3	2
	Electives	7	
		17	6

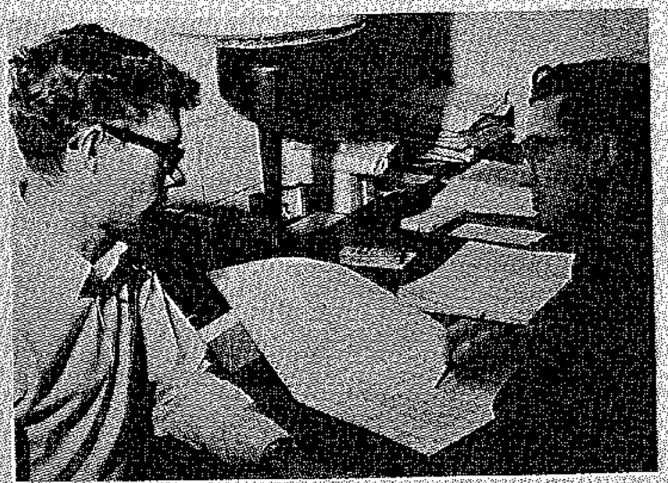
*Accounting 210 & 211 are presented over a three-term duration.

Sophomore Year	Course Title	Credit Hours LCC	Credit Hours AIB
	Fall Term		
SPH 104	Principles of Speech	3	2
AIB 203	Trust Service	3	2
BUS 223	Management & Supervisory Development	3	2
	Electives	6	
		15	6
	Winter Term		
AIB 222	Bank Management	3	2
AIB 204	Credit Administration	3	2
AIB 212	Analysis of Financial Statistics	3	2
SS 104	American Government	4	3
	Elective	4	
		17	9
	Spring Term		
BUS 224	Personnel Management	3	2
AIB 214	Commercial Law	3	2
AIB 205	Home Mortgage Lending	3	2
	Electives	4	
		13	6

Recommended Electives

BUS 131 Advertising
BUS 220 Office Management
BUS 228 Human Relations
BUS 229 Public Relations
DP 132 Cobol
ACC 212 Principles of Accounting III
ACC 250-1-2 Intermediate Accounting
BUS 230 Marketing
BUS 271 Real Estate
BUS 290 Management Internship
BUS 291 Management Internship
BUS 292 Management Internship
EC 202 Principles of Economics II

Other electives may be selected with departmental approval.



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Cosmetology

Cosmetology Management

A certificate and degree program is offered to students who have completed cosmetology certification requirements. To assure future success, business and management courses are prescribed for individuals desiring this certificate or degree.

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
BUS 118	Introduction to Business	4
ENG 121	Freshman English	4
MTH 164*	College Algebra and Trigonometry I	5
SO 101	Orientation	1
SS 101	Sociology	4
		18
	Winter Term	
ENG 122	Freshman English	4
MTH 165*	College Algebra and Trigonometry II	5
BUS 230	Introduction to Marketing	4
BUS	Elective	3-4
		16-17
	Spring Term	
DP 110	Fortran	3
ENG 124	Freshman English	4
MTH 160	Statistics or Elective	5
SS 103	Social Science II, OR	
SS 104	American Government	4
		16

Sophomore Year	Fall Term	Credit Hours
BUS 210	Principles of Accounting I	4
EC 201	Principles of Economics I	4
HUM 201	Western Civilization I	4
NS 101	Botany-Zoology	4
		16
	Winter Term	
BUS 211	Principles of Accounting II	4
EC 202	Principles of Economics II	4
HUM 202	Western Civilization II	4
NS 102	Chemistry-Physics	4
		16
	Spring Term	
BUS 212	Principles of Accounting III	4
HUM 203	Western Civilization III	4
NS 103	Astronomy-Geology	4
		12

Recommended Electives:

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

*MTH 180 College Algebra and Trigonometry (Replaces 164 and 165)

Property Valuation and Assessment Administration

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.

Certificate Program

Freshman Year	Fall Term	Credit Hours
BUS 280	Property Valuation and Assessment Administration I	3
DT 101	Engineering Drawing*	3
ENG 121	Freshman English	4
	OR	
BUS 236	Communications in Business and Management	3
DP 131	Survey of Data Processing	3
	OR	
DP 131	Introduction to Data Processing	5
	Elective	3
		16-17
	Winter Term	
BUS 281	Property Valuation and Assessment Administration II	3
BUS 229	Public Relations	3
SPH 104	Principles of Speech	3
BUS 117	Business Mathematics OR Equivalent	3
	Elective	4
		15
	Spring Term	
BUS 282	Property Valuation and Assessment Administration III	3
SS 104	American Government	4
BUS 118	Introduction to Business	4
	Electives	6
		17

Recommended Electives:

BUS 230 Introduction to Marketing
BUS 271 Real Estate Essentials
BUS 257 Federal Income Tax
MTH 102 Intermediate Algebra
ENG 112 Communication II
ENG 113 Communication III
ENG 122 Freshman English

Sophomore Year	Fall Term	Credit Hours
BUS 283	Property Valuation and Assessment Administration IV	3
EC 201	Principles of Economics I	4
ACC 210	Principles of Accounting I	4
BUS 223	Management and Supervisory Development	3
		14
	Winter Term	
BUS 284	Property Valuation and Assessment Administration V	3
EC 202	Principles of Economics II	4
ACC 211	Principles of Accounting II	4
BUS 204	Personnel Management	3
		14
	Spring Term	
BUS 285	Property Valuation and Assessment Administration VI	3
ACC 212	Principles of Accounting III	4
BUS 225	Principles of Management	3
	Electives	6
		16

ENG 123 Freshman English or
ENG 124 Freshman English
GEO 101 Elements of Geography
PSY 151 Psychology of Personal Adjustment
PSY 201 Introduction to Psychology
GT 103 Construction Costs*
GT 111 Elementary Surveying*

*Note Prerequisite

Property Evaluation and Assessment Administration—Associate Degree Program

Fall Term			Credit Hours
BUS	280	Property Valuation & Assessment Administration I	3
DT	101	Engineering Drawing*	3
ENG	121	Freshman English OR	4
ENG	111	Communication I*	3
DP	131	Survey of Data Processing OR	3
DP	151	Introduction to Data Processing	5
		Elective	3
			16-17

Winter Term			
BUS	281	Property Valuation & Assessment Administration II	3
BUS	229	Public Relations	3
SPH	104	Principles of Speech	3
BUS	117	Business Mathematics or Equivalent	3
		Elective	3
			15

Spring Term			
BUS	282	Property Valuation & Assessment Administration III	3
SS	104	American Government	4
BUS	118	Introduction to Business	4
		Electives	6
			17

Fall Term			Credit Hours
BUS	283	Property Valuation and Assessment Administration IV	3
EC	201	Principles of Economics I	4
ACC	210	Principles of Accounting I	3
BUS	223	Management & Supervisory Development	3
			13

Winter Term			
BUS	284	Property Valuation & Assessment Administration V	3
EC	202	Principles of Economics II	4
ACC	211	Principles of Accounting II	4
BUS	201	Personnel Management	3
			14

Spring Term			
BUS	285	Property Valuation & Assessment Administration VI	3
ACC	212	Principles of Accounting III	4
BUS	225	Principles of Management	3
		Electives	6
			16

Recommended Electives

BUS	230	Introduction to Marketing
BUS	271	Real Estate Essentials
BUS	257	Federal Income Tax
MTH	103	Intermediate Algebra
ENG	112	Communication II
ENG	113	Communication III
ENG	122	Freshman English
ENG	123	Freshman English OR
ENG	124	Freshman English
GEO	101	Elements of Geography
PSY	131	Psychology of Personal Adjustment
PSY	201	Introduction to Psychology
CT	103	Construction Costs*
CT	111	Elementary Surveying*

*Note Prerequisite

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. A certificate in Transportation and Traffic Management will be issued by the College.

This course deals 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.

Associate Degree Program

Freshman Year — Fall Term			Credit Hours
BUS	260	Trans/Traffic Management	3
BUS	118	Introduction to Business	4
DP	131	Survey of Data Processing, OR	3
DP	151	Introduction to Data Processing	5
ENG	121	Freshman English OR	4
BUS	236	Communications in Business and Management	3
			14-16

Winter Term			
BUS	261	Trans/Traffic Management	3
BUS	230	Introduction to Marketing	4
BUS	224	Personnel Management	3
SPH	104	Fundamentals of Speech	3
		Elective	3
			16

Spring Term			
BUS	262	Trans/Traffic Management	3
BUS	117	Business Math or equivalent	3
PSY	132	Applied Psychology	3
SS	104	American Government	4
		Elective	4
			17

Sophomore Year — Fall Term			Credit Hours
BUS	263	Trans/Traffic Management	3
BUS	223	Management and Supervisory Development	3
BUS	210	Principles of Accounting I	4
EC	201	Principles of Economics I	4
			14

Winter Term			
BUS	264	Trans/Traffic Management	3
BUS	229	Public Relations	3
BUS	246	Internship or Elective	3
BUS	211	Principles of Accounting II	4
EC	202	Principles of Economics II	4
			17

Spring Term			
BUS	265	Trans/Traffic Management	3
BUS	225	Principles of Management	3
BUS	212	Principles of Accounting III	4
BUS	266	Transportation Law I*	3
			13

Recommended Electives:

BUS	276	Transportation Law II
BUS	268	Systems Dis. and Material Handling
BUS	107	Business Machines I (AVT)
BUS	108	Business Machines II (AVT)
BUS	100	Beginning Typewriting (AVT) OR
BUS	101	Intermediate Typewriting (AVT)
DP	171	Cobol

*Prerequisite of BUS 263 or approval of instructor

The completion of the Transportation and Traffic Management courses qualify candidates for a Certificate in Transportation Management from the College of Advanced Traffic Management and Lansing Community College.

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DIVISION OF BUSINESS COURSE DESCRIPTIONS

Accounting

110, 111, 112 Applied Accounting I, II, III **(Each) Four credits**
Formerly Business 110

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. Prerequisite: approval by the student's academic advisor. 4 (4-0) Spring term

120 Family Finance **Three credits**

A comprehensive approach to spending inflationary dollars more wisely. Families of individuals, young or old, will be exposed to decision-making information designed to aid the consumer. Topics such as family or personal budgeting, consumer buying, food prices, credit options, investing, money management, and others will be reviewed. 3 (3-0)

210 Principles of Accounting I (AVT) **Four credits**
Formerly Business 210

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. 4 (4-0)

211 Principles of Accounting II (AVT) **Four credits**
Formerly Business 211

Continuation of Accounting 210. Includes payroll and tax accounting, controlling accounts and subsidiary ledgers, cash records and forecasting, the voucher system, partnerships, corporations, and bonds. Shows how the accounting services contribute to the recognition and solution of management problems. Prerequisite: Accounting 210. 4 (4-0)

212 Principles of Accounting III **Four credits**
Formerly Business 212

Continuation of Accounting 211 involving the study of income and valuation determination, and analysis and comparison of financial statements. Covers accounting principles related to mercantile businesses, branch accounts, manufacturing companies, cost accounting, budgeting, and sources and applications of funds. Prerequisite: Accounting 211. 4 (4-0)

220 Intermediate Accounting I **Four credits**
Formerly Business 250

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: Accounting 212. 4 (4-0) Fall term

221 Intermediate Accounting II **Four credits**
Formerly Business 251

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: Accounting 212. 4 (4-0) Winter term

222 Intermediate Accounting III **Four credits**
Formerly Business 252

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: Accounting 212. 4 (4-0) Spring term

230 Cost Accounting I **Four credits**
Formerly Business 253

The basic principles of cost accounting, including its contribution to management, are discussed. Cost concepts, classifications, and systems are presented to build vocabulary and understanding. Skill is developed in costing techniques and using cost records. Materials, labor and overhead are treated in depth. Considerable practice is provided in job order and process cost accounting and by-product costing. Prerequisite: Accounting 212. 4 (4-0)

231 Cost Accounting II **Four credits**
Formerly Business 254

This course emphasizes the managerial applications of cost accounting concepts with special reference to standard costs, the planning process and budgetary controls, responsibility accounting and management reports, analysis and control of distribution costs, cost-volume-profit analysis, administrative process and evaluation techniques, internal profit measurement and pricing policies. Prerequisite: Accounting 212. 4 (4-0)

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

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 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 carry-forward 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: Accounting 212 or departmental approval. 4 (4-0)

280 Governmental and Institutional Accounting I **Four credits**
Formerly Business 267

Principles of fund accounting. Provides a discussion of the characteristics of the government function as distinguished from commerce and industry, and analyzes the differences in records, accounting and reports required because of these differences. The essentials of fund accounting, appropriations, allotments, allocations, and budgetary controls are covered. Prerequisite: Accounting 222 or departmental approval. 4 (4-0)

281 Governmental and Institutional Accounting II **Four credits**
Formerly Business 268

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: Accounting 280. 4 (4-0)

282 Governmental Budgeting **Four credits**
Formerly Business 269

Continuation of Governmental Accounting II with emphasis of recent changes and current practices in different government units. Considerable instruction and work is devoted to program budgeting and performance measurement. Prerequisite: Accounting 280 or department approval. 4 (4-0)

C.P.A. Review Courses

Four C.P.A. review courses are offered at Lansing Community College beginning about August 30 each year. These courses are designed to prepare candidates for passing the Michigan Certified Public Accounting Exam. Past candidates who participated in the L.C.C. review courses had a passing percentage significantly higher than that for all candidates in Michigan.

Each section is taught with the specific intent of providing a background of information needed for the examination. Typical examination questions and problems are covered using current material. The single goal is to assist each applicant in his efforts to meet the standards required by the C.P.A. Examination.

810 Theory of Accounts Review **Three credits**

811 Commercial Law Review **Three credits**

812 Auditing Review **Three credits**

813 Accounting Practice Review **Six credits**

Business

A.I.B. Courses

American Institute of Banking courses are designed to prepare the student for certification. All areas needed to prepare for bank management are presented in accord with requirements of the National AIB curriculum and the local advisory committee.

100 Typewriting I (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 Typewriting II (AVT) — **Three credits**

Intermediate typewriting serves as a refresher typewriting course and as a continuation of Typing 100. 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 100 or department approval. 3 (0-4)

102 Typewriting III (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)

105 Intermediate Shorthand II — **Four credits**

Completes theory begun in Business 104. Develops speed and accuracy in reading from plates and individual notes. Practice in dictation skills. Prerequisite: Business 104 or departmental approval. 4 (4-0)

106 Advanced Shorthand III — **Four credits**

Continuation of Business 105. Develops higher 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 (AVT) — **Two credits**

Operation and manipulation of the stencil and fluid duplicating processes. Includes study of machine transcription and filing procedure. Prerequisite: Business 101. 2 (0-2)

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) Spring term

Four ?

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)

119 Office Methods — **Three credits**

Offered primarily for the one-year office program. Emphasizes clerical office procedures and responsibilities. Includes the study and evaluation of effective personality traits. Prerequisite: Business 103. 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)

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)

132 Retail Advertising — **Three credits**

Planning, development, and execution of retail advertising for greater effectiveness. Each method of advertising is examined for strengths and weaknesses as feasibility is determined. The budget is carefully analyzed.

171 Real Estate License Examination — **Two credits**

Intense preparation to prepare for passing the state examination required for real estate licensing.

191 Independent Study — **One credit**

Prerequisite: Department approval.

192 Independent Study — **Two credits**

Prerequisite: Department approval.

193 Independent Study — **Three credits**

Prerequisite: Department approval.

194 Independent Study — **Four credits**

Prerequisite: Department approval.

215 Advanced Food Production — **Five credits**

Advanced Commercial food production. A laboratory course. 5 (1-5)

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 Terminology — **Two credits**

Develops skill in writing and transcribing words and phrases occuring in the spoken and written language of medicine. Prerequisite: Business 106. 2 (2-0) Spring term

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)

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**

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)

226 Management and Financial Control of Small Businesses **Three credits**

A study of the problems of small business management and financial control through use of a wide variety of actual case studies. Problems are identified and sound management principles employed to solve problems.

227 Safety Management **Three credits**

Acquaints supervisory and safety personnel with the specific nature and significance of accident situations and how to prevent them. Emphasizes preventive rather than corrective approach.

228 Human Relations in Business and Industry **Three credits**

Application of psychological principles and methods to selection, placement, training, supervisor, evaluation and motivation of workers and managers efficiency. Accident prevention included. Introduction to problems of human relations and psychological illnesses in business and industry.

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)

230 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)

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)

233 Occupational Safety Laws **Three credits**

An in depth study of the Occupational Safety and Health Law Act, including employee and employer rights. This course is geared for top and middle levels of management primarily and especially for personnel and safety directors. Material covered will interest and affect industry, school systems, public utilities, hospitals, State Labor Department, insurance companies, Chambers of Commerce, and others. Prerequisite: Bus 227 or equivalent.

234 Human Relations for Safety **Three credits**

A study to develop a safety attitude within people. Provides step-by-step procedures for developing and managing people in one-the-job safety. Sound principles of management and supervision, focusing attention on the human relation aspects as related to the physical environment of the job. Directed to first-line supervision, middle management and safety specialists of all levels.

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)

236 Communication Techniques in Business/Management **3 credits**

Investigation of special communication areas including leadership roles, group dynamics, interviews, and mass media techniques allied to the communication process. Emphasis will be placed on applying communication methods to actual business situations. Extensive use of films, tapes, and role playing will be used throughout the course.

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)

246, 247, 248, and 249 (Arranged) 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 (0-3)

251 Intermediate Accounting II **Four credits**

Investments in stock (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); stockholder's equity from retained earnings (source of retained earnings and types of dividends); statements from incomplete records (single-entry systems); errors and correcting entires; 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**

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

258-259 Transportation Law I and II — **Three credits**

The two terms of Transportation Law will include a study of the Interstate Commerce Act, amendatory legislation, leading decisions of the Interstate Commerce Commission and courts, the I.C.C. rules of practice, drafting of an I.C.C. complaint, canons of ethics applicable in I.C.C. practice, remedial provisions of the I.C.C. Act. Prepares for the I.C.C. Practitioner's License.

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. 3 (2-0)

276 Consumer Insurance — **Three credits**

Comprehensive and clear coverage of life, health, fire, auto and other types of insurance. Provides information on history, regulation, areas of misunderstanding and other information necessary to examine needs, determine coverages, and project decisions to provide best coverage at lowest cost.

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 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)

290, 291, 292, and 293 Management Internship

A cooperative offering involving weekly, on-campus independent seminars with the coordinator and the student intern. The student intern also receives actual training and experience in tasks performed by owners, proprietors, and managers in organizing and operating a business in our enterprise system. Coordinator's approval required.

Community Service Course

908 Business Theory for Professional Secretaries — **Four credits**

This 28-week course of study offered at Lansing Community College is designed for the secretary who wants to be well qualified in all office procedures, who wants to learn more about the operation and management of business, and who is interested in the study of human relations.

The program offers a special opportunity to the secretary who plans to prepare for the national C.P.S. examination, because classes are organized to review subject matter in four sections of the test.

Course content:

1. Secretarial Procedures
   Includes office procedures, basic concepts of office management and records management, and a survey of data processing.
2. Communications and Decision-Making
   Includes in-basket exercises involving some dictation, composition of letters, reports, abstracting information, and establishing priorities of work.
3. Environmental Relationships
   Includes study of the basic principles of psychology as they pertain to human relations in group and individual encounters.
4. Economics of Management
   Includes a study of the basic concepts of economics, management, and the elements of business operation.

915 Law and Social Issues — **Two credits**

A survey course to inform the public of its rights and responsibilities in relation to others. The class provides an overview of court decisions on contemporary social issues and discussions regarding the foundations for these decisions. A deeper insight may be gained into the judicial system and the problems of insuring justice in an ever-changing social system. Topics covered include abortion and family planning, drugs and alcoholism, conscientious objectors, discrimination, consumers' and debtors' rights, and others which prove timely. 2 (2-0)

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**

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)

Data Processing

001 Key Punch — **Three credits**

Provides speed and accuracy on a training tandem—a simulator for the numerical keys on a key punch machine. A programmed instruction guide is used to present facts about the key punch machine and data processing in general. The course provides actual practice on the key punch machine, using practical jobs, including the preparation of program cards and verification of the work on the card verifier. The student will obtain the necessary knowledge and needed skills for actual performance on a job. A certificate is presented at completion of course. The key punch course is presented on a lab basis with open enrollment and individual assistance at all times. The student may establish his own hours and pace for learning. Previous typewriting is required (approximately 40 w.p.m.)

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) or equivalent.

122 Basic Cobol Applications — **Two credits**

The objectives of this course are to study: (1) the Report Writer feature of the Cobol language and (2) the techniques of writing an efficient Cobol program. This course is designed to be taken concurrently with/or after DP 132 since the programs relate directly to the subject matter in DP 132. 2 (1-1)

131 Survey of Data Processing — **Three credits**

The objective of this course is to introduce the student to: (1) the principles and purposes of data processing, (2) the language of data processing, and (3) the application of data processing in a business environment. The course is basically an introduction and orientation course for the data processing student who wants to strengthen his ability to communicate with data processing personnel. 3 (3-0)

132 Basic Cobol — **Three credits**

The objectives of this course are to study: (1) Cobol Input/Output techniques, (2) Cobol data handling techniques, (3) Cobol program control statements, (4) Cobol vocabulary of reserved words, and (5) the structure of an efficient Cobol program. The course provides the student with the technical knowledge necessary for writing Cobol programs. Those students who wish to develop an expertise in the writing of Cobol programs should enroll in DP 122 in the same or a subsequent quarter that they enroll in DP 132. 3 (1-2)

133 Forms Design and Control — **Three credits**

The purpose of this course is to cover topics in forms design and control from the initial phase of recognizing that a form is needed to the utilization of the form. These topics include: (1) Forms planning and the layout of items on the form by importance and utilization, (2) the Forms design of a printed page with an emphasis on margins, size of print, and spacing, (3) Forms reproduction with emphasis on grades of paper, reproduction techniques and equipment, and binding, and (4) Forms processing by those who are to complete the form. 3 (3-0)

134 Standards of Documentation — **Three credits**

The objectives of this course are to: (1) define the purposes and types of documentation, and assign responsibilities for preparatory review and approval of documentation. (The types of documentation, why we have each type, who does each type, who reviews and approves each type), (2) describe the role and content of documentation within systems development, (3) show the importance of documentation in project control, (4) emphasize the importance of documentation standards and to outline methods of developing these standards, and (5) to outline a model documentation system. Note: It is recommended but not required that this course be taken after Composition I, II, and the Principles of Speech. 3 (3-0)

161 Introduction to Electronic Computers — **Three credits**

A beginning course to acquaint Data Processing majors with Electronic Computers. Topics include an overview of electronic computers, the uses for computers, computer arithmetic and data representation, internal operations and storage in a computer, the programming of a computer, basic computer instructions, program modification, input and output, computer files and file management, operating an inhouse computer and using an outside computer service, detecting and controlling errors, introductions to procedure and problem oriented languages, the BASIC language, evaluating computers and current and prospective developments in computer hardware, computer software and computer based systems.

153 Data Processing Mathematics — **Five credits**

The objectives of this course are to study: (1) the Boolean Algebras of logic, sets and circuits, (2) computational methods for solving systems of simultaneous equations, finding roots of polynomials and handling arrays of numbers. Emphasis in this course will be placed on the writing of computational programs in Fortran. Note: Intermediate Algebra (MTH 102) and Fortran (DP 110) are prerequisites. 5 (5-0)

162 Operations I — **Three credits**

The first of two courses in operations to provide the student majoring in Data Processing with information and experience in unit record operations and control, forms handling equipment, equipment upkeep, forms inventory, supply storage and handling, tape and disk library systems and basic machine room procedures.

163 Operations II — **Three credits**

The second of two courses in operations to provide the student majoring in Data Processing with information and experience in computer operator responsibilities, job stream and multiprogramming techniques, handling of tape and disk media, job scheduling techniques, use of utility routines, such as sorts, merges and listings, and computer room procedures.

171 Basic Cobol — **Three credits**

The objectives of this course are to study: (1) Cobol Input/Output techniques, (2) Cobol data handling techniques, (3) Cobol program control statements, (4) Cobol vocabulary of reserved words, and (5) the structure of an efficient Cobol program. The course provides the student with the technical knowledge necessary for writing Cobol programs.

172 Cobol Applications — **Three credits**

Knowledge of the Cobol language is expanded by learning about and using the report writer feature and the sort verb in assigned homework problems. Job streams and programming techniques are discussed, and experience is gained through a term project. Introduces disk usage. Winter term.

173 Advanced Cobol — **Three credits**

Random access concepts of disk file will be covered, resulting in a term project. Also includes Cobol applications to tree searches and storage structures, and uses of lists and strings.

182 Assembly I — **Three credits**

The student's objective in this course is to learn a machine-oriented, symbolic programming language for third-generation "byte" computers, stressing the IBM System/360 type. Programs will be coded and run.

183 Assembly II — **Three credits**

A continuation of assembly I with emphasis on more advanced techniques and application.

246 DP Intern or Field Project — **Three credits**

This course is student-oriented, designed to provide each student with a meaningful contact in a Data Processing environment in the community. Note: The student should be within one academic year of completing the two-year degree program before enrolling in this course. 3 (0-3)

251 Business and E.D.P. Systems — **Five credits**

The objectives of this course are to study management tools for controlling, planning and operating the organization, and the tools that a data processing staff has to assist management. An integral part of this course will be the development of an information reporting system based on these tools. 5 (5-0)

252 Advanced Techniques of Data Processing — **Five credits**

The objectives of this course are to study: (1) Cobol tape and disk, (2) new developments in software and hardware, (3) survey new languages. 5 (5-0)

253 Assembly Language and Software — **Five credits**

The objectives of this course are to study a general assembly language, the nature of compilers, editors and operating systems. 5 (5-0)

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, adding 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)

203 Economic + Business History — Three credits

Hotel-Motel and Food Service Management

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 — **Three 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 Nutrition and Man — **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)

214 Law As Related to Innkeeping — **Three credits**

A course for innkeepers and their personnel as well as students. Presentation of safe, sound rules to assist in avoiding lawsuits and legal pitfalls. 3 (3-0)

215 Advanced Food Production — **Five credits**

Advanced commercial food production. A laboratory course. 5 (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)

230 Apartment Management and Leasing — **Three credits**

235 Tourism — **Three credits**

Provides insight into future growth potential and economic benefits of tourism. Techniques of analyzing tourism demand and supply are included.

236 Bartending

Provides a mastery of over 100 mixed beverages, including their fast and efficient production. Teaches the serving of International wines, and provides mastery of control systems involving alcoholic beverages. Provides the combination of the arts of mixology and hospitality with loyalty, knowledge and controls that which distinguishes the "Master" bartender from the ordinary bartender.

256 Gourmet Cooking — **Three credits**

Basic cookery using sauces and wines. Includes the preparation of hors d'oeuvres, canapes, fondue, party and holding foods, and meat cookery. Student preparation.

257 Gourmet Food (Foreign) — **Three credits**

Foreign foods from around the world are prepared and tasted. Includes wine and cheese samplings. Student preparation.

258 Gourmet Foods (American) — **Three credits**

This course is designed for the working housewife who not only works but hates to cook. Basis of class is menu development, recipe design and basic preparation to allow the cook to have a meal within one hour after arriving home. Also includes budgeting of the food dollar. Student preparation.

259 Gourmet (Barbecue) — **Three credits**

A spring and summer oriented course exploring the outdoors in foods. Most preparations occur outside. Meat, vegetables, hors d'oeuvres, salads and desserts are prepared throughout the term. At each meeting the student helps to prepare a balanced, nutritious meal. Student preparation.

260 Gourmet Foods (Pot Pourri) — **Three credits**

A combination of all other courses, this class offers a variety of food and ideas for your role as a host or hostess. Student preparation.

Law

120 Legal Research — **Four credits**

Research procedures of law offices. Includes the functions of a law library, locating legal information, the use of digests, encyclopedias, reporter systems and practice manuals. A research project will be required. 4 (4-0) Spring term

210 Pre Trial Procedures — **Four credits**

An introduction to and practical exercises in the variety of activities necessary before a case can go to trial. Topics covered will include pleadings, such as complaints, answers, counterclaims and bill of particulars, motions for accelerated judgment, summary judgment, protective orders, and others; discovery, including depositions, interrogatories, and demands for admissions; investigations activities of client interviews, using private investigators, witnesses—legal and expert—and exhibits, and pre-trial statements and waivers. 4 (4-0) Fall term

211 Trial and Appellate Procedures — **Four credits**

A practical study of the forms, activities and procedures necessary to bring a trial to a conclusion with emphasis on those items that can be completed by the Legal Assistant. This includes the preparation and use of pleadings, the notification, preparation and scheduling of witnesses; client preparation; the use of books and visual aids; preparation and indexing of the case file, and docket control. 4 (4-0) Winter term

213 Legal Field Specialists — **Four credits**

An overview of the various types of specialties in the legal field. The course will introduce the student to several major areas of law practice and the peculiarities of each. Some of the fields covered are probate and trusts, real estate, workman's compensation, municipal law, bankruptcy, domestic relations, and labor-management relations. 4 (4-0) Spring term

Law Enforcement

101 Introduction to Law Enforcement and Criminal Justice — **Five 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, philosphy and administration of justice. 5 (5-0)

102 Police Organization and Administration — **Five 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. 5 (5-0)

103 Theory of Patrol — **Five 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. 5 (5-0)

120 Basic Police Science — **Three credits**

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

201 Introduction to Criminal Investigation — **Five 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. 5 (5-0)

202 Criminal Law and Procedures — **Five 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. 5 (5-0)

203 Crime Prevention — **Five 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. 5 (5-0)

204 Highway Traffic Administration **Five credits**

A course covering the Michigan Vehicle 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. 5 (5-0)

205 Legal and Criminal Behavior **Three credits**

A survey of portions of the process whereby justice is arrived at; examines some of the people who take part in this process and looks into their purposes, motives, thoughts, and feelings. The course involves the application of methods and techniques to legal and criminal problems. 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)

207 Narcotic Drug Seminat (AVT) **Two credits**

This course offers the opportunity to expand one's knowledge of the narcotic drug picture.

246 Law Enforcement Internship **Three credits**

After successful completion of basic Law Enforcement courses students may elect Law Enforcement Internship. This course allows the student to be placed in an approved training station and earn credits for satisfactory work performance. 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)

DIVISION OF APPLIED ARTS AND SCIENCE

Department of Engineering Technology

Department of Applied Technology

Department of Health Careers

Department of Creative and Performing Arts

Division of Applied Arts and Science

Dean William Monroe

The Division of Applied Arts and Science is deeply involved in community service programs as well as the training of students seeking degrees. Accordingly, the college offers many services in career training as part of the community service effort. In accordance with this responsibility, courses are offered when needed by the local community and industry. Thus, on occasions, courses are offered but not included in this catalog.

Programs in the Division of Applied Arts and Science are developed to serve a diversity of needs across the community. These include particular needs of industry, business and government, and of citizens wishing to participate in a variety of community service activities. Objectives of this division, spanning a multitude of activities and programs, include:

CAREER TRAINING . . .

- to meet specific individual needs through single courses, combinations of selected courses, one-year certificate programs, or associate degree career programs.
- for those who wish to prepare for one of today's increasingly complex jobs.
- for those who wish assistance to become qualified for a more advanced position.
- for those who wish to perform better in their present job.
- for groups from industries, governmental agencies, hospitals, or other organizations wishing special courses to help their employees perform better in their assigned tasks or to become qualified for advancement into better positions.
- for apprentices who wish to enroll in joint on-the-job training and related training at the community college.

In addition to the college staff of full-time faculty, the career programs feature a team of part-time faculty who are working full time in careers related to their teaching specialities at Lansing Community College. This group includes not only technical specialists but company presidents, owners, managers, and other administrative personnel.

Currently, the Division of Applied Arts and Science offers training in more than 120 careers. These career training opportunities include the following:

Applied Technology

Arborist
Asbestos Worker
Auto Body Man
Auto Machinist
Auto Mechanic
Auto & Truck Mechanic
Bricklaying J.A.C.
Carpenter
Carpentry J.A.C.
Electrical Construction JATC
Electrical Maintenance
Electrical Residential
Inst. Repair (Music)
Machine Repair (Business)
Meat Cutter
Painting & Decorating JATC
Photo Engraver
Plumber-Pipefitter JATC
Plumber-Pipefitter Maintenance
Sheet Metal
Sheet Metal (Residential)
Silk Screen Processor
Stone Cutter
Technical-Dental
Technical-Optical
Well Drillers
Automotive Servicing
Auto Technician
Die Maker, Tool and Die Maker
Heating, Air Conditioning
Heating, Air Conditioning and Refrigeration
Industrial Supervision
Machine Repair
Millwright
Machinist
Tool Maker
Numerical Control Programmer
Pipefitter
Sheet Metal
Vocational-Technical-General
Welder

Industrial

Designs, Industrial
Die Design
Die Maker
Die Sinking
Die Trimmer Maker
Draftsman
Electrical, Industrial
Engraver
Foreman
Machine Builder
Machine Repair
Machinist
Millwright
Mold Maker
Model & Patternmaker
Numerical Control Programer
Plumber-Pipefitter, Industrial
Sheet Metal, Industrial
Structural Steel
Tool Designer
Tool & Die Maker
Tool Inspector
Tool Maker
Welder, Tool & Die

Employee-In-Training
Oldsmobile & Fisher Body

Assembler-Experimental Auto
Boring Mill Operator
Bricklayer-Furnace Building
Building Repair-General
Carpenter
Cutter Grinder "A"
Cutter Grinder "B"
Die Tryout
Dynamometer Operator-Engineer
Electrician
Gear Cutter-Experimental
Grinder Operator
Hardener-Tool and Die
Inspector-Layout Gages or Tech.
Inspector-Standard Tool
Jig Borer Operator
Lab Pyrometer Man
Lathe Operator
Machine Repair-Machine Operator
Machine Repair-Machinist Area
Machinist
Metal Finisher-Hand Form
Milling Machine Operator
Millwright
Painter
Pipefitter
Pneumatic Tool Repair
Power House-Substation Operator
Refrigeration and Air Conditioning Maintenance
Safety Appliance Maker
Template Maker
Tinsmith
Tool Gage and Fixture Repair
Tool Maker
Truck Repair-Gas and Electric
Welder-Arc, Gas and Layout
Welder-Die
Welder-Maintenance-Gas and Arc

Engineering Technology

Cartographic Drafting
Civil Technology, Highway
Civil Technology, Sanitary
Civil Technology, Structural
Civil Technology, Surveying
Civil Technology, Construction
Civil Technology, Traffic Engineering
Computer Technology
Drafting Technology-Architectural
Drafting Technology-Electrical
Drafting Technology-Industrial
Electronics Technology
Fire Science Technology
Industrial Safety Management
Mechanical Technology
Radio and Television Servicing
Technical-General
Traffic Engineering Technology
Truck Driver Training

Health Careers

Dental Assistant
Dental Hygiene
Inhalation Therapy
Nursing, Associate Degree
Practical Nursing
Radiologic Technology

Performing and Creative Arts

Art
- Commercial Art
- Graphic Design
- Illustration (Fashion-Technical)
- Industrial Design
- Interior Decorating and Design
- Print Making (Serigraphy)

Music
- Creative Dancing
- Music Commercial
  - Instrumental
  - Vocal
- Music Education
  - Instrumental
  - Vocal

Theater
- Acting
- Costume Design
- Directing
- Lighting and Sound
- Set Design and Construction
- Theater-Certificate

TRANSFER PROGRAMS . . .

- with associate degrees available to those who wish to enter a two-year degree program or who wish to transfer to a four-year university after completion of their work at Lansing Community College.
- for some of the programs in Performing and Creative Arts, designed to qualify a student to enter a professional school in the field of his choosing.
- for the student wishing no degree, but planning to transfer individual courses to a university. Since universities differ in their policies regarding transferring credit, a student who wishes to transfer to a specific institution should check with the counselor of transfer programs to verify the transferability of courses to a specific university.

COMMUNITY SERVICE PROGRAMS . . .

- individually designed to satisfy broad segments of the community served.
- ranging from production of major operas and broadway musicals to special nursing leadership seminars.
- with locations arranged to suit the needs of the community. This may include offerings within industry or in various communities served by Lansing Community College. Recently, the Division of Applied Arts and Science has offered 33 different seminars as part of this community service. Although these seminars are available upon demand, other seminars can be offered upon request, through the office of the dean of the Division of Applied Arts and Sciences.

Recent seminars include the following:

Advanced Electrical Controls
Advanced Special Burner
Apprentice
Automotive Body M.D.T.A.
Automotive Mechanics M.D.T.A.
Automotive Service M.D.T.A.
Drafting
Electronics
Fire Science
Heating and Air Conditioning
Industrial Management (Basic Skills)
Industrial Management (Front Line Foreman)
Instructor (Cosmetology)
Michigan Department of State Highways
Navigation
Oil Burner
Pre-Apprentice
Piloting
Safety
Seamanship
Truck Drivers' Safety
Waste Water (State Health Dept.)
Weather
Welding (In-plant)
Welding M.D.T.A.
Art Lecture
Art Lecture—Art & Industry
Band
Lansymphonic Choir
Dental Radiology
Gerontology
Nursing Leadership
R.N. Refresher

Edwin Bergmann

Department of Engineering Technology

Chairman: Edwin C. Bergmann

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

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

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

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

Associate degree programs require the successful completion of 90 credits including one course in American Government. The more popular associate degree programs offered by this department are described in detail in the following paragraphs.

The associate degree in science or associate degree—general may be granted for other groupings of courses upon approval of the department chairman.

The requirements for certificate programs vary considerably. In each case, the requirements are tailored to meet a specific objective. The most popular certificate courses are described in subsequent paragraphs in this catalog.

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

Engineering Technology Curriculums

The various curriculums 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 required to obtain a certificate or degree are listed. For each curriculum an advisor will be appointed from the department concerned. In the subsequent section each of these courses is described more fully.

Architectural Technology Associate in Science Degree (AT)

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 semi-professional working in direct 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.

35-40 credits required

			Credit Hours
AT	100	Beginning Architectural Drawing*	3
ART	101	Design I	3
AT	131	Residential Planning**	3
AT	230	Architectural Drafting—Detailing	4
AT	231	Architectural Drafting—Floor Plans	4
AT	232	Architectural Drafting—Elevations	4
AT	233	Architectural Drafting—Commercial Construction	4
AT	234	Architectural Composition	4
AT	235	Structural Drafting***	4
AT	242	Building Utility Systems	4
AT	243	Architectural Design	4
AT	246	Heating and Air Conditioning	3
AT	135	Architectural Pictorial Illustration	4
AT	241	Office Practices and Procedures	4
AT	247	Architectural History	3
DT	103	Descriptive Geometry	4
AT	308	Project Lab (Architectural)	3
AT	309	Project Lab (Architectural)	6

*For students with no background in Drafting.

**General interest course for those planning to buy, build or remodel a house. Little or no drawing involved.

***AT 235 may be used as Civil or Architectural Drafting requirement.

MATHEMATICS

12-13 credits required

			Credit Hours
ATR	151	Applied Algebra	4
ATR	152	Applied Geometry	4
ATR	153	Applied Trigonometry	4
TEC	151	Mathematics for Technicians	5
TEC	152	Mathematics for Technicians	5
TEC	153	Mathematics for Technicians	5
MTH	164	165*	

CIVIL—CONSTRUCTION AREA

12-16 credits required

			Credit Hours
CT	101	Construction Materials I	4
CT	102	Construction Materials II	4
CT	103	Construction Methods	4
CT	201	Construction Cost	4
CT	202	Construction Contracts	4
CT	123	Strength of Materials	4
CT	221	Structural Technology I	4
CT	222	Structural Technology II	4
CT	131	Basic Surveying I	4
CT	132	Basic Surveying II	4
CT	133	Basic Surveying III	4
CT	203	Project Lab	4

SOCIAL SCIENCE

4 credits required

SS	101, 102, 103	Social Science	12
SS	104	American Government	4

ENGLISH

8 credits minimum required

ENG	121	Freshman English*	4
ENG	122	Freshman English*	4
ENG	123	Freshman English*	4
TEC	101	Technical Report Writing I	3
ENG	101	Fundamentals of English I	4
ENG	102	Fundamentals of English II	4
ENG	103	Fundamentals of English III	4

*For transfer students

ELECTIVES

20 Credits Maximum

Electives are selected on the basis of student interest and specific career preparation requirements.

Students should consult with their Department advisor before making out schedule each term.

Architectural Technology Certificate Program (AT)

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 or to find a new field of employment. 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 DRAFTING

20-35 credits required

			Credit Hours
AT	100	Beginning Architectural Drawing*	3
AT	131	Residential Planning	3
AT	230	Architectural Drafting—Detailing	4
AT	231	Architectural Drafting—Floor Plans	4
AT	232	Architectural Drafting—Elevations	4
AT	233	Architectural Drafting—Commercial Construction	4
AT	135	Architectural Pictorial Illustration	4
AT	308	Project Lab	3
AT	309	Project Lab	6

*For students with no background in drafting.

RELATED INSTRUCTION

20-35 credits required

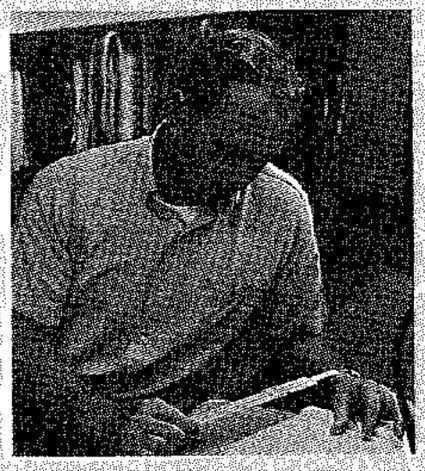
ATR	151	Applied Algebra	4
DT	103	Descriptive Geometry	4
CT	101	Construction Materials I	4
CT	102	Construction Materials II	4
CT	103	Construction Methods	4
CT	201	Construction Cost	4
CT	202	Construction Contracts	4
CT	123	Strength of Materials	4
CT	221	Structural Technology I	4
CT	222	Structural Technology II	4
CT	131	Basic Surveying I	4
CT	132	Basic Surveying II	4
CT	133	Basic Surveying III	4
AT	241	Office Practices and Procedures	4
AT	240	Heating and Air Conditioning	3
AT	242	Building Utility Systems	4
TEC	101	Technical Report Writing	3

OPTIONAL COURSES TOWARD CERTIFICATE*

ATR	152	Applied Plane Geometry	4
ATR	153	Applied Plane Trigonometry	4
TEC	151	Math for Technicians I	5
TEC	152	Math for Technicians II	5
TEC	153	Math for Technicians III	5
ART	101	Design I	3
DT	106	Engineering Drawing (Civil)	4
AT	247	Architectural History	3

Students should consult with their Departmental advisor before making out schedule each term.

The above credits are transferable toward an Associate Degree.



Cartographic Drafting and Photogrammetry (CT)

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

The art of drawing maps has become an essential vocation in our present society. The technique has been refined and tremendously improved since the beginning when crude maps were made freehand in the field during exploration. Today the work requires solution of cartographic problems involving the investigation, evelopment, 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 needed:

CT 105 Aerial Photo Interpretation
DT 206 Cartographic
CT 238 Advanced Photogrammetry & Stereoplotter Operation

Civil Technology Programs (CT)

Civil engineering technology is one of the broadest fields in the overall practice of engineering because its work is coordinated with so many other branches of the science. Civil Engineering is concerned with the planning, design, and construction of fixed structures and ground facilities for land, sea, and air transportation, for control of the flow and uses of water.

On the job, the technician works with engineers and scientists to find practical uses for scientific discoveries. He also serves as the link between the engineer and the skilled craftsman.

A civil engineering technician is trained to draw up plans and specifications, estimate costs and materials needed, use the transit, level and other surveying instruments, prepare maps, inspect jobs, and supervise construction.

Civil Technology—Construction Option

The objective of the Construction Technology program is to provide basic training in the design and construction of buildings and structures. The aim is not to train skilled draftsman or professional designers, rather it is to train technicians who will work with both of these groups. Persons so trained may qualify, with additional work experience, as estimators, engineering aides, construction superintendents, contractors, building inspectors or in other related fields of work.

Civil Technology—Highway Option

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

Civil Technology—Sanitary Option

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

Civil Technology—Structural Option

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

Civil Technology—Surveying Option

The objective of the Surveying Technology option is to provide the fundamental principles of surveying and the necessary training to use surveying instruments and equipment. Theory, field work and field problems are included in the courses.

The courses are available on an individual basis or as part of a certificate or associate degree program.

Civil Technology—Traffic Engineering Technician—Option

There is a growing concern in this country about the ability of the street system in our urban areas to meet the demands of ever-increasing traffic volumes. The traffic engineer is responsible for the developing of a complete traffic system in a community, the planning and implementation of programs and the administration of the traffic engineering functions. He is assisted by the traffic engineering technician in performing the above functions.

The traffic engineering technician is concerned with the most repetitive tasks involving data collection, the analysis of data, and the preparation of tentative recommendations for the correction of problems in the roadway system.

Students desiring an Associate Degree in Civil Technology need 90 credit hours of instruction; a one-year Certificate is 45 credit hours of instruction, or a special certificate may be obtained after completing the required courses listed under each Civil Technology option.

The course requirements for the Civil Technology options are:

CONSTRUCTION TECHNOLOGY—OPTION

		Credit Hours
CT	101 Construction Materials I	4
CT	102 Construction Materials II	4
CT	103 Construction Methods	4
CT	201 Construction Cost	4
CT	202 Construction Contracts	4
CT	203 Project Lab	4

Plus 24 elective credits to be chosen from Civil Technology courses.

SANITARY TECHNOLOGY—OPTION

CEM	111 General Chemistry	4
CEM	112 General Chemistry	4
CEM	113 Qualitative Analysis	4
MIC	100 Microbiology	4
MIC	203 Microbiology	4
CT	218 Water Supply & Treatment	4
CT	219 Sewerage and Sewage Treatment	4
CT	113 Hydrology	4
CT	112 Hydraulics	4

Plus 12 elective credits to be chosen from the Civil Technology courses.

STRUCTURAL TECHNOLOGY—OPTION

CT	121 Structural Concepts	4
CT	122 Statics	4
CT	123 Strength of Materials	4
CT	221 Structural Technology I	4
CT	222 Structural Technology II	4
CT	233 Project Lab	4

Plus 24 elective credits to be chosen from Civil Technology courses.

HIGHWAY TECHNOLOGY—OPTION

		Credit Hours
CT	111 Soils	4
CT	112 Hydraulics	4
CT	113 Hydrology	4
CT	211 Highway Technology I	4
CT	212 Highway Technology II	4
CT	213 Project Lab	4

Plus 24 elective credits to be chosen from Civil Technology.

SURVEYING TECHNOLOGY—OPTION

CT	131 Basic Surveying I	4
CT	132 Basic Surveying II	4
CT	133 Basic Surveying III	4
CT	231 Advanced Surveying I	4
CT	232 Advanced Surveying II	4
CT	233 Project Lab	4

Plus 24 elective Credits to be chosen from Civil Technology.

TRAFFIC ENGINEERING TECHNICIAN—OPTION

CT	260 Introduction to Traffic Engineering	4
CT	261 Principles of Traffic Administration	4
CT	262 Field Traffic Surveys	4
CT	263 Control Devices	4
CT	264 Traffic Geometrics	4
CT	265 Traffic Studies	4
CT	266 Traffic Laws and Regulations	4
CT	267 Urban Transportation Planning	4

Plus 30 elective credits to be chosen from Civil Technology Courses.

The following courses in the area of drafting, physics, English and mathematics are requirements in the Associate Degree program.

DRAFTING

8 Credits Required

		Credit Hours
DT	100 Basic Drafting	3
DT	101 Industrial Drafting I	4
DT	103 Descriptive Geometry	4
DT	106 Engineering Drawing (Civil)	4

PHYSICS

12 Credits Required

PHY	201 Physics	4
PHY	202 Physics	4
PHY	203 Physics	4
TEC	201 Applied Physics	4

ENGLISH

9 Credits Required

TEC	101 Technical Report Writing	3
ENG	101 Fundamentals of English I	4
ENG	102 Fundamentals of English II	4
ENG	103 Fundamentals of English III	4
ENG	121 Freshman English	4
ENG	122 Freshman English	4
ENG	123 Freshman English	4

MATH

15 Credits Required

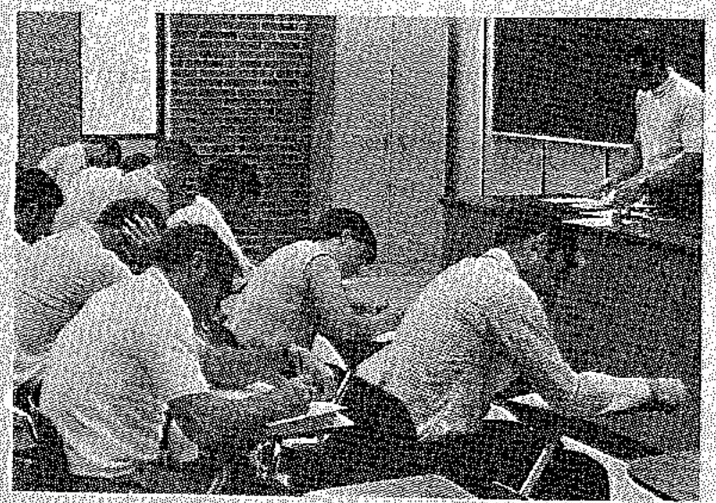
TEC	151 Math for Technicians	5
TEC	152 Math for Technicians	5
TEC	153 Math for Technicians	5
MTH	161 College Algebra and Trig. I	5
MTH	165 College Algebra and Trig. II	5

SOCIAL SCIENCE

4 Credits Required

SS	104 American Government	4

Students should consult with their departmental advisor before making a selection of electives in the Civil Technology programs.



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Industrial Drafting Technology — Associate Degree in Science (DT)

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 prepare for employment in the field of production design, tool design, or die design in a wide range of industries.

Emphasis is placed on the application of principles involved in product drafting and the procedures and techniques in common use of jigs, fixtures, cutting, 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 room as a qualified draftsman.

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

DRAFTING TECHNOLOGY

21 Credits Required

			Credit Hours
DT	100	Basic Drafting	3
DT	101	Industrial Drafting I**	4
DT	102	Industrial Drafting II**	4
DT	103	Descriptive Geometry**	4
DT	104	Jigs and Fixtures I**	4
DT	135	Industrial Pictorial Illustration	4
DT	202	Die Design I*	4
DT	203	Die Design II	4
DT	204	Body Design I	4
DT	205	Body Design II	4
DT	306	Project Lab**	4
DT	307	Project Lab	6

RELATED INSTRUCTION:

MATHEMATICS

13 Credits Required

			Credit Hours
ATR	151	Applied Algebra**	4
ATR	152	Applied Geometry**	4
ATR	153	Applied Trigonometry**	4
TEC	151	Math for Technicians I	5
TEC	152	Math for Technicians II	5
TEC	153	Math for Technicians III	5
MTH	164	College Algebra and Trigonometry I*	5
MTH	165	College Algebra and Trigonometry II*	5

MECHANICAL TECHNOLOGY

20 Credits Required

			Credit Hours
ATR	101	Machine Shop I	4
ATR	102	Machine Shop II	4
ATR	103	Machine Shop III	4
MT	209	Strength of Materials	4
MT	210	Kinematics and Machine Elements	4
MT	211	Machine Design	4
ATR	144	Hydraulics and Pneumatics I	3
ATR	145	Hydraulics and Pneumatics II	3
MT	201	Processing and Plant Layout	3
MT	203	Industrial Management	3
ATR	142	Metallurgy	3

*Recommended for Transfer Students.

**Recommended for Associate Degree.

ELECTRONICS TECHNOLOGY AND SCIENCE

6 Credits Required

			Credit Hours
ET	100	Electronics	4
ET	106	Industrial Electricity I**	3
ET	107	Industrial Electricity II	3
PHY	201	Physics Mechanical and Heat	4
TEC	201	Applied Physics**	4
TEC	202	Industrial Chemistry	4

SOCIAL SCIENCE

4 Credits Required

			Credit Hours
SS	104	American Government*	4

ENGLISH

6 Credits Required

			Credit Hours
TEC	101	Technical Report Writing**	3
ENG	101	Fundamentals of English I	4
ENG	102	Fundamentals of English II	4
ENG	103	Fundamentals of English III	4
ENG	121	Freshman English*	4
ENG	122	Freshman English*	4
ENG	123	Freshman English*	4

ELECTIVES—26 Credits

Electives are selected on the basis of student interest and specific career preparation requirements.

Students should consult with their departmental advisor before making out a schedule each term.

Students wishing to attain a certificate in drafting in conjunction with associate degree must have a total of 27 credits in drafting.

Drafting Certificate Program (DT)

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 evening to enable persons presently employed to upgrade themselves or prepare for positions as industrial draftsmen.

Courses are oriented to practical experiences in the various areas of drafting. These experiences are supplemented by study in the related areas of manufacturing, mathematics and materials.

Those desiring more in-depth training may transfer the credits earned in the one-year certificate program to the two-year Associate Degree Program.

DRAFTING

27 Credits Required

			Credit Hours
DT	101	Industrial Drafting I	4
DT	102	Industrial Drafting II	4
DT	103	Descriptive Geometry	4
DT	104	Jigs and Fixtures I	4
DT	202	Die Design I	4

*Select additional credits from Drafting courses listed below.

MATHEMATICS

8 Credits Required

			Credit Hours
ATR	151	Applied Algebra	4
ATR	153	Applied Trigonometry	4

MECHANICAL TECHNOLOGY

4 Credits Required

			Credit Hours
MT	108	Materials and Processes in Manufacture	4

GENERAL TECHNOLOGY

7 Credits Required

			Credit Hours
TEC	101	Technical Report Writing	3
TEC	201	Applied Physics	4

OPTIONAL COURSES TOWARD DRAFTING CERTIFICATE

			Credit Hours
DT	100	Basic Drafting	3
DT	105	Jigs and Fixtures II	4
DT	203	Die Design II	4
DT	135	Industrial Pictorial Illustration	4
DT	204	Body Design I	4
DT	205	Body Design II	4
DT	306	Project Lab	4
DT	307	Project Lab	6
MT	209	Strength of Materials	4
MT	201	Processing and Plant Layout	3
ATR	101	Machine Shop I	4
ATR	142	Metallurgy	3

Electronics Technology Program (ET)

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

SUGGESTED SCHEDULE FOR ASSOCIATE DEGREE ELECTRONICS TECHNOLOGY DEGREE

Freshman Year

Fall Term		Credit Hours
ET 111	Electrical Circuits I	4
ET 102	Electronics Drawing	2
TEC 151	Math for Technicians I	5
ENG 101	Fundamentals of English	4
		15

Winter Term		
ET 112	Electrical Circuits II	4
SS 104	American Government	4
TEC 152	Math for Technicians II	5
ENG 102	Fundamentals of English	4
		17

Spring Term		
ET 113	Electrical Circuits III	4
TEC 153	Math for Technicians III	5
TEC 101	Technical Report Writing	3
	Elective (Minimum)	3
		15+

Sophomore Year

Physics 201 and 202 and one elective.

Three of the following four sequences.

ET 231-232-233	Computer Circuits
ET 241-242-243	Industrial Electronics
ET 261-262-263	Radio and TV Service
ET 271-272-273	Communications

Exceptions and substitutions may be made with approval of departmental advisor.

Total credits required 90

Electronics Technology Certificate Programs (ET)

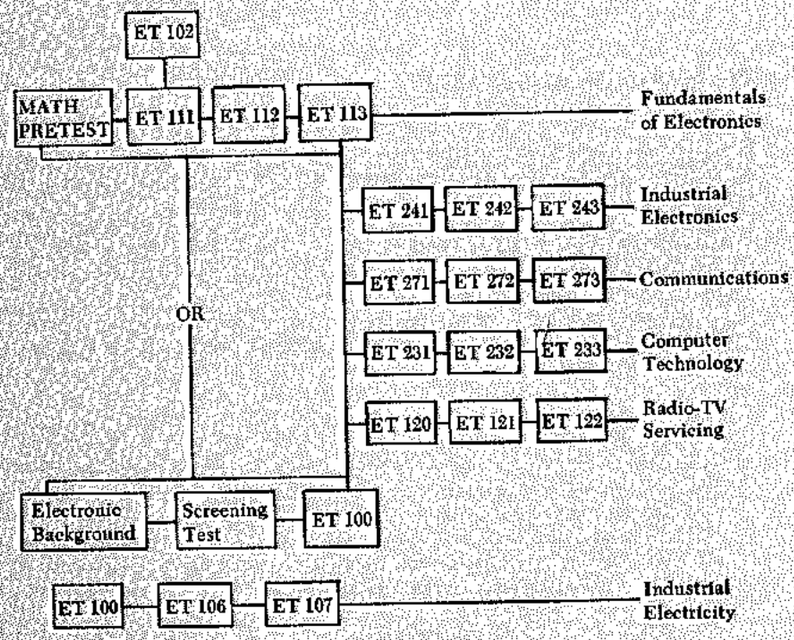
Certificates are granted in the following areas:

Fundamentals of Electronics
Industrial Electronics
Communications
Computer Technology
Radio-TV Servicing
Industrial Electricity

Certificates are available to all students who have completed the necessary course work, by application to the Registrar's Office. Application for each certificate should be initiated by the student during his last term of work in the certificate program.

Certificates are also available to those students enrolled, either on a part-time or full-time basis, in the Electronics Technology Associate Degree Program.

COURSE WORK FOR CERTIFICATE PROGRAMS— ELECTRONICS TECHNOLOGY



Electronics Guide to Course Prerequisites

COURSE		PREREQUISITE
ET 100	Basic Electronics	Algebra
ET 102	Electronics Drawing	none
ET 111	Electrical Circuits I	Algebra (can be taken concurrently)
ET 112	Electrical Circuits II	ET 111 & Trigonometry (can be taken concurrently)
ET 113	Electrical Circuits III	ET 112 or instructor approval
ET 231	Computer Circuits I	Algebra and instructor approval
ET 232	Computer Circuits II	ET 113 or ET 100 ET 102 and instructor approval
ET 233	Computer Circuits III	ET 232 or instructor approval
ET 241	Industrial Electronics I	ET 113 or ET 100 and ET 102 and instructor approval
ET 242	Industrial Electronics II	ET 241 or instructor approval
ET 243	Industrial Electronics III	ET 242 or instructor approval
ET 261	Radio Servicing	ET 113 or ET 100 and ET 102 and instructor approval
ET 262	Television Servicing	ET 261
ET 263	Advanced Television Servicing	ET 262
ET 264	Audio Systems Servicing	ET 113 or ET 100 and ET 102 and instructor approval
ET 272	Communications II	ET 271 or instructor approval
ET 273	Communications III	ET 272 or instructor approval

Prerequisites may be waived by Engineering Technology advisors if student has had previous experience or courses in that particular subject area.

Fire Science Technology (FST)

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

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

FST 160	Fire Fighting Strategy and Tactics I	Three credits
FST 161	Basic Fire Science	Three credits
FST 164	Fire Protection Systems and Equipment	Three credits
FST 165	Hazardous Materials I	Four credits
FST 166	Ordinances and Codes	Three credits
FST 167	Fire Hydraulics	Four credits
FST 180	Fire Fighting Strategy and Tactics II	Three credits
FST 263	Building Construction for Fire Security I	Five credits
FST 264	Fire Investigation I	Three credits
FST 265	Emergency Rescue procedures	Four credits
FST 266	Fire Investigation II	Three credits
FST 267	Organizational Procedures	Three credits
FST 268	Hazardous Materials II	Four credits
FST 283	Building Construction for Fire Security II	Five credits
FST 290	Fire Administration	Three credits
FST 306	Project Lab	Three credits
FST 307	Project Lab	Six credits

Courses may be taken individually. Students desiring certificates or associate degrees in Fire Science may develop programs to fit their individual needs. Certificate programs require 45 credit hours of instruction. Associate degrees require 90 credit hours of instruction. Minimum credit hours in subject areas for a certificate and associate degree are shown below:

ASSOCIATE DEGREE

90 Credits Required

Courses	Credit Hours
Fire Science	44
Mathematics (Minimum)	4
English (Minimum)	3
Chemistry and/or Physics	3
American Government	4
Electives	31
	90

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

CERTIFICATE

Courses	Credit Hours
Fire Science	29
Mathematics (Minimum)	4
English (Minimum)	3
Chemistry and/or Physics	4
Electives	13
	45

Industrial Safety Management (SAF)

There is an increasing emphasis on industrial safety practices in the country due largely to the recently enacted Federal and State laws and regulations on safety and health standards. As a result there will be many Federal, State and local governmental agencies that will need professionally trained people to carry out the functions of the above mentioned standards. Industry will also need trained people, other than safety engineers, to carry out safety practices within individual companies and departments.

The courses listed below are taught as needed to upgrade or prepare these technicians in practices and procedures according to the new standards.

CERTIFICATE REQUIREMENTS

45 Credits Required

		Credit Hours
SAF 300	Industrial Accident Prevention I	3
SAF 301	Industrial Accident Prevention II	3
SAF 302	Economics of Safety	3
SAF 303	Industrial Safety Hazards	3
SAF 304	Industrial Hygiene	3
SAF 305	Safe Practices and First Aid	3
SAF 306	Hazardous Materials and Processes	3
SAF 307	Industrial Accident Analysis	3
	Technical Communications	3
	Applied Science	3
	Mathematics (Minimum)	4
	Fire Science (Minimum)	3
	Electives	8
		45

Associate Degree program may be arranged with Departmental Chairman.

Mechanical Technology Program (MT)

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

MECHANICAL TECHNOLOGY

36 Credits Required

			Credit Hours
ATR	101	Machine Shop I	4
ATR	102	Machine Shop II	4
ATR	103	Machine Shop III	4
ATR	106	Numerical Control I	4
ATR	107	Numerical Control II	4
ATR	108	Numerical Control III	4
MT	201	Processing and Plant Layout	3
MT	203	Industrial Management	3
ATR	142	Metallurgy	3
ATR	143	Industrial Heat Treating Processes	3
ATR	141	Hydraulics and Pneumatics I	3
ATR	145	Hydraulics and Pneumatics II	3
MT	209	Strength of Materials	4
MT	210	Kinematics and Machine Elements	4
MT	211	Machine Design	4
MT	108	Materials and Process in Manufacture	4
MT	305	Project Lab	3
MT	307	Project Lab	6

MATHEMATICS

9-10 Credits Required

			Credit Hours
ATR	151	Applied Algebra	4
ATR	152	Applied Geometry	4
ATR	153	Applied Trigonometry	4
TEC	151	Mathematics for Technicians	5
TEC	152	Mathematics for Technicians	5
TEC	153	Mathematics for Technicians	5

DRAFTING TECHNOLOGY

12 Credits Required

			Credit Hours
DT	101	Industrial Drafting I	4
DT	102	Industrial Drafting II	4
DT	103	Descriptive Geometry	4
DT	104	Jig and Fixture Design I	4
DT	202	Die Design I	4

ELECTRONICS TECHNOLOGY

3 Credits Required

			Credit Hours
ET	101	Basic Electricity	4
ET	106	Industrial Electricity I	3

GENERAL TECHNOLOGY 6 Credits Required

			Credit Hours
TEC	101	Technical Report Writing	3
TEC	201	Applied Physics	4
TEC	202	Industrial Chemistry	4
TEC	207	Technical Internship Seminar	3

ENGLISH 4 Credits Required

			Credit Hours
ENG	101	Fundamentals of English I	4
ENG	102	Fundamentals of English II	4
ENG	121	Freshman English*	4
ENG	122	Freshman English*	4
ENG	123	Freshman English*	4

*Recommended for transfer students.

SOCIAL SCIENCE 4 Credits Required

			Credit Hours
SS	104	American Government	4

ELECTIVES—15 Credits Maximum

Electives are selected on the basis of student interest and specific career preparation requirements.

Students should consult with their department advisor before making out schedule each term.

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 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.

Cooperative education programs are available to qualified students. The University of Michigan, Dearborn Center and the University of Detroit presently offer cooperative programs for Lansing Community College pre-engineering students. 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.

Freshman Year	Fall Term	Credit Hours
MTH 164	College Algebra and Trigonometry	5
ENG 121	Freshman English	4
CEM 111	General Chemistry (Inorganic)	5
PSY 101	Orientation	1
PE 101	Physical Education	1
		16

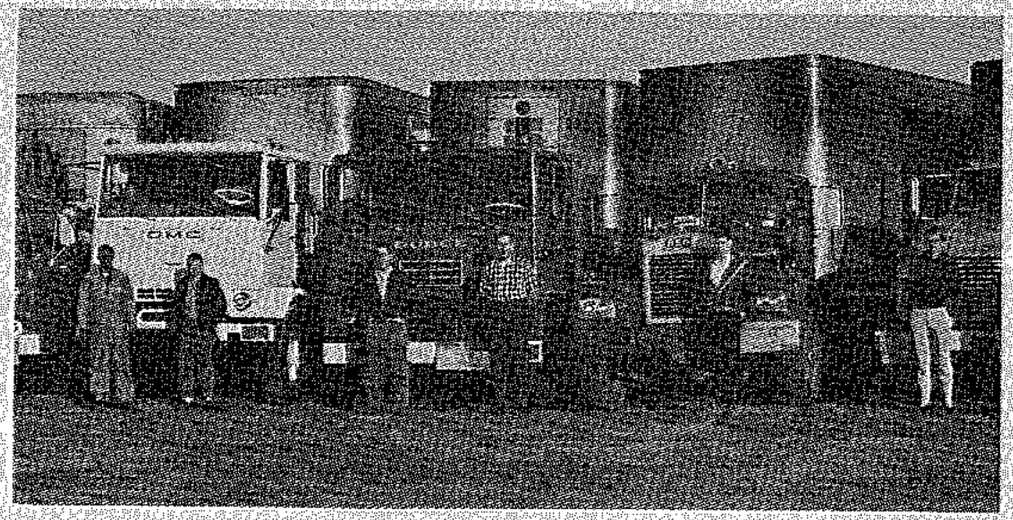
	Winter Term	
MTH 213	Analytic Geometry and Calculus I	5
ENG 122	Freshman English	4
CEM 112	General Chemistry (Inorganic)	5
	Elective	3-4
PE 102	Physical Education	1
		18-19

	Spring Term	
MTH 214	Analytic Geometry and Calculus II	5
ENG 123	Freshman English	4
CEM 113	Qualitative Analysis	5
	Elective	3-4
PE 103	Physical Education	1
		18-19

Sophomore Year	Fall Term	Credit Hours
MTH 215	Analytic Geometry and Calculus III	5
PHY 211	Physics	4
DT 101	Industrial Drafting I	4
SS 101	Social Science I	4
		17

	Winter Term	
MTH 216	Analytic Geometry and Calculus IV	5
PHY 212	Physics	4
DT 102	Industrial Drafting II	4
SS 102	Social Science II	4
		17

	Spring Term	
MTH 233	Theory of Matrices	4
PHY 213	Physics	4
DT 103	Descriptive Geometry	4
SS 103	Social Science III	4
		16



Edward Jenkins

Transportation Training Program

Coordinator: Edward D. Jenkins

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

This program includes studies of the following subjects:

Accident Prevention and Reporting
Air Brake System
Communications
Customer and Public Relations
Driver's Daily Logs
Driver's Responsibility & Maintenance
Driver Situations
Fire Fighting
Freight Handling
Health & First Aid
Highway Regulations & Laws
History & Importance of Industry
D.O.T. Safety Regulations
Job Injury Prevention
Labor Relations
Loading & Securing Loads
Mathematics
Orientation
Psycho-Physical
Registration
State Code

Range instruction consists of 120 hours actual driving time in deisel rigs. An extended road trip is taken during the final week of training. The four-week training course is conducted five days a week from 8:00 a.m. to 5:00 p.m.

The range program consists of exercises on the college driving range combined with actual road training conducted on public highways.

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

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

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

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

COURSE DESCRIPTIONS

Architectural Technology (At)

100 Beginning Architectural Drawing — **Three credits**

For students without previous drafting courses or experience. Drafting and lettering techniques will be stressed. Orthographic projection, types of pictorial drawings and sketching are included. 3 (2-2)

131 Residential Planning — **Three credits**

General interest course for those planning to buy, build or remodel a house. Little or no drafting involved. Topics include construction details as well as architectural styles and planning concepts. Some reading of blueprints, and use of working drawings is included. Not a required course for architectural majors. 3 (3-0)

135 Architectural Pictorial Illustration — **Four credits**

Fundamental course for those interested or who are working as illustrators. Course covers principles of axiometric projection, perspective shading, and shadows, with experience offered in the use of rendering medias. 4 (2-4)

230 Architectural Drawing I — **Four credits**

Covers proper selection of building materials and the preparation of architectural details using these materials. Emphasis is placed upon using reference material and developing working drawings from architectural sketches. 4 (2-4)

231 Architectural Drawing II — **Four credits**

Essentials of designing and drawing floor plans. Course allows student to exemplify present skills and knowledge as they pertain to the construction industry. Students select an architectural project, design it, select proper materials, and prepare working drawings in accordance with the needs of a mythical customer, and as dictated by local building codes. Prerequisite: AT 230. 4 (2-4)

232 Architectural Drawing III — **Four credits**

The student prepares final working drawings, primarily elevations, and completes a set of specifications covering the project designed in AT 231. The final result of 231 and 232 should be a well prepared resume of the student's architectural drafting abilities and his general knowledge of the construction industry. 4 (2-6)

233 Architectural Drawing IV — **Four credits**

Primary emphasis is placed upon commercial and industrial construction. Course covers both low-rise and high-rise buildings. Prerequisite AT 230, 231 and 232 for drafting technology majors; others, approval of department. 4 (2-4)

234 Architectural Composition — **Four credits**

Site and urban planning. Design and composition of architectural and natural elements in open spaces. 4 (2-4)

235 Structural Drawing — **Four credits**

Acquaints the student with the standard graphic representation of various structural designs using concrete, steel, and wood; of structural components, and of structural details. 4 (2-4)

241 Office Practices and Procedures — **Four credits**

Covers general specifications, supplemental or job specifications, material specifications, building codes, use of reference material, shop drawings, bidding practices, office reduction of field data, and field inspection procedures. 4 (4-0)

242 Building Utility Systems — **Four credits**

Components and arrangement of residential and commercial plumbing and electrical systems. Heating and cooling systems will be introduced. Emphasis placed on code and specification requirements. 4 (4-0)

245 Architectural Design — **Four credits**

The development of creative skills in architectural design, theory of aesthetic design, color, materials and textures. 4 (2-4)

246 Heating and Air Conditioning — **Three credits**

Components and arrangement of residential and commercial heating and air conditioning systems. Emphasis is placed on environmental factors, specification requirements, and code provisions. 3 (3-0)

247 Architectural History — **Three credits**

Development of architecture as an art form in each of the civilizations or architectural periods from antiquity to contemporary. 3 (3-0)

308 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, under the guidance of an instructor and through the research, designs or constructs a project to meet the requirements of a three credit architectural course. Requires departmental approval before enrolling. 3 (0-3)

309 Project Laboratory (Architectural) — **Six credits**

Designed for students with a strong background in architectural technology who wish to advance their ability in design. Each student spends a minimum of 12 hours per week on an architectural technology project. The student, under the guidance of an instructor and through research, designs or constructs a project to meet the requirements of a six credit architectural course. Requires departmental approval before enrolling. 6 (0-6)

CIVIL TECHNOLOGY (CT)

Construction (CT)

101 Construction Materials I — **Four credits**

This course deals with the determination of the properties of aggregates and concrete. Teaches methods of designing concrete mixes for different uses and methods of sampling and testing. 4 (2-4)

102 Construction Materials II — **Four credits**

Continuation of Construction Materials I dealing with the determination of the properties of bituminous materials. Teaches methods of designing bituminous mixes for different uses and methods of sampling and testing. Prerequisite: CT 101. 4 (2-4)

103 Construction Methods — **Four credits**

Study of techniques and equipment used in constructing bridges, buildings, highways and pipelines. Comparison of building codes and construction specifications. Prerequisite: CT 102. 3 (3-3)

201 Construction Costs — **Four credits**

Gives methods of preparing material take-offs and labor estimates and applying current unit prices to estimate construction project costs. Prerequisite: CT 103. 4 (3-3)

202 Construction Contracts — **Three credits**

Fundamentals of contract law liability and workmen's compensation are covered with the various contract documents. Prerequisite: CT 201. 3 (3-0)

203 Project Lab — **Four credits**

Gives the opportunity to undertake and complete an independent study of project in Construction Technology. Prerequisite: Graduation Term. 4 (arranged)

Highway (CT)

111 Soils — **Four credits**

Teaches testing and classification of soils. Also includes discussion of basic geologic principles related to soils. 4 (3-3)

112 Hydraulics — **Four credits**

Covers hydrostatics, laminar and turbulent flow in pipes and fittings, pump characteristics, venturi meters, cavitation, flow in open channels, orifices, weirs, critical depths, subcritical and critical flow and channel transitions. Prerequisite: CT 111. 3 (3-3)

113 Hydrology — **Four credits**

Study of the analysis of run-off and the design of control devices. Includes discussion of drainage, culverts, stream flow, open channel flow, Bernoulli's theorem, storm water, ground water and water tables. Prerequisite: CT 112. 4 (3-3)

211 Highway Technology I — **Four credits**

Covers plan and profile drawing, highway planning, financing, organization, geometrical design, traffic studies, pavements, mass diagrams, earthwork and costs. Prerequisite: CT 113. 4 (2-4)

212 Highway Technology II — **Four credits**

Continuation of Highway Technology I, with discussions on trends in mass transportation systems. Prerequisite: CT 211. 4 (2-4)

213 Project Lab — **Four credits**

Gives the opportunity to undertake and complete an independent study or project in highway technology. Prerequisite: Graduation Term. 4 (arranged)

Structural (CT)

121 Structural Concepts — **Four credits**

Introduction to structural terminology and concepts. Balsa wood models are used to demonstrate the general behavior of structural members in compression, tension, shear and bending due to different loading conditions. Framing for bridges and building will be discussed. 4 (3-3)

122 Statics — **Four credits**

Study of loads and forces due to loads. Conditions of stability and equilibrium in structural frames. Free body analysis for reactions and member forces. Prerequisite: CT 121. 4 (3-3)

123 Strength of Materials — **Four credits**

Covers stress, strain, creep, fatigue, yield, tension, compression, shear, bending, torsion, combined stresses and deflections. Prerequisite: CT 122. 4 (3-3)

221 Structural Technology I — **Four credits**

This course deals with the basic analysis and design techniques related to structural steel bridges and building. Emphasis will also be given to standard detailing practices. Prerequisite: CT 123. 4 (2-4)

222 Structural Technology II — **Four credits**

Continuation of Structural Technology I, emphasizing basic analysis, design and detailing methods related to reinforced concrete structures. Prerequisite: CT 221. 4 (2-4)

223 Project Lab — **Four credits**

Gives the opportunity to undertake and complete an independent study of project in Structural Technology. Prerequisite: Graduation Term. 4 (arranged)

Surveying (CT)

131 Basic Surveying I — **Four credits**

Introduction course in surveying which includes the study of terminology, the use of tape, level and transit for measuring distances, elevations and angles. Also analysis and use of verniers. 4 (2-4)

132 Basic Surveying II — **Four credits**

Continuation of Basic Surveying I which covers field notes and the reducing of notes for office use. Traverse computations, dividing off land, U.S. Public Land System, and subdivision plats. Prerequisite: CT 131. 3 (3-3)

133 Basic Surveying III — **Four credits**

Continuation of Basic Surveying II with emphasis on field work for bench mark circuits, profiles, cross-sections, traverses, topography and mapping. Prerequisite: CT 132. 4 (2-4)

231 Advanced Surveying I — **Four credits**

Covers stake-out for various construction projects for horizontal and vertical control. Inaccessible distance problems. Prerequisite: CT 132. 4 (2-4)

232 Advanced Surveying II — **Four credits**

Continuation of Advanced Surveying I covering precise surveying principles, ground and aerial photogrammetry, astronomy, and geodetic surveying. Also, the use of tilting levels, theodolites and other precise instruments. Prerequisite: CT 231. 4 (3-3)

233 Project Lab — **Four credits**

Gives the opportunity to undertake and complete an independent study of project in Surveying Technology. Prerequisite: Graduation Term. 4 (arranged)

Review for Registration Exams (CT)

141 Engineering Review I — **Four credits**

First in a series of three courses which provide a theoretical background in the engineering sciences as a review in preparation for the Registered Professional Engineer Examination. Topics include mathematics, physics, statics and dynamics. 4 (6-0)

142 Engineering Review II — **Four credits**

Continuation of Engineering Review I includes fluid mechanics, hydraulics, thermodynamics, and mechanics of materials. 4 (6-0)

143 Engineering Review III — **Four credits**

Continuation of Engineering Review II, includes chemistry, electricity, electronics, economics, law and ethics. 4 (6-0)

241 Engineering Exam Part II — **Three credits**

This course is open to qualified individuals who are preparing to write the Registered Professional Engineer Examination. Topics covered are soil mechanics, road design, road construction, bridge construction, highway drainage, traffic operations, traffic geometrics, highway planning and route location. 3 (3-0)

242 Land Surveyor Review I — **Three credits**

This course is open to qualified individuals who are preparing to write the Registered Land Surveyor Examination. Topics covered are math for plane surveying, range of accuracy and route surveying. 3 (3-0)

243 Land Surveyor Review II — **Three credits**

Continuation of Land Surveyor Review I, includes legal requirements, instrument adjustments, space surveys, latitude, longitude and use of the solar ephemiris. 3 (3-0)

Traffic Engineering (CT)

260 Introduction to Traffic Engineering — **Three credits**

This course offers a general overview of the field of traffic engineering technology and provides insight into related career opportunities. It relates human factors and driver characteristics to the vehicle, roadway and environment. Traffic characteristics are defined in terms of speed, design, speed zoning, density, gaps and lags, and traffic volume. The course serves as an introduction for traffic engineering technology students and as a survey course for students majoring in other related fields. The laboratory is used for problems, experiments and field trips. 3 (3-0)

261 Principles of Traffic Administration — **Three credits**

By studying traffic administration and safety, the student learns how budget, public relations, interagency problems and other systems operations affect traffic engineering. Stressing traffic safety as a basic consideration for all technical aspects of the field, the student is shown that field traffic surveys, control devices, geometric design, traffic studies, traffic laws and urban transportation planning constitute the major subject areas of traffic engineering technology. 3 (3-0)

262 Field Traffic Surveys — **Four credits**

By collecting actual field data, the student solves problems relating to accident reporting, collision diagraming, intersection surveys, pedestrian volumes, and parking studies related to control, financing, design, demand characteristics, meters, terminals, vehicle dimensions, signs and parking. Emphasis will be placed on the methods and equipment required for the collection of field data, the writing of reports and the formulation of recommendations to solve these related problems. 4 (3-lab arranged)

263 Control Devices — **Three credits**

In the general context of design maintenance and placement, the course emphasizes sign (illumination, lettering, response time, type and design), signals (cycle length, phases, offsets, equipment and maintenance), markings, lighting (highways, intersections, special areas), and delineation. 3 (3-0)

264 Traffic Geometrics — **Four credits**

Horizontal, vertical, and transitional curves, vertical curves, super elevation, pavement grip, widening, curb radii, shoulders, acceleration and deceleration lanes, channelization stopping distance, reaction in braking time, sight distances and channelization combined with other considerations in the geometric design of roadways in rural, urban and downtown areas. The design laboratory is used for the geometric layout and the preparation of geometric design plans for the solution of practical field problems. 4 (3-lab arranged)

265 Traffic Studies — **Four credits**

Using actual field problems the student is taught how to plan and execute traffic engineering studies. Studies concerned with illumination, origin and destination, speed and volume stress the basic concepts of counting procedures, counting equipment, ADT, cordons, flow maps, short counts, peak hour, platoon flow, composition, thirtieth HV, and other traffic concepts. Emphasis is also placed on the use of data processing and statistics to reduce bulk data and analyze results. 4 (3-lab arranged)

266 Traffic Laws and Regulations — **Three credits**

A thorough study of federal, state, and local laws and regulations provides the legal framework to be used in geometric design, vehicle characteristics, wheel loads, bus stops, parking, signs, signals, markings, pedestrian and driver characteristics, warrants, and general traffic law enforcement. 3 (3-0)

267 Urban Transportation Planning — **Four credits**

This course combines new concepts in benefit, cost economic analysis, traffic forecasting and needs studies with the fundamental concepts learned in previous courses to plan large scale transportation systems. Although a traffic engineering technician would probably not be involved in such a large scale undertaking early in his career, he is shown how small segments of a project are carefully woven into a master planning concept. 4 (3-lab arranged)

INDUSTRIAL DRAFTING TECHNOLOGY (DT)

100 Basic Drafting — **Three credits**

For students without previous drafting experience or who need a refresher course for understanding basic concepts in orthographic projection, auxiliary projection, sketching, both orthographic and pictorial. Lettering technique will also be stressed and a brief approach to industrial dimensioning practices. DT 100 is a prerequisite to DT 101 for those students who do not have a sufficient background in drafting. 3 (2-2)

101 Industrial Drafting I — **Four credits**

A course in drafting designed to enable the student to become efficient in reading, understanding, and drawing. Areas stressed are orthographic projection, sectioning, pictorial drawing, auxiliary views, and dimensioning according to industrial standards. Various problems in each area are developed by the student. Prerequisite: DT 100 or a one year high school (or equivalent) background in drafting. 4 (2-4)

102 Industrial Drafting II — **Four credits**

A continuation of drafting practices stressed in DT 101 with emphasis on advanced techniques to develop a skill in drafting correlated to the demands of industry. Gears, cams, and beginning layout practices are also covered. Advanced detailing and assembly type drawing is done by each student. Prerequisite: DT 101. 4 (2-4)

103 Descriptive Geometry — **Four credits**

A basic course in the science of graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic projection. Covers the following topics: points, lines, and planes; primary and successive auxiliary views; parallelism; perpendicularity; concurrent vectors; developments and intersections; pictorial projections, shades, and shadows. Makes a study of civil and mechanical engineering problems. Prerequisite: Drafting Technology 101. 4 (2-4)

104 Jigs and Fixtures I — **Four credits**

Jigs and fixtures function to properly locate and hold a work piece while work is performed. Jigs and fixtures may be provided with necessary devices for drilling, grinding, milling, supporting, clamping, and gaging. Each student will work on drawing problems in designing various types of jigs and fixtures. Prerequisite: DT 102. 4 (2-4)

105 Jigs and Fixtures II — **Four credits**

The study and design of advanced Jigs and Fixtures and a continuation of DT 104. Prerequisite: DT 104. 4 (2-4)

106 Engineering Drawing—Civil — **Four credits**

Offers practice in techniques of transferring field survey notes to the drawing and includes traverse plotting, topographic maps, profiles, cross sections, earthwork plans, logs of boring, and plat maps. 4 (2-4)

110 Blueprint Reading I — **Four credits**

Covers orthographic projection, linear and angular measurement and reading of prints with three views given in the three principal planes of projection. Deals mainly with part prints. 4 (2-2)

111 Blueprint Reading II — **Four credits**

Covers application of orthographic projection principles in more detailed blueprints than DT 100. Deals with part prints and assembly drawings. Prerequisite: DT 100 or permission of instructor. 4 (2-2)

135 Industrial Pictorial Illustration — **Three credits**

Fundamental course for those who are interested in becoming or who are working as draftsmen or illustrators. Includes exposure to various methods of illustration currently used in industry, including use of sketches, photographs, isometric, and three point perspective grid. Use of various line weights achieves desired finish drawing effects, rather than rendering. Prerequisites: DT 102 or equivalent in experience. 3 (0-3)

202 Die Design and Construction I — **Four credits**

Emphasis of the design of blank and pierce dies, basic forming dies and basic trim dies, material types, heat treat requirements and press requirements as applied to the design. 4 (2-4)

203 Die Design and Construction II — **Four credits**

Emphasis on the design of progressive dies, forging dies, hot form dies, diffusion bond dies. Study of exotic metals as applied to the type of die. Related study in the areas of EDM, processes, and estimating. Prerequisite: DT 202. 4 (2-4)

204 Body Design I — **Four credits**

Basic automotive body design will acquaint the student with the techniques and drafting procedures used in actual industry drafting rooms. The tools, materials and techniques differ from those used in mechanical drawing in many ways, principally because of the preponderance of curved lines and surfaces. Prerequisite: DT 103. Lecture and Laboratory. 4 (2-4)

205 Body Design II — **Four credits**

Reviews basic descriptive geometry as applied to actual automotive true view problems. Includes basic study of simple and compound surface development, surface development and true view practice applied to actual automotive design problems. Lecture and Laboratory. 4 (2-4)

206 Cartographic Drawing and Photogrammetry — **Six credits**

Essentials of large area mapping and characteristics of the various map projections. Draining, geological, land subdivision, and route location maps are also studied and prepared. Some time devoted to overlay construction for color separation on printed maps. Course also includes fundamentals of photogrammetry and actual operation of stereo plotter. 6 (2-4)

207 Cartographic Drawing — **Four credits**

Covers in detail the preparation of large area maps. Drainage, geological, land subdivision, and route location maps are also studied in detail. Some time devoted to overlay construction for color separation on printed maps. 4 (2-4)

218 Electrical and Electronics Drawing I — **Four 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 technical manuals, catalogs, and periodical technical literature. Attention given to pictorial drawings, connection diagrams, block diagrams, logic diagrams and schematics, using the latest symbology and practice, and using material based on A.S.A., I.R.E. and Mil-Stds. Includes study of circuit tracing and sketching. Prerequisite: Drafting Technology 101. 4 (2-4)

219 Electrical and Electronics Drawing II — **Four credits**

Second of two courses allowing the student majoring in Electrical and Electronics Drafting Technology to select a project that will constitute, at the completion of the second term, a resume of his drafting skills and his general knowledge of the specific field. A project shall be chosen and designed, technical material gathered and preliminary drawings made during this course. Prerequisite: Satisfactory completion of first term, second year curriculum. 4 (2-4)

306 Project Laboratory (Industrial) — **Four credits**

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 pursue and complete in one term. Each student also will be responsible for some research in design application. Recommended for students enrolled in Drafting Technology or working toward a Drafting Certificate. 4 (0-6)

307 Project Laboratory (Industrial) — **Six credits**

Designed for students with a strong background in drafting, who wish to advance their ability in design. Each student spends a minimum of 12 hours per week on layout procedures. Upon completion of this course and 45 credits, the student meets the drawing requirements for a drafting certificate and is fully qualified to become a draftsman in industry. Class requirements include the design of a mechanical device and making a complete design drawing. The student is evaluated on his ability to create and complete this mechanical device. 6 (0-12)

ELECTRONICS TECHNOLOGY (ET)

Courses leading to the Electronics Technology Associate Degree and to Certificates in Electronics Technology:

100 Basic Electronics — **Four credits**

A survey course covering the fundamental concepts of electricity to electronic amplification using transistors. Major emphasis is on laboratory work. Not intended for students in Electronics Technology Associate Degree program. 4 (2-4)

102 Electronics Drawing — **Three credits**

Describes a wide variety of electronic components and certain of their characteristics. Schematic diagrams are drawn and practice is afforded in relating the schematic diagram to the electronic equipment it represents. Upon completion of this course, the student should be able to identify the components commonly found in electronic equipment by sight and to relate their interconnection to the schematic diagram for the instrument and, using the schematic diagram as a guide, should be able to locate the components in the equipment. 3 (1-2)

111 Electrical Circuits I — **Four credits**

Normally the first of a sequence of courses taken to obtain an associate degree or certificate in the electronics area. An introduction to basic electrical circuits with emphasis on direct current. Covers electrical units, resistor color code, Ohm's law, Kirchhoff's laws, network theorems, inductance, capacitance and R. C. time constants. Laboratory work includes measurement of voltage, current and resistance in D.C. circuits using the VOM and VTVM, constructing and testing simple meters, and using the oscilloscope to measure the period and amplitude of an A.C. signal. 4 (3-2)

112 Electrical Circuits II — **Four credits**

A continuation of ET 111 with emphasis on sinusoidal voltage and current and vacuum tubes. Topics include analysis of RC, RL and RLC circuits, both series and parallel; series and parallel resonance; coupled circuits; and vacuum tubes. Load line and equivalent circuit analysis of simple vacuum tube circuits are performed. Laboratory work includes measurement of A.C. voltage and current, impedance measurements, construction and analysis of resonant circuits, and construction and testing of various vacuum tube circuits. 4 (3-2)

113 Electrical Circuits III — **Four credits**

A continuation of ET 112, with emphasis on semiconductor devices. Topics include PN diodes, Zener diodes, bipolar transistors and field effect transistors; small signal and large signal characteristics and biasing of bipolar transistors; classes of amplifiers and stability. Laboratory work includes construction and testing of solid state circuits including transistor amplifiers of various kinds. 4 (3-2)

206 Project Laboratory — **One credit**

The student selects a project compatible with his chosen field of work. The student under the guidance of the instructor and through research, constructs and tests and electronic device. Project approval must be granted by supervising instructor prior to registration. 1 (0-2)

207 Project Laboratory — **Two credits**

Same as ET 206 except 2 credits. 2 (0-4)

208 Project Laboratory — **Three credits**

Same as ET 206 except 3 credits. 3 (0-6)

231 Computer Circuits I — **Four credits**

A course designed to be an introduction to digital computer operation. Topics include number systems, logic and computer operation. Laboratory work will emphasize these topics through actual programming and operation of a small digital computer. This course may be taken alone. 4 (3-2)

232 Computer Circuits II — **Four credits**

A course designed to cover the subject of pulse and switching circuits. Topics include waveform characteristics, switching behavior of semiconductor devices, gating circuits, multivibrators, and blocking oscillators. Laboratory work reinforces lecture material through actual construction and testing of circuits. 4 (3-2)

233 Computer Circuits III — **Four credits**

A continuation of 232. Topics include time base generators and operational amplifiers with applications to the field of instrumentation and analog computers. 4 (3-2)

241 Industrial Electronics I — **Four credits**

First of a series of three courses dealing with industrial electronics. Includes the basics of AC and DC motor and generator characteristics, unijunction transistors, silicon controlled rectifiers and other solid state switching devices. Laboratory work includes construction and testing of solid state lamp dimmers and motor speed controls. 4 (3-2)

242 Industrial Electronics II — **Four credits**

A continuation of ET 241. Topics include thyratrons, ignitrons, resistance welding controls and photoelectric control circuits. Laboratory work includes construction and testing of thyratron and photoelectric circuits. 4 (3-2)

243 Industrial Electronics III — **Four credits**

A continuation of ET 242. Topics include closed loop control systems such as voltage regulators, process controls and servomechanisms. Laboratory work includes construction and analysis of voltage regulator circuits. 4 (3-2)

261 Radio Servicing — **Five credits**

A laboratory oriented course during which AM, FM and FM-MPX radio operation is discussed with emphasis placed on theoretical and practical trouble shooting techniques. A block diagram of a superheterodyne receiver is used to introduce the student to radio concepts. During the course, students are encouraged to bring their own radios to the laboratory for trouble shooting. Vacuum tube and transistor radio topics are discussed. 5 (2-6)

262 Television Servicing — **Five credits**

A laboratory oriented course during which the principles of operation of black and white television receivers are discussed. A block diagram introduction to television is used as a foundation for trouble-shooting techniques. Students are encouraged to bring to the laboratory their own sets to trouble-shoot; if no set is available to the student, sets will be provided during the course. 5 (2-6)

263 Advanced Television Servicing — **Five credits**

A laboratory oriented course using the basic principles of black and white television operation as a basis for discussing color television receivers. Laboratory emphasis will be placed on trouble-shooting and alignment of color circuits. Students will have the opportunity to repair their own color sets or others provided in the course. 5 (2-6)

264 Audio Systems Servicing — **Five credits**

A laboratory-oriented course covering both vacuum tube and transistor audio circuits. Topics covered will include monaural and stereo amplifiers and speaker systems. Emphasis will be placed on trouble-shooting audio amplifiers, measuring power output, distortion and other characteristics of audio systems. 5 (3-4)

271 Communications I — **Four credits**

The first of a series of three courses dealing with electronic communication principles and devices. The purpose of the series is two-fold: to teach the principles of communication theory and to prepare the student to take the FCC exams for a commercial radiotelephone license. The first course includes the topics of oscillation, frequency multiplication, RF power amplification and amplitude modulation. 4 (3-2)

272 Communications II — **Four credits**

A continuation of ET 271. Topics covered include single sideband, detection, frequency conversion, and IF & RF amplification. 4 (3-2)

273 Communications III — **Four credits**

A continuation of ET 272. Topics covered include frequency modulation and detection, television, and microwave principles. 4 (3-2)

General Electricity Electronics Courses:

100 Basic Electronics — **Four credits**

A survey course covering the fundamental concepts of electricity to electronic amplification using transistors. Major emphasis is on laboratory work. Not intended for students in Electronics Technology Associate program. 4 (2-4)

101 Basic Electricity — **Four credits**

A basic course covering the practical use, application and understanding of electrical power as used in the home and in industry. Special emphasis is placed on the safe and efficient use of electricity for producing heat and power. Topics for discussion will include: electrical wiring of homes and motors, electrical switches and controls; series and parallel circuits; new lighting devices, and electrical heat. 4 (3-2)

201 Advanced Electricity — **Four credits**

A second course in Electricity. More advanced topics will be discussed in heat, light, power and magnetism. Prerequisite: ET 101. 4 (4-0)

103 Electrical Blueprint Reading — **Four credits**

A basic course teaching the interpretation of electrical blueprints and wiring diagrams for building, machines, controls, appliances and electrical devices. Specifications and recommended practice will be based on the latest National Electrical Code. Topic areas may include architectural plans, house wiring, motor winding diagrams, control systems, power distribution and safety. Emphasis will be placed on typical wiring diagrams and equipment used in the electrical trade. 4 (4-0)

104 Electrical Mathematics I — **Four credits**

A first course covering basic mathematics from fractions to trigonometry used in electricity and electronics courses. Problems will be solved on measurements, Ohms Law, Kirchhoff's Law, series and parallel circuits, combination circuits, electrical power, efficiency, and complex circuits involving practical applications in electrical installation and electronic equipment servicing. The emphasis is on electrical concepts to extend electrical theory and application. Prerequisite: Basic Math 150. 4 (4-0)

105 Electrical Mathematics II — **Four credits**

A second course to familiarize students with more advanced problems in Electrical theory and application. Emphasis will be on practical solutions to develop a understanding of the principles of inductance, capacitance, impedance and phase relationships in AC and DC circuits. Topics will include resistance of conductors, trigonometric functions in AC electricity, reactance in circuits and power factor correction. Prerequisite: ET 104. 4 (4-0)

106 Industrial Electricity I — **Three credits**

First of two courses dealing with electrical control of industrial machinery. Includes basics of A.C. and D.C. motor characteristics, and electro-magnetic or "AC" control. 3 (1-2)

107 Industrial Electricity II — **Three credits**

A continuation of ET 260 with emphasis on static control. Topics covered include logic diagrams and symbols, G.E. static control and NORPAK. 3 (1-2)

221, 222, 223 International Morse Code — **One credit**

Principles of International Morse Code transmission, reception, and speed building. The course may be continued under the course number indicated in successive terms. 1 (0-3)

251 Electric Vehicle Systems — **Three credits**

A new course designed to meet the need for both a practical and theoretical approach to the rapidly developing field of electric-powered vehicles. Initially, the course material will be geared to an understanding of electric powered forklift trucks, roustabouts and other industry vehicles now being used. Topics covered will include basic circuits, DC motors, battery systems SCR and pulse width controls component testing, trouble shooting and schematic diagrams. Prerequisite: ET 101 or approval of instructor. 3 (2-1)

FIRE SCIENCE TECHNOLOGY (FST)

Fire Science

160 Fire Fighting Strategy and Tactics I — **Three credits**

Fundamentals of fire fighting strategy and tactics, planning methods of attack and preplanning fire problems. 3 (3-0)

161 Basic Fire Protection — **Three credits**

An investigation of local, county, state, federal and private fire protection agencies as to organization and function. Study of the history of loss of life and property by fire, and the history and philosophy of fire protection. Also considers future employment and career opportunities. 3 (3-0)

164 Fire Protection Systems and Equipment — **Three credits**

Study of fire detection and alarm systems, special hazard protection systems, sprinkler systems and fire estinguishing equipment. 3 (3-0)

165 Hazardous Materials I — **Four credits**

Fire fighting methods relating to hazardous materials, to include solids, liquids and bases and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials. 4 (3-0)

166 Ordinances and Codes — **Three credits**

Study of state laws and regulations, local ordinances and national standards including Interstate Commerce Commission regulations as to fire prevention. 3 (3-0)

167 Fire Hydraulics — **Four credits**

Fundamentals of fire hydraulics. Includes a study of water supply problems, standards on pump requirements, formulas, test criteria and physical laws relating to hydraulics, and practical application to fire fighting problems. 4 (3-0)

180 Fire Fighting Strategy and Tactics II — **Three credits**

Is a study of manpower assignments for stations and apparatus in communities of various sizes. The course is designed to assist officers in making good decisions in organizing and operating fire fighting forces. 3 (3-0)

263 Building Construction for Fire Security I — **Three credits**

Involves the essentials of building design and construction. Includes special features and considerations related to fire security. 3 (3-0)

264 Fire Investigation I — **Three credits**

Fire behavior and importance of determining origin. Procedures used in identifying accidental, incendiary or arson type fires. Methods of recognizing and identifying motivation for arson. Laws relative to the intentional setting of fires. 3 (3-0)

265 Emergency Rescue Procedures — **Four credits**

Study of emergency first-aid and rescue practices. Training with resuscitation and rescue equipment and its application for mutual aid, major disaster and civil defense. 4 (3-0)

266 Fire Investigation II — **Three credits**

Continuation of FST 264. Preservation of evidence and photographic coverage of fire. Methods of interrogation related to fire investigation and conduct for investigators. Study of libel, slander and court procedures relative to evidence and statements. Importance of cooperation between investigative agencies, records, reports and case histories. 3 (3-0)

267 Organizational Procedures — **Three credits**

Further study of fire department organization. Considers personnel administration, communications, records and reports, maintenance, training, fire equipment, fire prevention and fire fighting, fire company organization and duties of the company officer. 3 (3-0)

268 Hazardous Materials II — **Four credits**

Designed to cover methods of detection, control and extinguishing methods of fires, which are likely to arise whenever chemicals, explosives and radioactive materials are used, stored, and transported. 4 (3-0)

283 Building Construction for Fire Security II — **Three credits**

A study of building construction and protections of opening in floors, walls and partitions, exits, smoke and heat venting, protections against exposures, life safety codes, sprinkler systems and special structures. 3 (3-0)

290 Fire Administration — **Three credits**

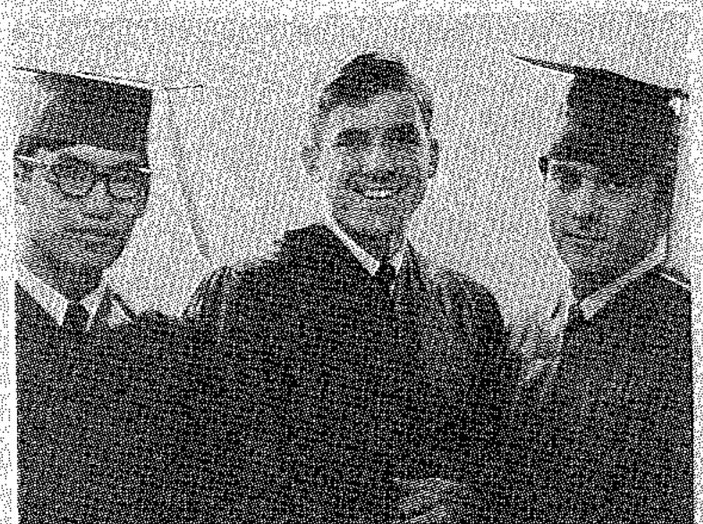
A broader context providing chief officers with a better understanding of motivation with proper direction of management, and to reflect modern approaches to the challenge which faces today's fire executives. 3 (3-0)

306 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. 3 (0-3)

307 Project Laboratory — **Six 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. 6 (0-6)



INDUSTRIAL SAFETY MANAGEMENT (SAF)

300 Industrial Accident Prevention I — **Three credits**

Provides a basic understanding of the historical development of industrial accident prevention and its relationship to modern industry and to public and private agencies. Early industrial developments in accident prevention: public disasters and their influence; accident experience in various areas; development of safety service agencies; accident control legislation; workmen's compensation laws. 3 (3-0)

301 Industrial Accident Prevention II — **Three credits**

Establishing a new program or improving programs now in operation. Discussion includes elements in a complete program, job study, operational requirements, accident investigations, reporting and analysis, creating and maintaining interest, developing an accident control man, and selling the program to management. 3 (3-0)

302 Economics of Safety — **Three credits**

A study of the costs and factors in accidental injuries to the person injured, the company, and to society. Also includes safety suggestions systems and safety awards. 3 (3-0)

303 Industrial Safety Hazards — **Three credits**

Developed to acquaint accident prevention personnel and those beginning this work with the specific nature and significance of accident situations. 3 (3-0)

304 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 analyses; engineering control methods; personnel protective equipment, and industrial health education. 3 (3-0)

305 Safe Practices and First Aid — **Three credits**

This course is designed to acquaint individuals with First Aid and treatment through lectures, demonstrations, and practice as outlined in the course of study issued by the American Red Cross or equivalent. Safe working practices in performing work with hand tools and around machines are stressed. Information about the safety devices of machines and how to identify and use them is covered. Upon successful completion of the course, a certificate may be granted. 3 (3-0)

306 Hazardous Materials and Processes — **Three credits**

Designed to acquaint safety engineers with the basic principles of physics and chemistry and the application of some of these principles to construction operation. Heat, electricity, sound, gasses—radiation, dangerous products, plastics, demolition, excavation, steel erection, concrete construction, welding and cutting. 3 (3-0)

307 Industrial Accident Analysis — **Three credits**

Sources of accident data, review and evaluation of currently used indexes of safety performance, review of American Standards Association Codes, survey of present methods of collecting and using data, the role of statistical concepts and terminology, review of essential mathematics, measures of central tendency, measures of variability, the normal probability distribution, use of descriptive statistics in accident analysis. 3 (3-0)

MECHANICAL TECHNOLOGY (MT)

108 Materials and Processes in Manufacture — **Four credits**

Covers a wide field of manufacturing including casting (sand, die, investment, centrifugal, etc.); powdered metallurgy, hot-working processes (rolling, forging, piercing, drawing, extrusion, etc.); cold working processes (swaging, cold heading, extrusion, rolling, drawing, spinning, stamping, etc.); plastic molding (casting, extruding, etc.); welding (arc, gas, resistance, etc.), machining, related techniques (layout, jigs and fixtures, automation and tape control, etc.), and making extensive use of audio-visual aids. 4 (4-0)

201 Processing and Plant Layout — **Three credits**

Part processing techniques, process engineering cost analysis, and plant layout methods. A knowledge of basic manufacturing process is recommended. 3 (2-2)

203 Industrial Management — **Three credits**

The management function, foundations of successful management, organizational relationships, the manufacturing function, the procurement function, the personnel function, process control, and production control. 3 (3-0)

209 Strength of Materials — **Four credits**

Stress, strain, torsion, pure bending, compound stresses, failure theories, beam deflection, columns, and connections. Prerequisite: Mathematics for Technicians 151. 4 (4-0)

210 Kinematics and Machine Elements — **Four credits**

Motion analysis of linkages, cams, and gears. Study of machine components such as camshafts, slides, brakes, and clutches. Prerequisite: DT 101 Engineering Drawing, Applied Science. 4 (2-2)

211 Machine Design — **Four credits**

Practical design and fundamentals, strength of materials and kinematics are applied to solve basic machine design problems. Prerequisite: MT 203, MT 210 and Math for Technicians 153. 4 (1-3)

306 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, under the guidance of the faculty and through research, designs or constructs a mechanical device or mechanism. Projects and class hours of work are comparable to a three credit course in the Mechanical Technology program. 3 (0-3)

307 Project Laboratory (Mechanical) — **Six credits**

Advanced course, recommended only for students wishing to do in-depth work in the mechanical technology area after finishing basis prerequisites. Student selects a project compatible with his chosen field of work. The student, under the guidance of the faculty and through research, designs or constructs a mechanical device or mechanism. Projects and class hours of work compare with a six credit course in the Mechanical Technology program. 6 (0-6)

SYSTEMS TECHNOLOGY (ST)

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

101 Critical Path Method — **Four credits**

The CPM method of project control involves planning, scheduling, and monitoring. The course includes construction of the arrow logic diagram, float calculations, management and crew restraints, time-cost functions, manpower and equipment leveling, project expediting, and network flow calculations. PERT probability estimates are discussed and various computer techniques are investigated and compared. 4 (4-0)

102 Statistical Quality Control — **Four credits**

An introductory course in quality control methods. The program develops basic statistical concepts and orients the student to a recognition of variation in whatever form it may occur. Graphical solution of quality control problems is emphasized. Actual case studies are used as the basis of class projects. 4 (3-0)

GENERAL TECHNOLOGY (TEC)

101 Technical Report Writing I — **Three credits**

This course emphasizes the means for presenting information effectively, using drawings, prints, sketches, and outlines. Methods for using graphical presentations in technical calculations will be included. Incorporation of such graphic media will be used in laboratory presentation projects. 3 (3-0)

102 Applied Communication Techniques — **Three credits**

This course is designed for the student who has difficulty communicating his ideas to others. Included in the course will be instruction in promotional techniques; adaption of material for radio, television and publications. 3 (3-0)

103 Industrial Communications — **Four credits**

A course designed to provide a review of basic written and spoken English as is found necessary in writing AVO's safety reports, job lineups, as well as oral communications. It emphasizes clear and accurate transmission of information utilizing shop terminology at the same time striving for brevity.

Individuals benefiting most from this course would be those now employed and those preparing for industrial occupations such as technicians, supervisors, and skilled trades apprentices. 4 (4-0)

107 Introduction to Radio Communications — **Three credits**

A beginning course for those interested in learning the fundamentals of radio communications. Topics to be covered include how to interview people, write and deliver newscasts, prepare deliver-sell commercials, select proper music to fit a format, run a console of a radio station, write and read editorials, and to qualify for a third class FCC license. 3 (3-0)

201 Applied Physics — **Four credits**

This course is a study of the fundamental phenomena commonly encountered in various technician, apprenticeship, and craftsman careers. It includes fundamentals of technology principles involved in mechanical technology, electricity and electronics, civil technology, hydraulics, metal working, and heating and air conditioning. This course will provide the basic training in fundamental physical phenomena necessary for the student preparing for a technology career. Emphasis will be placed on teaching technology fundamentals by means of practical problems encountered in the various technician, apprentice, and craftsman careers. 4 (3-1)

202 Industrial Chemistry — **Four credits**

A basic course in general chemistry designed for the technician. Topics include atomic and molecular theory, bonding, properties of the elements. Also discussed are oxidation-reduction reactions, kinetic-molecular theory, phase diagrams, solutions and electrochemistry. 4 (3-0)

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

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

151 Mathematics for Technicians I — **Five credits**

Applications of linear, quadratic and higher degree algebraic equations to the solution of a wide variety of practical problems in the areas of civil technology, electronics technology, mechanical technology and others. Emphasis is placed on a common sense approach to problem solving using trial and error, graphical, numerical and analytical methods. Also covers units of measurement, approximate numbers, precision, accuracy and use of the slide rule. Prerequisite: Basic algebra and geometry. 5 (5-0)

152 Mathematics for Technicians II — **Five credits**

A continuation of TEC 151 with the applications of the principles of plane trigonometry to the solution of practical technical problems. Prerequisite: TEC 151. 5 (5-0)

153 Mathematics for Technicians III — **Five credits**

A continuation of TEC 152 with the application of the principles of differential and integral calculus to the solution of practical technical problems. Prerequisite: TEC 152. 5 (5-0)

Department of Applied Technology

Chairman: Harold J. Walper

The Department of Applied Technology offers programs and courses providing training which can lead to a career as craftsman or technician in the building trades, industrial trades, or the service trades.

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

Harold Walper

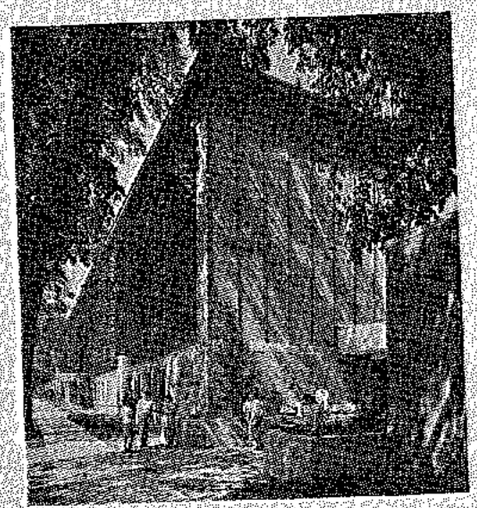
Primary Functions of Department of Applied Technology

The primary purposes of the Applied Technology Department are to provide: (1) related instruction for apprentices in all skilled trades served by the College area, (2) one-year certificate programs to enable individuals to prepare for job entry positions requiring basic knowledge and skills, (3) two-year associate degree programs to give greater breadth and depth, and (4) advanced knowledge in the field of technology to allow individuals to promote and update themselves in their present occupations or in new fields.

In keeping with the philosophy of the College, the Applied Technology Department strives to serve broad areas of needs. The industrial and building trades occupations present problems different from those of other fields. A constant awareness of these differences is necessary for an effective educational approach to fulfillment of these needs.

This vocationally oriented department provides "hands-on" experience whenever possible, in the belief that participation reinforces the lecture portion of any subject matter taught.

Recognizing that the social elements of our community require greater attention than ever before, special attention is necessary to aid disadvantaged and minority persons. The department develops programs to assist government and local agencies to strengthen the educational and skill levels of these persons.



Apprenticeship Training

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

Apprentice training offers the individual the opportunity to learn a skilled craft or trade while he works at the trade for wages and takes related instruction to learn more about the job. A person desiring apprentice training there must be employed as an apprentice before entering certain designated classes.

Upon completion of his training program, the apprentice is awarded the status of journeyman, signifying that he is a skilled craftsman or tradesman. Many of the key men in industry today began as apprentices.

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

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

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

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

Building trades apprenticeships include:

- Asbestos Worker
- Bricklaying
- Carpentry
- Electrical (Inside)
- Electrical (Residential)
- Painting and Decorating
- Plumbing and Pipefitting
- Sheet Metal

Industrial trades apprenticeships include:

- Die Making
- Die Sinking
- Engraver-Die
- Machine Repair
- Machinist
- Millwright
- Model Making
- Structural Steel Fabrication
- Tool Inspection
- Tool Making
- Tool and Die Making

Service trades apprenticeships include those of:

- Automotive Body Repair
- Automotive Painter
- Automotive Servicing

Seminars

Lansing Community College develops many seminars, in an effort to meet the educational needs of the citizens of our community. These seminars are usually designed for companies and/or groups. They are offered on or off campus. In turn, they upgrade the individual's working effectiveness, provide additional knowledge and develop new skills. Seminars consits of lectures, laboratory experience or a combination of both.

Human relations and technical skills are emphasized. Competence in selecting, preparing, utilizing and evaluating tools and methods will be stressed according to need. The seminars are offered upon request, and credit varies.

The various curriculums in which students can enroll are given on the following pages. In the subsequent section, each of these courses is described more fully.

Certificate Programs

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

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

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

Students should bear in mind that the Certificate Programs are informational and instructive in nature but are not equivalent in course work and job experience to the programs of the various Lansing Joint Apprenticeship Committees, and do not of themselves lead to journeyman status.

Students seeking journeyman status should consult with the Apprenticeship and Training Committee of the appropriate Joint Apprenticeship Board, as registered with the Bureau of Apprenticeship and Training, Lansing office of the U.S. Department of Labor, or the 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.

Associate Degree Programs

Courses completed in Applied Technology Certificate Programs are usually transferable toward an associate degree of similar nature within the department.

All associate degree programs require a minimum of 90 term hour credits.

Each student should check with the departmental chairman, or a counselor, to determine the transferability of credits to a particular college or university.

ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS

Air Conditioning—Associate Degree Program

The Air Conditioning Associate Degree is designed to train a technician to service and install a total comfort air conditioning system in residential and light commercial applications. The student works with air conditioning systems designed to control the temperature, humidity, purity and circulation of air within an enclosed space, such as a home or business.

Students receive necessary background to calculate heat gains and heat losses, and learn layout, planning and design of cooling and heating systems.

In the heating sections, the installation and servicing of oil burners, gas-fired systems and the controls needed for these systems are thoroughly covered. Much time is spent in the cooling sections, building a background knowledge of the combination of motors, pulleys, compressors, valves, coils, piping, ducts, electrical wiring and automatic controls that make up an air conditioning unit.

The student gains through knowledge of the latest tools, gauges and testing equipment used in air conditioning, and a general background in trouble-shooting domestic refrigerators.

Air Conditioning—Associate in Science Degree
(Minimum of 90 credits required)

36 Credits Required

			Credit Hours
HAC	101	Air Conditioning I	4
HAC	102	Air Conditioning II	5
HAC	103	Air Conditioning III	4
HAC	120	Gas & Oil Burner I	4
HAC	121	Gas & Oil Burner II	4
AT	242	Building Utility Systems	4
AT	246	Heating & Air Conditioning	4
ATR	142	Metallurgy	3
ATR	144	Hydraulic & Pneumatic I	3
MT	209	Strength of Materials	4
TEC	201	Applied Physics	4

Mathematics

10-12 Credits Required

			Credit Hours
ATR	151	Applied Algebra	4
ATR	152	Applied Plane Geometry	4
ATR	153	Applied Plane Trigonometry	4
TEC	151	Mathematics for Technicians I	5
TEC	152	Mathematics for Technicians II	5
TEC	153	Mathematics for Technicians III	5

Drafting Technology — **10-12 Credits Required**

			Credit Hours
AT	100	Beginning Architectural Drafting	3
AT	131	Residential Planning	3
AT	230	Architectural Drawing	3
ATR	135	Structural Blueprint Reading	4

Electronics Technology

			Credit Hours
ET	101	Basic Electricity	4
ET	106	Industrial Electricity I	3

General Technology

			Credit Hours
TEC	101	Technical Report Writing	3
CEM	101	Introduction to Inorganic Chemistry I	4

English — **3 Credits Required**

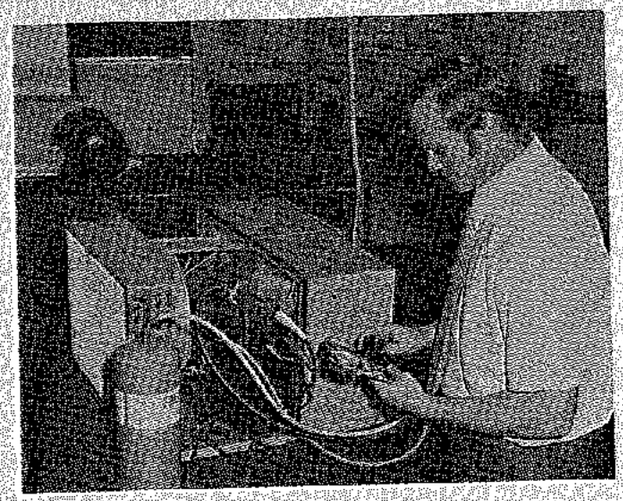
			Credit Hours
ENG	111	Communication I	3
ENG	112	Communication II	3
ENG	121	Freshman English	4
ENG	122	Freshman English	4
ENG	123	Freshman English	4

Social Science — **4 Credits Required**

			Credit Hours
SS	104	American Government	4

Electives:

			Term Credits
HAC	110	Refrigeration Service I	4
HAC	111	Refrigeration Service II	4
ATR	190	Appliance Servicing I	4
ATR	191	Appliance Servicing II	4
ATR	192	Appliance Servicing III	4



Air Conditioning—Certificate Program

The Air Conditioning Certificate Program is designed to equip the student with job entry skills for employment in the air conditioning industry.

The curriculum will provide the student with a basis knowledge of the field. Students will be working with the total heating and air conditioning system including air purity and humidity under laboratory conditions, and diagnosing and servicing of units and testing equipment used in air conditioning.

Fall Term

			Credit Hours
ATR	135	Structural Blueprint Reading	4
ET	101	Basic Electricity	4
ATR	151	Applied Algebra	4
TEC	201	Applied Physics	4
			16

Winter Term

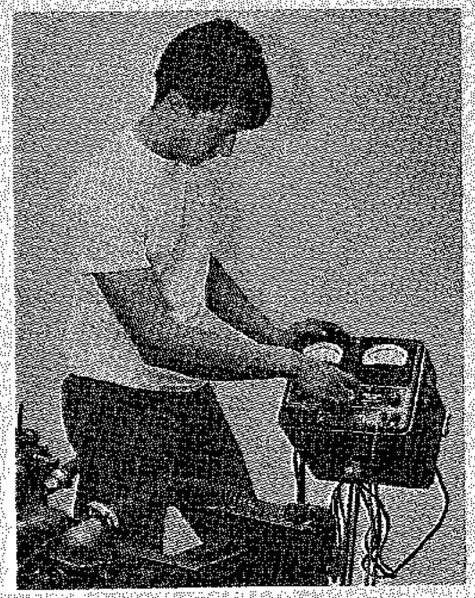
AT	230	Architectural Drafting	3
MT	209	Strength of Materials	4
HAC	102	Air Conditioning II	5
HAC	120	Gas and Oil Burner Service I	4
			16

Spring Term

CEM	101	Introduction to Inorganic Chemistry I	4
ATR	144	Hydraulics and Pneumatics I	3
HAC	103	Air Conditioning III	4
HAC	121	Gas and Oil Burner Service II	4
ATR	161	Customer Relations	2
			17

Recommended Electives

AT	246	Heating and Air Conditioning	3
HAC	110	Refrigeration Service I	4
HAC	111	Refrigeration Service II	4
HAC	101	Air Conditioning I	4



Automotive Technology—Associate in Science Degree

Minimum of 90 credits required.

The Automotive associate degree program is designed to develop a service technician who will be able to diagnose, repair, and service an automobile. This series of courses will provide an individual with job entry skills enabling him to seek employment in the Automotive Service industry. Ecology has placed heavy demands on the auto industry for control of auto emissions, resulting in a need for trained technicians to service emission controls. Students gain practical expereince by working on and servicing live units in the laboratory courses.

Automotive Technology — 48 Credits Required

			Credit Hours
AUT	100	Auto Service I	4
AUT	110	Auto Electrical Theory	4
AUT	120	Auto Drive Lines	4
AUT	130	Auto Engines	4
AUT	111	Tune-Up I	4
AUT	140	Auto Brakes	4
AUT	150	Auto Suspension	4
AUT	112	Tune-Up II	4
AUT	160	Auto Air Conditioning	4
AUT	121	Automatic Transmission I	4
AUT	122	Automatic Transmission II	4
AUT	123	Automatic Transmission III	4

Automotive Specialization — 12 Credits Required (may be taken in 1 area)

			Credit Hours
AUT	171	Engine Laboratory	8
AUT	172	Tune-Up and Electrical Laboratory	8
AUT	173	Brake Laboratory	8
AUT	175	Suspension Laboratory	8
AUT	176	Automatic Transmission Laboratory	8
AUT	177	Auto Related Service Laboratory	8
AUT	178	Auto Internship	6

Social Science — 4 Credits Required

SS	104	American Government	4

General Technology

			Credit Hours
SS	101	Technical Report Writing	3
TEC	201	Applied Physics	4
TEC	305	Safe Practices and First Aid	3
ATR	101	Machine Shop I	4
WLD	100	Combination Welding	4
MTH	009	Basic Arithmetic	4
BUS	118	Introduction to Business	4
BUS	222	Small Business Management	4

Automotive—Certificate Program

The Automotive Certificate Program is designed to provide the student with job entry skills for employment in the automotive industry. The curriculum consists of practical laboratory courses designed to provide hands-on experience.

		Fall Term	Credit Hours
AUT	100	Auto Service I	4
AUT	110	Auto Electrical Theory	4
AUT	120	Auto Drive Lines	4
AUT	130	Auto Engines	4
			16
		Winter Term	
AUT	111	Tune-Up I	4
AUT	140	Auto Brakes	4
AUT	150	Auto Suspension	4
AUT	177	Auto Related Service Laboratory	8
			20
		Spring Term	
AUT	112	Tune-Up II	4
AUT	160	Auto Air Conditioning	4
AUT	178	Auto Internship	6
			14
		Electives	
WLD	100	Combination Welding	4
ATR	150	Basic Math	4
ATR	101	Machine Shop I	4

DIE MAKER, TOOL & DIE MAKER CERTIFICATE PROGRAM

			Credit Hours
Fall Term			
TEC	305	Safe Practices and First Aid	3
DT	100	Basic Drafting	3
ATR	151	Applied Algebra	4
ATR	101	Machine Shop I	4
ATR	127	Machinery Handbook I	4
			18
Winter Term			
DT	101	Industrial Drafting I	4
ATR	152	Applied Plane Geometry	4
ATR	102	Machine Shop II	4
ATR	113	Die Construction I	3
			15
Spring Term			
DT	102	Industrial Drafting II	4
ATR	153	Applied Plane Trigonometry	4
ATR	103	Machine Shop III	4
ATR	114	Die Construction II	3
			15

Recommended Electives:

ATR	150	Basic Math	4
ATR	142	Metallurgy	3
ATR	143	Industrial Heat Treat	3
ATR	106	Numerical Control I	4

MACHINE REPAIR, MILLWRIGHT CERTIFICATE PROGRAM

			Credit Hours
Fall Term			
TEC	305	Safe Practices and First Aid*	3
DT	110	Blueprint Reading I	4
ATR	151	Applied Algebra	4
ATR	101	Machine Shop I	4
ATR	142	Metallurgy	3
			18
Winter Term			
DT	111	Blueprint Reading II	4
ATR	152	Applied Plane Geometry	4
WLD	100	Combination Welding	4
ATR	144	Hydraulics and Pneumatics I	3
			15
Spring Term			
ATR	139	Rigging	3
WLD	101	Arc Welding I	4
ATR	145	Hydraulics and Pneumatics II	3
ATR	133	Structural Blueprint Reading	4
			14

Electives:

ATR	150	Basic Mathematics	4
TEC	201	Applied Physics	4
WLD	102	Gas Welding and Brazing	4
ET	101	Basic Electricity	4

Industrial Supervision—Associate in Science Degree Program

Minimum of 90 credits required.

This program is designed to equip an individual with the necessary background material and supervisory techniques to qualify for a first line foreman position in industry. It is also valuable for current supervisors who may have been promoted from the ranks of labor, offering pertinent courses to assist his development as a professional leader.

Skills and knowledge in human relations, technical areas, proven management theory and practice, and efficient communication are emphasized in practical and usable ways.

The following curriculum is offered on a full-time student basis or may be pursued on a part-time schedule to suit the student's work schedule.

NOTE: Those interested in sales management, and similar activities, may refer to programs and courses offered by the Department of Management and Marketing.

Supervision — 27 Credits Required

			Credit Hours
ATR	166	Front-Line Foreman I*	3
ATR	167	Front-Line Foreman II*	3
ATR	168	Front-Line Foreman III*	3
TEC	101	Technical Report Writing I*	3
TEC	305	Safe Practices and First Aid*	2
ATR	164	Customer Relations	2
ATR	165	Employer and Employee Relations*	2
BUS	222	Small Business Management	3
BUS	118	Introduction to Business	4
BUS	120	Sales	3
BUS	215	Business Law I	3
PSY	152	Applied Psychology	3

Mathematics — 12 Credits Required

			Credit Hours
ATR	150	Basic Mathematics	4
ATR	151	Applied Algebra	4
ATR	152	Applied Geometry	4
ATR	153	Applied Trigonometry	4
TEC	151	Mathematics for Technicians	5
TEC	152	Mathematics for Technicians	5
TEC	153	Mathematics for Technicians	5

Drafting Technology — 8 Credits Required

			Credit Hours
DT	100	Basic Drafting	3
DT	101	Industrial Drafting I	4
DT	102	Industrial Drafting II	4

Mechanical Technology — 24 Credits Required

			Credit Hours
DT	110	Blueprint Reading I	4
ATR	160	Precision Inspection I	3
ATR	101	Machine Shop I	4
ATR	106	Numerical Control	3
ATR	142	Applied Metallurgy	4
TEC	201	Applied Physics	3
MT	201	Processing and Plant Layout	3
MT	108	Materials and Processes in Manufacture	4
WLD	100	Combination Welding	4

Electronics Technology — 8 Credits Required

			Credit Hours
ET	101	Basic Electricity	4
ET	106	Industrial Electricity I	3

Social Science — 4 Credits Required

			Credit Hours
SS	104	American Government	4

Suggested Electives — 12 Credits Maximum

Electives are selected on the basis of student interest and specific career preparation requirements.

Students should consult with their departmental advisor before making out their schedule each term.

			Credit Hours
ATR	120	Plastics	4
ATR	127	Machinery Handbook	4
ATR	137	Industrial Presses I	4
ATR	144	Hydraulics and Pneumatics	3

*Mandatory

MACHINIST & TOOLMAKER

	Fall Term	Credit Hours
TEC 305	Safe Practices and First Aid	2
DT 100	Basic Drafting	3
ATR 151	Applied Algebra	4
ATR 101	Machine Shop I	4
ATR 127	Machinery Handbook I	4
		7

	Winter Term	
DT 101	Industrial Drafting I	4
ATR 152	Applied Plane Geometry	4
ATR 102	Machine Shop II	4
ATR 142	Metallurgy	3
		15

	Spring Term	
DT 111	Blueprint Reading II	4
ATR 153	Applied Plane Trigonometry	4
ATR 103	Machine Shop III	4
ATR 106	Numerical Control I	4
		16

Electives:

ATR 150	Basic Mathematics	4
ATR 155	Compound Angles I	4
ATR 160	Precision Inspection I	3

Numerical Control Programmer—Associate in Science Degree

Minimum of 90 credits required

The advent of numerical controls has done much to take human labor from the machining processes. This change has created a new job classification: Numerical Control Programmer.

To qualify, an individual first must acquire a solid machining background, since he must decide exactly what each machine is capable of doing. This curriculum also will provide necessary mathematical skills for computing precision movements. A programmer must become expert at reading blueprints, for they determine the finished machined part.

Many companies include the numerical control program in their engineering department.

The following curriculum should provide job entry skills and enough related knowledge to communicate with all personnel in the field:

Applied Technology — 36 Credits Required

		Credit Hours
ATR 101	Machine Shop I*	4
ATR 102	Machine Shop II*	4
ATR 103	Machine Shop III*	4
ATR 105	Project Laboratory	4
ATR 106	Numerical Control I*	4
ATR 107	Numerical Control II*	4
ATR 108	Numerical Control III*	4
ATR 111	Project Lab Numerical Control*	3
ATR 142	Metallurgy	3
ATR 143	Industrial Heat Treating Processes	3
ATR 144	Hydraulics and Pneumatics I	3
ATR 145	Hydraulics and Pneumatics II	3

Mathematics — 12 Credits Required

		Credit Hours
ATR 151	Applied Algebra	4
ATR 152	Applied Geometry	4
ATR 153	Applied Trigonometry	4
TEC 151	Mathematics for Technicians	5
TEC 152	Mathematics for Technicians	5
TEC 153	Mathematics for Technicians	3

Drafting Technology — 12 Credits Required

		Credit Hours
DT 101	Industrial Drafting I	4
DT 102	Industrial Drafting II	4
DT 103	Descriptive Geometry	3
DT 104	Jig and Fixture Design I	4
DT 110	Blueprint Reading I	4
DT 111	Blueprint Reading II	4

Electronics Technology — 3 Credits Required

		Credit Hours
ET 100	Basic Electricity/Electronics	4
ET 106	Industrial Electricity I	3

General Technology — 12 Credits Required

		Credit Hours
TEC 101	Technical Report Writing*	3
TEC 201	Applied Physics	4
ATR 165	Employee and Employee Relations	3
TEC 305	Safe Practices and First Aid	3
BUS 110	Fortran	3

Social Science — 4 Credits Required

		Credit Hours
SS 104	American Government	4

*Mandatory

Suggested Electives — 8 Credits Maximum

Electives are selected on the basis of student interest and specific career preparation requirements.

Student should consult with his department advisor before making out his schedule each term.

		Credit Hours
ATR 154	Advanced Trigonometry	4
ATR 155	Compound Angles I	4
ATR 160	Precision Inspection I	4
ATR 112	Template Making and Model Checking	4
MT 108	Material Processes in Manufacturing	4

PIPEFITTER

	Fall Term	Credit Hours
TEC 305	Safe Practices and First Aid	2
WLD 100	Combination Welding	4
DT 100	Basic Drafting	3
ATR 151	Applied Algebra	4
	Elective	4
		17

	Winter Term	
BTR 155	Blueprint Reading for Plumbers I	4
ATR 144	Hydraulics and Pneumatics I	3
ATR 152	Applied Plane Geometry	4
TEC 201	Applied Physics	4
		15

	Spring Term	
BTR 156	Blueprint Reading for Plumbers II	4
ATR 145	Hydraulics and Pneumatics II	3
HAC 101	Air Conditioning I	4
	Elective	4
		15

Recommended Electives:

ATR 150	Basic Math	4
BTJ 160	Journeyman Pipefitters Welding I	4
ATR 153	Applied Plane Trigonometry	4

SHEET METAL

	Fall Term	Credit Hours
TEC 305	Safe Practices and First Aid	2
BTR 175	Sheet Metal I	3
DT 100	Basic Drafting	3
ATR 151	Applied Algebra	4
WLD 100	Combination Welding	4
		16

	Winter Term	
BTR 176	Sheet Metal II	3
DT 101	Industrial Drafting I	4
ATR 152	Applied Plane Geometry	4
WLD 102	Gas Welding and Brazing	4
		15

	Spring Term	
BTR 177	Sheet Metal III	3
DT 102	Industrial Drafting II	4
ATR 153	Applied Plane Trigonometry	4
TEC 201	Applied Physics	4
		15

Recommended Electives:

ATR 150	Basic Mathematics	4
DT 103	Descriptive Geometry	3
WLD 101	Arc Welding I	4

WELDOR

NOTE: This program is not intended to qualify the student as a "certified weldor". Nor does it lead to journeyman status. (Also see description of departmental certificate programs.)

	Fall Term	Credit Hours
TEC 305	Safe Practices and First Aid	2
ET 101	Basic Electricity	4
ATR 151	Applied Algebra	4
WLD 100	Combination Welding	4
DT 100	Basic Drafting	3
		17

	Winter Term	
ATR 133	Blueprint Reading for Weldors I	4
WLD 101	Arc Welding	4
WLD 102	Gas Welding and Brazing	4
ATR 152	Applied Plane Geometry	4
		16

	Spring Term	
ATR 134	Blueprint Reading for Weldors II	4
ATR 142	Metallurgy	3
WLD 103	Arc Welding II	4
WLD 104	Tig & Mig Welding	4
		15

Recommended Electives:

ATR 150	Basic Math	4
ATR 133	Structural Blueprint Reading	4
ATR 143	Industrial Heat Treat	3

COURSE DESCRIPTIONS

Applied Technology Related (ATR)

101 Machine Shop — **Four credits**

Designed to teach the theory and practice in the operation and setup of machine tools: lathe, milling machine, shaper, drill press, grinder, metal sawing, bench work and measuring instruments. $10 Laboratory fee. 4 (2-4)

102 Machine Shop — **Four credits**

Continuation of ATR 101 with emphasis on milling, shaping and planing. Prerequisite: ATR 101. $10 Laboratory fee. 4(2-4)

103 Machine Shop — **Four credits**

Continuation of ATR 102 with emphasis on grinding, sawing, hydraulic power transmission, metallurgy and cutting fluids. Prerequisite: ATR 102. $10 Laboratory fee. 4 (2-4)

105 Project Laboratory (Machine Shop) — **Four credits**

Ad advanced course, recommended only for students wishing to do in-depth work in the machine shop area, after finishing basic prerequisites. The student, guided by his instructor, selects a project compatible with his field of work. $15 Laboratory fee. 4 (0-6)

106 Numerical Control I—Fundamentals of Numerical Control — **Four credits**

General introduction to modern concepts of numerical control of machine tools including the interrelationship of these new manufacturing methods in the various departments of a company. Emphasizes controlling media, introductory programming and limited machine operation. Prerequisite: Algebra. 4 (3-1)

107 Numerical Control II—Manual Programming for Numerical Control — **Four credits**

Continuation of ATR 106 with emphasis on developing skill in manual programming of two and three-axis, point-to-point positioning, numerically controlled machine tools. Operation of Flexowriter and vertical milling machine provides important part of this course. Prerequisite: ATR 106 Numerical Control I or equivalent. 4 (3-1)

108 Numerican Control III—Introduction to Computer Assisted Programming — **Four credits**

Study of types of parts which can be programmed to advantage, using a computer, and actual experience programming typical elementary examples. Includes survey of various computer programming languages and methods used to apply to numerically controlled machine tools. Equipment used includes computer, Flexowriter and numerically controlled milling machine. Prerequisite: ATR 107 Numerical Control II or equivalent. 4 (3-1)

111 Project Laboratory (Numerical Control) — **Three credits**

An advanced course, recommended only for students wishing to do in-depth work in the machine shop area, after finishing basic prerequisites. The student, guided by his instructor, selects a project compatible with his field of work. 3 (0-4)

112 Template Making and Model Checking — **Three credits**

Functions of models and how to check models using sine bar and height gauge. Functions of templates and how they are made and used. Types of aids made from models and how these aids are used. Interpretations and sectioning of drawings used for template making and model checking. Prerequisite: Drafting Technology 100 or 110 or approval of instructor. 3 (2-2)

113 Die Construction I — **Three credits**

Layout and processing related to die construction. Types of aids used in die construction and how to use these aids. How to select steels used in die construction. Limitations on accuracy and finish of parts used in die construction explored, such as grinding and lapping. Covers various types of die construction used in industry, and presses related to die construction. Prerequisite: DT 100 or DT 110 or approval of instructor. 3 (2-2)

114 Die Construction II — **Three credits**

Continuation of layout and processing from ATR 113. Covers theory of heat treat, welding, types of steels and types of aids used in die construction. Auxiliary equipment to dies such as lifters, loaders, kickers, stackers, hoppers, dial feeds covered. Repair and maintenance of dies considered as well as how dies should be built to make maintenance possible and provide long die life. Prerequisite: ATR 113 or approval of instructor. 3 (2-2)

115 Machine Tool Careers I — **Twelve credits**

The first of a three term series for student who require in-depth experience and knowledge of machining practices. A minimum exposure of seventeen hours per week includes set-up and manipulation of most machines and precision measurement equipment common in industry today. This course is recommended preparation for machinist careers, industrial vocational teaching, and related careers such as: numerical control programming and pre-apprenticeship training for the metal trades. $15 Laboratory fee. 12 (3-17)

116 Machine Tool Careers II — **Twelve credits**

Continuation of ATR 115. Prerequisite: ATR 115 Machine Tool Careers I. $15 Laboratory fee. 12 (3-17)

117 Machine Tool Careers III — **Twelve credits**

Continuation of ATR 116. Prerequisite: ATR 116 Machine Tool Careers II. $15 Laboratory fee. 12 (3-17)

120 Plastics I (Introduction) — **Four credits**

Will include the classification of plastics, plastic structure, and how plastics are made. The thermoplastic family, acetal, acrylic, cellulosic, fluorocarbon, polyamide, polypropylene, styrene and vinyl plastics; and the thermoset family, urea and melamine, casin, epoxy phenolic, polyester silicone, urethane, etc. 4 (4-0)

121 Plastics II (Processing) — **Four credits**

Covers molding processes such as compression, transfer, injection, extrusion, etc.; casting processes and thermoforming processes such as mechanical, vacuum, matched, etc., forming processes, such as the molding expandable, casting urethane foam, vacuum metalizing and electroplating will be discussed. Prerequisite: ATR 120. 4 (4-0)

122 Plastics III (Fabrication and Design) **Four credits**

The cutting and finishing of plastics, joining and fastening and types of tools and equipment used for plastic work. Also covers product design in plastics as it is influenced by processing and fabrication. Prerequisite: ATR 121 or approval of instructor. 4 (4-0)

127 Machinery Handbook I **Four credits**

Designed to familiarize the student with the effective utilization of information contained in this handbook. 4 (4-0)

130 Blueprint Reading for Die Sinkers **Four credits**

An applied course in Blueprint Reading designed especially for the Die Sinking trades. The course is designed to familiarize students with the different types of dies, their purposes, and the terminology used in the forging industry. Time will be spent on transferring the information on part prints to forging and trimmer dies. 4 (4-0)

133 Blueprint Reading for Weldors I **Four credits**

Covers mechanical blueprints and stresses welding symbols. 4 (4-0)

134 Blueprint Reading for Welders II **Four credits**

Continuation of Blueprint Reading for Weldors I. Prerequisite ATR 133. 4 (4-0)

135 Structural Blueprint Reading **Four credits**

The student is trained to visualize and interpret illustrations and sections from blueprints, and to translate them into practical situations. The student is shown the purpose of and the relationship between specifications and blueprints as applied to various trades. 4 (4-0)

137 Industrial Presses I **Four credits**

A practical course to familiarize the student with the different types of presses, terminology, and purposes in industry. Lecture will include computation of tonnage capacity, mechanical action, and maintenance systems as well as safety to the operator and set-up personnel. This course should be excellent for the following people: All mechanical trades apprentices, press repair and maintenance people, stamping plant foreman, press operators, die set-up employees, mechanical engineers, students of Engineering Technology. 4 (4-0)

138 Industrial Presses II **Four credits**

An advanced course concerning the mechanics of industrial presses of all types, with more in-depth study of how to maintain, adjust and repair clutches, reinforced by field trips to Bliss Press Co. and general local press repair plants. Press tonnage capacities and various applications to dies utilized will provide a broader knowledge for individuals from many different trades and occupations. Prerequisite: ATR 137 Industrial Presses I. 4 (4-0)

139 Rigging **Three credits**

The uses and strength of ropes, chains, block and tackles, and the construction and erection of gin poles are covered, with a study of rope knots used in rigging. Also covers safe working strength of slings, hooks, sheaves, ropes and chains, and the use of personal safety equipment. 3 (2-2)

142 Metallurgy **Three credits**

Physical and mechanical properties of metals, atomic structure, crystal structure, phases in metal systems, phase diagrams, and metallography. 3 (2-2)

143 Industrial Heat Treat **Three credits**

Hardening, normalizing, annealing, case hardening, carburizing, cyaniding, nitriding, flame hardening, induction hardening, marquenching, austempering, martempering, and production of metals. Prerequisite: ATR 142 Metallurgy. 3 (2-2)

144 Hydraulics and Pneumatics I **Three credits**

Pressure, viscosity, flow rate, fluid power, hydraulic and pneumatic fluids, pumps, motors, cylinders, valves, accumulators, controls, reservoirs, strainers, filters, and basic circuits. 3 (2-2)

145 Hydraulics and Pneumatics II **Three credits**

Continuation of ATR 144. Emphasis is on applications of pneumatic and hydraulic circuitry to industrial machinery. Prerequisite: ATR 144 Hydraulics and Pneumatics I. 3 (2-2)

150 Basic Mathematics **Four credits**

Review of basic arithmetic operations: whole numbers, common fractions and decimals, percentage, ratio and proportion. Introduction to basic algebraic operations and formulae in plane geometry. 4 (4-0)

151 Applied Algebra **Four credits**

Applications of algebraic equations to shop work. 4 (4-0)

152 Applied Plane Geometry **Four credits**

Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: ATR 151. 4 (4-0)

153 Applied Plane Trigonometry **Four credits**

Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: ATR 152. 4 (4-0)

154 Advanced Applied Trigonometry **Four credits**

Continuation of ATR 153. Provides broad experience in solution of problems taken directly from industry. Prerequisite: ATR 153. 4 (4-0)

155 Compound Angles I **Four credits**

Combination of solid geometry and advanced (solid) trigonometry enabling student to solve setup problems involving angles and tilted work. Prerequisite ATR 153 or ATR 154. 4 (4-0)

156 Compound Angles II **Four credits**

Continuation of ATR 155. Emphasis on application of actual tooling setups for complex machining operations. Prerequisite: ATR 155. 4 (4-0)

160 Precision Inspection I **Three credits**

Techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, hardness testing. 3 (2-2)

161 Precision Inspection II — **Three credits**

Precision layout work related to gauges and inspection problems. Prerequisite: ATR 160. 3 (2-2)

163 Metrication — **Four credits**

A familiarization with the metric system as it applies to industry and commerce. The student learns to convert the decimal system to metric as it is now being used in the major countries of the world. 4 (4-0)

165 Employer-Employee Relations — **Two credits**

Emphasizes the interdependence of capital, labor and management. Includes personal and physical qualities essential to success. 2 (2-0)

166 Front Line Foreman I — **Three credits**

This first of a three-course series is designed to keep the firstline supervisor abreast of the new techniques and methods used to achieve management goals. It will provide a fundamental understanding of these tecchniques for the newly assigned foreman as well as those individuals aspiring to be supervisors in the future. Human Relations and Labor Relations are emphasized. 3 (3-0)

167 Front Line Foreman II — **Three credits**

The importance of communicatfons between the first-line supervisor and the men of his department, and with those above him, cannot be overestimated. Better communication will mean a better job. Faulty communication can cause financial loss, accidents and misunderstandings. This course will attempt to help the supervisor to open effective lines of communication in all directions. 3 (3-0)

168 Front Line Foreman III — **Three credits**

This course is designed to acquaint the supervisor with the principals and methods of job analysis, time study, business economics, industrial safety, and various other related areas which affect his responsibilities. Experts from industry, education, and government are brought into the classroom to inform and discuss issues pertinent to their field. 3 (3-0)

175 Graphics I* — **Three credits**

The first of a three-term printing-graphics series, classes are designed for those on apprenticeship programs, and for those interested in the field of graphics. The student begins exploring all the basic printing processes and operations. $10 Laboratory fee. 3 (2-2)

176 Graphics II* — **Three credits**

Continuation of Graphics I with the students gaining more depth with offset techniques, stripping, layout and composition processes. $10 Laboratory fee. 3 (2-2)

177 Graphics III* — **Three credits**

The third term offers the student further study in his interest area: press operation, process camera, halftones, etc. $10 Laboratory fee. 3 (2-2)

*This series of graphics courses may be repeated for a maximum of 36 credits.

190 Appliance Servicing I — **Four credits**

The theory and application of basic electricity and electronics will be covered. The student will learn to read schematic drawings, properly use hand tools and electronic equipment (such as meters). He will also diagnose malfunctions of electrical circuits on simple one-action appliances such as water heaters and garbage disposals. $5 Laboratory fee. 4 (2-4)

191 Appliance Servicing II — **Four credits**

The student begins work on ranges, dishwashers, washing machines, clothes dryers and humidifiers, utilizing the knowledge that he gained in Appliance Servicing I. The use of service manuals and other published information for servicing is stressed. Prerequisite: ATR 190 or equivalent. $5 Laboratory fee. 4 (2-4)

192 Appliance Servicing III — **Four credits**

Designed to familiarize the student with the theory and application of refrigeration. Covers diagnosing and repairing of malfunction of refrigerators, freezers and room air conditioners, dehumidifiers and water coolers. Prerequisite: ATR 191 or equivalent. $5 Laboratory fee. 4 (2-4)

Seminars

Seminars

090-099 Pre-Apprenticeship Seminar — **Up to Nine Credits**

Designed to assist individuals who need or desire additional background to aid them in being considered for apprenticeship training.

100-109 Apprentice Seminar — **Up to Nine Credits**

Arranged for individuals enrolled in apprenticeship programs. For individual trades or groups of trades to provide additional knowledge and/or skills to meet current needs.

110-119 Automotive Seminar — **Up to Nine Credits**

Intended for any area related to the automotive field.

120-129 Building Trades Seminar — **Up to Nine Credits**

These seminars are planned to assist any building trades group or groups to upgrade their skills or to review new and emerging techniques.

130-139 Heating and Air Conditioning Seminar — **Up to Nine Credits**

Covers cooling, heating, humidifying, filtering, servicing and/or ventilating, etc. for individuals already in the field or interested in any of these areas.

140-149 Industrial Seminar — **Up to Nine Credits**

Intended for any area in industry which could be of benefit to the individuals or industry concerned.

150-159 Industrial Management Seminar — **Up to Nine Credits**

Planned for those presently in management or planning to enter management functions.

160-169 Welding Seminar — **Up to Nine Credits**

Includes maintenance welding, production welding, resistance welding, and/or tool and die welding, etc.

Automotive Trades (AUT)

Auto Mechanics

100 Auto Service I — **Four credits**

Teaches the understanding of basic tools and equipment, safety, lubrication exhaust systems, and basic Oxy-acetylene welding. $5 Laboratory fee. 4 (2-4)

110 Auto Electrical Theory — **Four credits**
Formerly STR 101

A theory course covering batteries, starters, generators, regulators, ignition systems, and chassis wiring. $5 Laboratory fee. 4 (2-4)

111 Tune-Up I — **Four credits**

A lecture-laboratory course covering fuel systems, equipment operations, and tune-up procedure. $5 Laboratory fee. Prerequisite: AUT 110 or instructor approval. 4 (2-4)

112 Tune-Up II — **Four credits**

A lecture-laboratory course with emphasis on actually tuning engines. $5 Laboratory fee. Prerequisite: AUT 110, AUT 111. 4 (2-4)

120 Auto Drive Trains — **Four credits**

Teaches the student to service clutches, manual shift transmissions, universal joints, differentials, and rear axles. $5 Laboratory fee. 4 (2-4)

121 Automatic Transmission I — **Four credits**

This is a basic course for automatic transmission repair. $5 Laboratory fee. Prerequisite: AUT 120 and instructor approval. 4 (2-4)

122 Automatic Transmission II — **Four credits**

This is advanced automatic transmission repair. $5 Laboratory fee. Prerequisite: AUT 120, AUT 121. 4 (2-4)

123 Automatic Transmission III — **Four credits**

This is advanced automatic transmission repair. $5 Laboratory fee. Prerequisite: AUT 120, AUT 121. 4 (2-4)

130 Engines — **Four credits**

A background in principles, design, operation, and service procedures of modern gasoline engines. Prepares student to begin practical experience in engine maintenance and service. $5 Laboratory fee. 4 (2-4)

135 Small Engines — **Three credits**

A basic course covering the servicing and repair of two cycle and four cycle small gas engines. Each student will be required to supply his own small engine for laboratory work. $5 Laboratory fee. 3 (2-2)

140 Auto Brakes — **Four credits**

The student learns to service both regular and disc brakes. This includes adjustment, shoe replacement, drum and disc turning, shoe grinding, and hydraulic system service. $5 Laboratory fee. 4 (2-4)

150 Auto Suspension — **Four credits**

This course instructs the student in wheel alignment, wheel balancing, and front end part replacement procedures. $5 Laboratory fee. 4 (2-4)

160 Auto Air Conditioning — **Four credits**

Instruction is given in the operation of auto air conditioning systems and repair procedures. $5 Laboratory fee. 4 (2-4)

165 General Auto Mechanics — **Three credits**

This course is designed for car owners. The student will gain a better understanding of his/her automobile and be able to make some repairs. Areas covered include preventative maintenance, tune-up, brakes, engines, electrical systems, drive lines, front end and steering. $5 Laboratory fee. 3 (2-2)

166 Automotive Review — **Three credits**

A review of automotive courses with emphasis on the individual needs of each student. Prerequisite: Instructor approval. 3 (2-2)

170 Auto Shop Management — **Four credits**

This is a laboratory course that gives a student an opportunity to practice running an auto shop. Prerequisite: Instructor approval. 4 (0-8)

171 Engine Laboratory* — **Eight credits**

A laboratory course to develop trade entry skill. $5 Laboratory fee. Prerequisite: AUT 100, AUT 130 (with "B" or better) or instructor approval. 8 (0-12)

172 Tune-Up and Electrical Laboratory* — **Eight credits**

A laboratory course to develop trade entry skill. $5 Laboratory fee. Prerequisite: AUT 100 (AUT 110 and AUT 111 with "B" or better in each) or instructor approval. May be taken concurrently with AUT 111. 8 (0-12)

173 Brake Laboratory* — **Eight credits**

A laboratory course to develop trade entry skill. $5 Laboratory fee. Prerequisite: AUT 110, AUT 140 (with "B" or better) or instructor approval. 8 (0-12)

174 Suspension Laboratory* — **Eight credits**

A laboratory course to develop trade entry skill. $5 Laboratory fee. Prerequisite: AUT 100, AUT 150 (with "B" or better) or instructor approval. 8 (0-12)

176 Automatic Transmission Laboratory* — **Eight credits**

A laboratory course to develop trade entry skill. $5 Laboratory fee. Prerequisite: AUT 100, AUT 120, AUT 121 (with "B" or better) or instructor approval. 8 (0-12)

180 Auto Related Service Laboratory — **Eight credits**

A laboratory course to allow a student to practice skills learned in previous courses. $5 Laboratory fee. Prerequisite: One other automotive course (except General Auto Mechanics). 8 (0-12)

188 Auto Body Repair and Painting* — **Four credits**

A combined course of auto body repair and painting. Begins instruction in using body fillers, welding brazing, bumping, metal finishing. Also beginning instruction in preparation for painting, including priming, sealing and painting. Covers all common materials used in the auto body process. $5 Laboratory fee. 4 (2-4)

*Approval may be given to take any one of these lab courses twice for a maximum of sixteen credits each.

191 Automotive Internship — **Six credits**

This course allows a student to practice skills, learned in previous courses, in a real work situation. The training station, working conditions, and student must be approved by the automotive coordinator. The student is required to attend one hour per week of related instruction at the college. A pre-placement interview between the student and coordinator is also required. Prerequisite: Coordinator approval. 6 (1-15)

*This course may be repeated for a maximum of 40 credits.

Auto Parts

196 Parts Counter Man I — **Four credits**

Covers the nomenclature of automotive parts and repairs made on an automobile. 4 (4-0)

197 Parts Counter Man II — **Four credits**

This course covers parts catalogs and their use. Prerequisite: AUT 196. 4 (4-0)

198 Parts Counter Man III — **Four credits**

This course covers product knowledge. Prerequisite AUT 197. 4 (4-0)

Building Trades (Open to Apprentices Only)

100 Apprentice Bricklaying — **Three credits**

For apprentice bricklayers on registered programs with the Lansing Bricklaying and Stonemasonry Joint Apprenticeship Committee. Includes manipulative practices, related theory, mathematics, estimating, blueprint reading and drawing. 3 (1¼-1¾)

105 Apprentice Asbestos Workers — **Three credits**

Open to Apprentice Asbestos Workers indentured to the Asbestos Workers Local #47 Joint Apprenticeship Training Committee. Covers blueprints, applied science, related mathematics, estimating and manipulative practices. 3 (2-2)

110 Apprentice-Carpentry — **Three credits**

For apprentice carpenters on registered programs with the Lansing Carpentry Joint Apprenticeship Committee. Covers free-hand sketching and drawing, blueprint reading mathematics, use of steel square, estimating and layout, building codes, safety practices, manipulative practices and applied science. Includes light and heavy construction practices. 3 (1¼-1¾)

120 Apprentice-Electrical (Inside) — **Three credits**

Open to electrical apprentices indentured to the Lansing Electrical Joint Apprenticeship and Training Committee. Covers blueprint reading and drawing, electrical theory, laboratory work, electrical code and mathematics. 3 (1¼-1¾)

125 Apprentice Electrical-Residential — **Three credits**

Open to electrical residential trainees indentured to the Lansing Electrical Residential Training Committee. Covers blueprint reading and drawing, electrical theory, laboratory work, electrical code and mathematics necessary for residential electricians. 3 (2-2)

140 Apprentice Painting and Decorating — **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, methematics related to the trade, estimating and paperhanging. 3 (2-2)

150 Apprentice Plumbing or Pipefitting — **Three credits**

For apprentice plumbers and pipefitters indentured to the Lansing Joint Plumbing and Pipefitting Apprenticeship and Training Committee. Includes mathematics, manipulative practices, theory, blueprint reading and drawing, job analysis, physics and other science, and supplementary courses from the regular college offerings approved by the J.A.C. 3 (1¼-1¾)

170 Apprentice Sheet Metal — **Three credits**

Open to apprentices indentured to the Lansing Sheet Metal Joint Apprenticeship Committee. Covers manipulative practices, layout, mathematics and drafting. 3 (2-2)

Building Trades (Open to Journeymen and Apprentices Only)

128 Journeyman Electricians Welding I — **Four credits**

Open to electrical journeymen and apprentices. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. $15 Laboratory fee. 4 (2-4)

129 Journeyman Electricians Welding II — **Four credits**

Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of Building Trades 128. Prerequisite: Building Trades 128 or permission of instructor. $15 Laboratory fee. 4 (2-4)

147 Paper Hanging For Journeymen I — **Three credits**

Designed for journeymen painter-decorators. Includes preparation of surfaces, selection and care of tools, selection of materials, and adhesives, estimating of materials, layout, avoiding and correcting of faults, application of paper and vinyl. $5 Laboratory fee. 3 (2-2)

148 Paper Hanging For Journeymen II — **Three credits**

Continuation of Building Trades 147, Paper Hanging for Journeymen I. $5 Laboratory fee. 3 (2-2)

160 Journeyman Pipefitters Welding I — **Four credits**

Students who enter this class should be Journeyman Plumbers or Steamfitters. Apprentices to the plumbing or fitting trades will be admitted when the degree of training they have achieved meets the approval of the Joint Apprenticeship Committee on Plumbing.

Training begins with a review of welding fundamentals and proceeds rapidly into more advanced skills according to the need of the individual student. Teaches welding of all kinds of pipe, including stainless steel by the heliarc method. $10 Laboratory fee. 4 (2-4)

161 Journeyman Pipefitters Welding II — **Four credits**

Continuation of BTJ 160. Prerequisite: BTJ 160. $10 Laboratory fee. 4 (2-4)

162 Journeyman Pipefitters Welding III — **Four credits**

Continuation of BTJ 161. Prerequisite: BTF 161. $10 Laboratory fee. 4 (2-4)

Building Trades (Open to Anyone)

115 Framing Square — **Two credits**

The selection, care, and use of the framing square is covered. Students will lay out common, valley, hip and jack rafters, and determine the lengths of braces. How to use the framing square with a bevel to determine a polygon and the use of the Essex board measure table is also presented. 2 (2-0)

123 National Electrical Code — **Five credits**

Intensive study of the most recent National Electrical Code. Outside study required. Twelve (12) weeks are required to complete the course. 5 (4-0)

155 Blueprint Reading for Plumbers I — **Four credits**

Covers orthographic projection, linear and angular measurement and reading of prints whose three views are given in the three principal planes of projection. Examples apply to the plumbing trades. 4 (4-0)

156 Blueprint Reading for Plumbers II — **Four credits**

Continuation of Building Trades 155 with emphasis on more complex prints. Actual construction prints are used whenever possible. Prerequisite: BTR 155 or permission of instructor. 4 (4-0)

175 Sheet Metal I — **Three credits**

Course includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line and triangulation pattern development. Shop work includes layout of fittings with hand and machine tools. Current techniques of fabrication emphasized. $5 Laboratory fee. 3 (2-2)

176 Sheet Metal II — **Three credits**

Continuation of Sheet Metal I with more advanced problems. Prerequisite: BTR 175 or permission of instructor. $5 Laboratory fee. 3 (2-2)

177 Sheet Metal III — **Three credits**

Continuation of Sheet Metal II with specialty work. Prerequisite: BTR 176. $5 Laboratory fee. 3 (2-2)

180 Sheet Metal Welding I — **Four credits**

Arc welding as applied to sheet metal. Introduction to heliarc. $15 Laboratory fee. 4 (2-4)

181 Sheet Metal Welding II — **Four credits**

Continuation of Building Trades 180 with additional emphasis on heliarc. Prerequisite: BTR 180 or approval of instructor. $15 Laboratory fee. 4 (2-4)

Heating, Air Conditioning and Refrigeration (HAC)

101 Air Conditioning I — **Four credits**

Air Conditioning I is organized to acquaint students with the fundamental math, physics and blueprint reading necessary to work effectively with heating and air conditioning equipment. Covered in detail is the interpretation of the terminology on the name plates, wiring diagrams and manuals used with climate control equipment. 4 (4-0)

102 Air Conditioning II — **Five credits**

Designed to deal with the fundamental theories and principles of climate control systems. By use of discussions and demonstrations, in both the lab and field, the course will correlate theory to actual practices used in the field. Prerequisite: HAC 101. $5 Laboratory fee. 5 (4-2)

103 Air Conditioning III — **Four credits**

The fundamentals of air conditioning servicing. Students test, repair and trouble shoot a variety of residential and commercial systems. The student becomes familiar with proper air distribution and control devices in both residential and commercial climate control systems. Prerequisite: HAC 102. $5 Laboratory fee. 4 (2-4)

110 Refrigeration Servicing I — **Four credits**

Instruction for beginners in the refrigeration servicing field. Domestic refrigerators are studied in detail. Most common types of refrigerators are covered thoroughly, with particular attention to principles of construction and operation of complete refrigeration systems. Includes discussions on theory and principles underlying repairing and practical shop work. The student performs such jobs as tube bending, flaring, and soldering, as well as the charging and testing of refrigeration equipment. $5 Laboratory fee. 4 (2-4)

111 Refrigeration Servicing II — **Four credits**

Advanced course for those who have completed Refrigeration Servicing I, or who have had some practical experience in the refrigeration servicing field. More complex refrigeration systems are discussed, and students connect various components to make complete refrigeration systems. Students receive practical work in adjusting and servicing refrigerant valves and controls, and in trouble-shooting multiple refrigeration systems. $5 Laboratory fee. Prerequisite: HAC 110. 4 (2-4)

120 Gas and Oil Burner Servicing I — **Four credits**

Information about construction and operation of various types of automatic heating equipment for servicemen, steamfitters, sheetmetal men, and others interested. Material covered includes construction and operation of high-pressure oil burners; installation of conversion burners; servicing of nozzles, electrodes, and pumps; basic controls and control circuits. $5 Laboratory fee. 4 (2-4)

121 Gas and Oil Burner Servicing II — **Four credits**

Continuation of HAC 120, including work on various types of oil burners other than high-pressure burners; gas burner installation and servicing; checking and adjusting burners for combustion efficiency; more complex wiring systems, and practice in locating and correcting service faults in a variety of heating systems. Prerequisite: HAC 120. $5 Laboratory fee. 4 (2-4)

Special Projects

Special Projects

601 Special Projects — **One credit**

Provides, in special cases, the opportunity for a student to enroll in a course with sufficient reason at any time. The student is expected to enroll in such a manner that he can complete the course successfully, and must have the approval of the departmental chairman.

602 Special Projects — **Two credits**

See SPA 601 for description.

603 Special Projects — **Three credits**

See SPA 601 for description.

604 Special Projects — **Four credits**

See SPA 601 for description.

605 Special Projects — **Five credits**

See SPA 601 for description.

606 Special Projects — **Six credits**

See SPA 601 for description.

Welding

Welding

All welding students must furnish their own safety glasses, gloves and pliers.

100 Combination Welding — **Four credits**

An introductory course in the basic principles, safe operation and application of the oxy-acetylene welding, cutting and electric arc and MIC (metal inert gas) processes. Each process consists of beading, butt, lap and corner joints in the flat and horizontal positions. $15 Laboratory fee. 4 (2-4)

101 Arc Welding I — **Four credits**

A practical course designed to develop skills and confidence in producing quality type multiple pass fillet and groove welds in steel plate. Conventional and iron powdered electrodes and recommended procedures are presented in preparation for passing performance tests in the flat and horizontal position. Prerequisite: WLD 100. $15 Laboratory fee. 4 (2-4)

102 Gas Welding and Brazing — **Four credits**

A practical course designed to develop skills and confidence in joining of low and medium carbon steels, cast iron and aluminum. Silver brazing alloys, tobin bronze, general purpose brazing alloys and the common filler metals are presented. Prerequisite: WLD 100. $15 Laboratory fee. 4 (2-4)

103 Arc Welding II — **Four credits**

An advanced course designed to develop skills and confidence in the vertical and overhead positions. Multiple pass fillet and groove welds are demonstrated in preparation for performance tests. The use and interpretation of welding symbols related to arc welding applications are presented. Prerequisite: WLD 101. $15 Laboratory fee. 4 (2-4)

104 TIG (Tungsten Inert Gas) — **Four credits**

A study of the principles and fundamentals of Tig (Heliarc) welding of steel, stainless steel and aluminum. The spray and short circuiting arc (low voltage) and spot welding techniques in all positions are presented. Prerequisites: WLD 100 $15 Laboratory fee. 4 (2-4)

Department of Health Careers

Chairman: Michael F. Lenkowski

Michael Lenkowski

Programs of Study

The Department of Health Careers currently offers four programs:

Associate Degree Programs
1. Nursing
2. Dental Hygiene

Certificate Programs (Four Terms)
3. Practical Nursing
4. Dental Assisting

Because these programs are designed to assure qualification for State Licensing or National Certification Examination, and minimum safety in practice in the respective field, specific admission qualifications have been established for each program. Applicants are expected to satisfy admission requirements for the College as well as those for the individual program.

Consistent with the philosophy and objectives of Lansing Community College, the Department of Health Careers offers additional health education services to the community in the form of community service courses. Each term, courses are scheduled to assist practitioners in the several health care disciplines to upgrade, up-date, and teach new skills as advances are made in the respective field. Community service courses are listed in the printed class schedule each term.

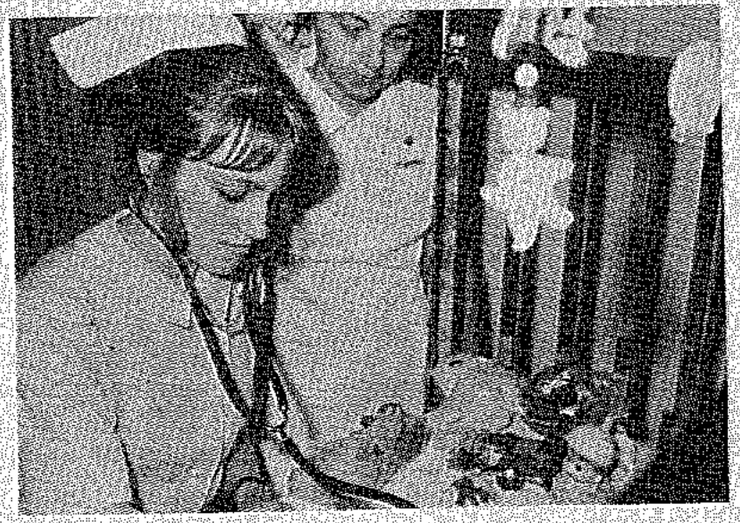
The Associate Degree Program in Nursing is approved by the Michigan Board of Nursing and is nationally accredited by the National League for Nursing, Department of Associate Degree Programs in Nursing.

Audio-Visual Nursing Practice Laboratory

The Department of Health Careers has developed a series of audio-visual study units which have been designed to replace some traditional teaching methods, and others which supplement or enhance classroom and laboratory instruction. Study units include color slide films or filmstrips, audio-tapes, and a printed laboratory study-work manual. All study units have been developed by the Audio-Visual Laboratory with all faculty participating to assure effectiveness and pertinence to respective curriculums.

Development of additional study units is a continuing process in the Department, and as units are completed they will be utilized in the respective programs and courses.

Students in all programs receive an intensive orientation in the use of audio-visual laboratory equipment, scheduled study units, and laboratory instruction staff.



Associate Degree Program in Nursing

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 learning experiences are conducted by College faculty in four hospitals and four extended care facilities in the community. Other community health agencies and programs provide opportunities for observation of related health care activities.

Student experiences progress from simple to complex patient care. Emphasis is placed on understanding of principles and the development of skills and new learning in the clinical setting. Many aspects involved in the care of the "whole patient" are integrated in clinical nursing courses throughout the nursing sequence. Pharmacology, nutrition, mental health, nurse-patient relationships, and others are integrated in many innovative ways throughout the curriculum.

Upon completion of the program, the graduate will have had theory and related clinical experiences in medical-surgical, maternal-child, and psychiatric nursing. The final term is designed to provide theory and related opportunities to apply beginning principles of leadership which relate to the patient care for a group of patients based on assessed priority of needs.

The student is required to meet College criteria for the Associate Degree in Science, and the criteria for students in the nursing major to qualify for graduation.

Associate Degree Program in Nursing

First Year — Fall Term	Credits
(1) Nursing Foundations I—101	6
(2) Anatomy—Physiology 201	4
Psychology 201—Introduction	4
Sociology 101	4
	18

Winter Term

Nursing Foundations II—102	6
Anatomy-Physiology—202	4
English 101 or 121	4
Psychology 202	3
	17

Spring Term

Nursing in Physical-Mental Illness I	10
Microbiology 100 (or 203)	3(4)
Psychiatric Nursing 204***	5
	18-19

Summer Term

English 122	4
Speech 104	3
Government 104	4
	11

Second Year — Fall Term	Credits
Nursing in Physical-Mental Illness II—202*	10
English 123	4
	14

Winter Term

Maternal-Child Nursing 103*	10
Psychology-Growth and Development—205	3
	13

*Or Fall Term as assigned

Spring Term

Advanced Nursing-Leadership 208	10
Humanities-Fine Arts Elective	3-4
	13-14

Credit Requirement for Graduation

Liberal Arts-Science	47-49
Nursing Major	57

***May be assigned concurrent with NUR 201 or NUR 202

(1) Nursing Foundations I currently being developed as a "core course" for all nursing students.

(2) Entering students may be required to complete ANT 201 during Summer Term prior to admission.

Practical Nursing

Lansing Community College offers a one-year (four quarters or terms) program in Practical Nursing leading to the Certificate of Achievement. Graduates are eligible to write the Licensing Examination required by the Michigan Board of Nursing.

The curriculum includes concurrent theory and clinical learning experiences in cooperating community hospitals, extended care facilities, and other health agencies.

Applicants to the program are required to meet admission requirements of the College *and* those specifically established for the Practical Nursing Program. One class is admitted in September of each year. Applicants are urged to apply one year before desired admission.

1st Term		Credit Hours
PN 600	Foundations of Nursing	5
PN 602	Anatomy & Physiology	4
PN 606	Nutrition	3
PN 608	Community Health	1
PN 610	Vocational Relations	1
PSY 100	Psychology (PN)	2
PN 618	Nursing Skills I	3

2nd Term		Credit Hours
PN 612	Fundamentals of Nursing	3
PN 604	Growth & Development	3
PN 622	Nursing Skills II	6

3rd Term		
PN 616	Medical-Surgical Nursing	6
PN 624	Medical-Surgical Skills	6

4th Term		
PN 614	Maternal-Child Nursing	6
PN 626	Maternal-Child Skills	6

Dental Hygiene

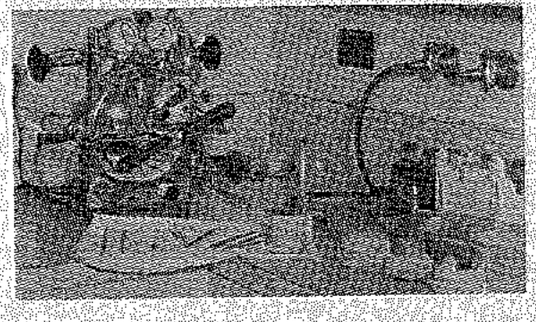
Lansing Community College offers a two-year dental hygiene program. Upon successful completion of the program an Associate in Science Degree is awarded, and the graduate is eligible for the licensing examination in dental hygiene administered by the Michigan State Board of Dentistry. Following graduation and successful completion of the examination for licensure, the dental hygienist is prepared to function as a member of the dental health team in the state of Michigan.

The Dental Hygiene Program at Lansing Community College has "Accreditation Eligible" status which is granted by the Council on Dental Education, American Dental Association. Admission qualifications and basic curriculum are carefully designed to assist the graduate in meeting the responsibilities of the dental hygienist's professional role.

Associate Degree Program in Dental Hygiene

First Year	Fall Term	Credit Hours
ANT 201	Anatomy and Physiology	4
CEM 100	Concepts of Biochemistry	1
PSY 201	Introduction to Psychology	4
DH 100	Seminar: Dental Auxiliary	2
DH 101	Dental Anatomy I	3
DH 150	Oral Health Practices	1
		15
	Winter Term	
ANT 202	Anatomy and Physiology	4
ENG 121	Freshman English	4
HME 203	Nutrition and Man	1
DH 102	Dental Anatomy II	3
DH 103	Introduction to Clinical Dental Hygiene	3
		15
	Spring Term	
MIC 203	Microbiology	4
ENG 122	Freshman English	4
DH 201	Clinical Dental Hygiene I	1
DH 105	Dental Radiology	2
DH 205	Periodontics I	2
DH 101	Pharmacology	2
		15
	Summer Term	
ENG 123	Freshman English	4
SS 101	Social Science I	4
		8

Second Year	Fall Term	Credit Hours
HUM	Humanities Elective	3 (or 4)
SS 104	American Government	4
DH 217	Periodontics II	3
DH 203	Dental Materials	3
DH 202	Clinical Dental Hygiene II	4
DH 200	Preventive Dentistry	2
		18
	Winter Term	
HUM	Humanities Elective	3 (or 4)
PSY 202	Psychology of Personality	3
DH 211	Oral Pathology	3
DH 203	Clinical Dental Hygiene III	3
DH 208	Theory of Health Education	2
		16
	Spring Term	
HUM	Humanities Elective	3 (or 4)
SPH 101	Principles of Speech	3
DH 204	Clinical Dental Hygiene IV	5
DH 210	Orientation to Clinical Practice	3
DH 209	Community Dental Hygiene	2
		16
	Total General Education Credits	39
	Total Dental Hygiene Major Credits	53
		112



Dental Assistant

The one year curriculum for dental assisting combines business and science courses. This curriculum will prepare the student to assist the dentist in his office management and at the chairside. After completing the four terms of course and laboratory work at Lansing Community College, the student may apply for a Certified Dental Assistant rating. The student will receive certification after successful completion of the examination conducted by the American Dental Assistant Association Certifying Board.

Eligibility for the Dental Assisting Program requires:

1. High school courses:
   Required: English—3 units
   Mathematics (general or business)—1 unit
   Recommended: Chemistry—1 unit
   Typing (40 w.p.m. or better)

2. The A.C.T. (American College Test). This test battery is waived for applicants who have successfully completed one or more terms in a college or university program, or high school graduates with grade point averages of 2.5 or higher.

3. A visit to the Dental Assisting Program. This visit is to receive detailed information and counseling about the program.

Inquiries regarding application to the Dental Assisting Program, and completed applications for admission with the student's transcript of all previous academic work, may be sent to:

College Admissions Office
Lansing Community College
419 North Capitol Avenue
Lansing, Michigan 48914

The Dental Assisting Program begins in the fall term of each year. The dental assisting courses in the program must be taken in four consecutive terms of study.

	Fall Term	Credit Hours
DA 101	Dental Assisting I	3
PN 002	Anatomy and Physiology	4
ENG 101 or 121	English Elective (optional)	4
PSY 131	Psychology of Personal Adjustment	3
BUS 201	Business Correspondence	3
		19
	Winter Term	
DA 102	Dental Assisting II	5
MIC 100	Microbiology	3
DA 103	Dental Techniques and Materials	3
PN 006	Nutrition	2
ENG 102 or 122	English Elective (optional)	4
RG 212	First Aid and Emergency	2
		19
	Spring Term	
DA 203	Dental Assisting III	5
DH 105	Dental Radiology	2
ENG 121 or 122 or 123	English Elective (optional)	4
DA 106	Dental Specialty Techniques	3
BUS 110	Applied Accounting	4
		18

	Summer Term	
DA 104	Dental Assisting IV (Seminar and Dental Office Experience)	5
SPH 104	Principals of Speech	3
		8
	Total General Education Credits	38
	Total Dental Assisting Major Credits	26
		64

Note: 1. All candidates must pass a typing skills test at 40 w.p.m. 2. D.A., D.H., and P.N. courses are open only to students who have received a letter of acceptance to the Dental Assisting Program. Students preparing for admission may take other courses in this curriculum prior to admission.

COURSE DESCRIPTIONS

Associate Degree Nursing (NUR)

Associate Degree Nursing

101 Nursing Foundations I — **Fall Term** — **Six credits**

The beginning course in the sequence of clinical nursing courses. Basic principles of patient care are emphasized including nursing-patient relationships, communication skills, and observation of overt and covert physical and emotional needs. Techniques and nursing activities pertinent to physical care of the patient are also emphasized.

Concepts and skills in assessment of patient needs and planning patient care are introduced. Audio-visual study units are used to demonstrate nursing activities and concepts of basic patient care. This knowledge is reinforced through practice and is evaluated in the nursing practice laboratory on campus. The sequence leads to a clinical learning experience in assigned hospitals or extended care facilities in the community.

Beginning with this course, concepts of mental health are integrated throughout the nursing sequence.

102 Nursing Foundations II — **Winter Term** — **Six credits**

The second course in the nursing sequence. More complex aspects of patient care are considered with increased emphasis upon underlying principles. Scientific principles underlying aseptic techniques, fluid and electrolyte balance are also considered.

Patient assessment with emphasis upon priority of needs provide the basis for developing and implementing a plan for patient care.

Basic principles of nutrition, pharmacology and mental health are included throughout the term. Prerequisite: NUR 101 and grade point requirement.

103 Maternal-Child Nursing — **Fall or Winter Term** — **Ten credits**

A clinical nursing course which provides the student with opportunities to develop basic understanding, and to apply basic principles in planning and implementing care for mothers, newborn infants, and the growing child. Selected experiences in the hospital laboratory include labor-delivery, nursery, post-partum, and pediatric areas. Resources in community health agencies provide opportunities for observation of related health services. Prerequisite: Nursing Foundations I and II. 10 (5-15)

201 Physical and Mental Illness I — **Spring Term** — **Ten credits**

A clinical nursing course which provides opportunities for the student to apply nursing principles in the care of patients with common physical illnesses. Further emphasis is placed on the relationship of physical and emotional needs of the patient, family and community, and pertinent nursing intervention. Selected patient experiences are provided in three hospital laboratory sessions each week during the term. Community health agencies are utilized for observation of pre- and post-hospitalization health services which are available to the patient. Prerequisite: Nursing Foundations I and II. 10 (5-15)

202 Physical and Mental Illness II — **Fall or Winter Term** — **Ten credits**

A continuation of Physical-Mental Illness I with emphasis on more complex aspects of patient care in the presence of common physical illnesses. Emphasis is also placed upon observation of overt-covert needs, priority of patient needs, and appropriate intervention in complex nursing situations. The student has opportunity to develop nursing care plans for a number of patients, and implement care in selected clinical areas. Prerequisite: Nursing Foundations I and II and Physical and Mental Illness I. 10 (5-15)

203 Advanced Nursing Skills and Leadership Principles — **Spring Term (2nd year)** — **Ten credits**

The final course in the nursing sequence emphasizing principles of leadership as they relate to the patient care team.

Opportunities are provided for the student to observe and participate in various leadership roles in the clinical laboratory under the supervision of College Faculty. Observations in selected specialty and concentrated care units are utilized to assist the student in understanding the full range of patient care resources.

Lectures include principles of leadership, professional legal, and ethical responsibilities of the nurse. Prerequisite: NUR 201-202 and grade point of not less than 2.0 (C average) in the nursing major.

204 Psychiatric Nursing — **Four credits**

Lectures in psychiatric nursing with emphasis on application of principles. Nursing 204 must be taken concurrently with Nursing 201 or Nursing 202 for clinical laboratory credit.

Dental Assistant (DA)

Dental Assisting

Admission to the program is a prerequisite for each course.

101 Dental Assisting I — **Fall Term** — **Five credits**

An introduction to dental assisting. An orientation to the dental profession; to its purpose, laws, ethics and personnel. Dental anatomy including the basic structure of the teeth, and related oral structures, and the growth and development of primary and secondary dentition are studied. 5 (4-2)

102 Dental Assisting II — **Winter Term** — **Five credits**

Elements of chairside assisting and oral health. Introduction to the assistant's duties in the dental operatory. The identification, use, and maintenance of instruments, equipment, materials and supplies. Principles and methods of sterilization and disinfection procedures. One two hour laboratory section will be assigned to an introduction to oral health, preventive dentistry, and patient counseling in home care regimens. 5 (3-4)

103 Dental Assisting III — **Spring Term** — **Five credits**

Continuation of DA 102 with emphasis on total operatory operation. Pharmacology and anesthesia, sources and uses of drugs, and form, rules, and legal aspects governing the use of drugs in dental practice will be discussed. The physiology of human response to infection, and degenerative pathological processes and common oral pathology will be reviewed.

A separate four hour clinic in radiography technic is included in this course. 5 (2-2-4)

104 Dental Assisting IV — **Summer Term** — **Five credits**

Supervised clinical practice and seminar. Each student will spend 150 hours working in dental offices under the supervision of a practicing dentist. Seminars will be held to discuss experiences in various offices. Technics and skills in applying for jobs, analysis of job performance, and self evaluation will be developed. 5 (2-0-20)

105 Dental Technics and Materials — **Winter Term** — **Three credits**

Utilization and manipulation of dental materials. Composition and source of materials used in dentistry with discussion of the physical properties, characteristics, and uses. Laboratory time is used in developing skills in the manipulation of materials in the same way they must be handled in a dental operatory. 3 (1-4)

106 Dental Specialty Technics **Spring Term** **Three credits**
Continuation of chairside assisting with emphasis on four and six handed technic. The duties and responsibilities of the assistant in specialty areas and the utilization of special tray set-ups and procedures are stressed. Office routines relating to patient appointments and practice in correct and effective office use of the telephone. 3 (2-2)

Dental Hygiene

Dental Hygienist (DH)

Admission to the program is a prerequisite for each course.

100 Seminar: Dental Auxiliaries **Fall Term** **Two credits**
An introduction to the practice of dental hygiene. Examination of the interaction of dental auxiliaries, technicians, dentists and the dental specialties in providing dental health services. Dental law and the ethics of the profession are discussed. 2 (2-0)

101 Oral Anatomy and Physiology **Fall term** **Three credits**
A comprehensive review of oral anatomy and physiology. Lecture and laboratory sections which cover basic anatomical terminology, embryonic development of the face and oral cavity, histology of the oral tissues and a complete description of the morphology of the human dentition. Anatomy of the head and neck, oral structures, mastication, arrangement of the teeth, occlusion, and identification of human teeth from extracted specimens are included. A laboratory which includes the study of selected microscopic slides of the oral tissues is presented. 2 (2-2)

102 Oral Anatomy and Physiology **Winter Term** **Three credits**
A continuation of DH 101. 3 (2-2)

103 Introduction to Clinical Dental Hygiene **Winter Term** **Three credits**
A lecture and clinic course which will enable the student to become familiar with the structural relations in the oral cavity and to develop skill in manipulating instruments and materials which are basic to an effective oral prophylactic procedure. 3 (2-0-4)

104 Pharmacology **Spring Term** **Two credits**
A lecture and laboratory course which will study the theoretical and practical implications of the use of drugs in dental practice. Prescription writing, action and effects due to the administration of drugs, adverse reaction to drugs, and the management of common medical emergencies will be discussed. The laboratory will provide for development of skills in the common technics used to administer drugs and in lifesaving procedures. 2 (2-1)

105 Dental Radiology **Spring Term** **Two credits**
Development of the theory and practice of radiology to prepare the auxiliary for routine dental office responsibilities. The student will expose, process, evaluate for quality, mount, and file radiographs. The lecture section will cover the production and emission of dental X-radiation, indications for exposure, technics of exposure, and the processing and evaluation of dental radiographs. 2 (2-0)

150 Oral Health Practices **Fall Term** **One credit**
A laboratory and practical course which will introduce the student to the concept of personal oral health, provide experience in working with the common dental office and home care technics for maintaining oral health, and initiate an appropriate oral health regimen for each student. 1 (0-2)

200 Preventive Dentistry **Fall Term** **Two credits**
This course surveys the theory and practice of preventive dentistry. A review of the epidemiology of oral disease and selected reading of the scientific literature prepares the student to develop a sound basis for preventing and controlling oral disease. 2 (2-0)

201 Clinical Dental Hygiene I **Spring Term** **Four credits**
The beginning clinical course which offers each student opportunities to perfect skills in methods of patient education and counseling, oral physiotherapy and control of dental caries, recognition and recording of oral conditions, and performing a complete oral prophylaxis. The student will establish and maintain a recall program. 4 (2-0-8)

202 Clinical Dental Hygiene II **Fall Term** **Four credits**
A continuation of DH 201. 4 (2-0-8)

203 Clinical Dental Hygiene III **Winter Term** **Five credits**
A continuation of DH 201 and 202. 5 (2-0-2)

204 Clinical Dental Hygiene IV **Spring Term** **Five credits**
A completion of the clinical experience with emphasis on comprehensive oral prophylaxis. 5 (2-0-12)

205 Dental Materials **Fall Term** **Three credits**
A lecture and laboratory course which will prepare the student to use the materials utilized by most dental practices. A theoretical description of the composition, source, physical properties, and characteristics of the material will be coordinated with a practical manipulation of the material in the laboratory. 3 (1-4)

206 Periodontics I **Spring Term** **Two credits**
The first of two courses which will broaden the student's understanding of the anatomy, physiology, and histology of the periodontium. The classification and etiology of periodontal diseases is introduced. The role of oral hygiene is studied in its relation to prevention of periodontal disease. 2 (2-0)

207 Periodontics II **Fall Term** **Two credits**
A continuation of periodontics I, with emphasis on correction of periodontal disease. Home care for patients with periodontal disease, and special corrective, therapeutic, and surgical procedures are emphasized. 2 (2-0)

208 Theory of Health Education **Winter Term** **Two credits**
A series of lectures and seminars which will develop a theoretical and practical basis for health education. Principles and methods for influencing behavior will be related to office chairside instruction, patient motivation and counseling. 2 (2-0)

209 Community Dental Hygiene **Spring Term** **Two credits**
A lecture and seminar course which will use the skills developed in DH 208 to prepare health education and service programs for groups, schools and special populations. Various models of dental service programs will be discussed with emphasis placed on the present and future role of the hygienist. 2 (2-0)

210 Orientation to Clinical Practice **Spring Term** **Three credits**
Students will investigate, observe, and participate in dental office routine in an extramural experience. Emphasis will be placed on supply systems, recall and appointment plans, chairside assisting, and specialty practice. Various types of practices in public and private clinics will be visited. 3 (2-0-4)

211 Oral Pathology **Winter Term** **Three credits**
A study of the diseases affecting the oral region including developmental disturbances, diseases of the teeth and supporting structures, and neoplasms. 3 (3-0)

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Practical Nursing (PN)

100 Pharmacology — **Three credits**

A community service course for the graduate Practical Nurse designed to prepare for administration of oral, intramuscular and sub-cutaneous medications to a limited number of patients. Includes knowledge of the nature of drugs, their uses, their expected effect and untoward reactions. Is valuable for any practical nurse even though not actually administering medications. 3 (3-1)

600 Foundations of Nursing — **Five credits**

A course given in conjunction with nursing skills I and designed to acquaint the student with the principles underlying clinical practice. Includes the physical and emotional effects of illness. 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)

604 Growth and Development — **Three credits**

A course dealing with the principles of physical, emotional, social and intellectual development and with the characteristics of the normal individual throughout the various periods of his life span. 3 (3-0)

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 (2-0)

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)

612 Fundamentals of Nursing — **Three credits**

A continuation of the theoretical concepts relating to Nursing Practice. Students learn to assess nursing needs, plan how to meet these needs and how to modify nursing practice to meet the unique needs of each patient. 2 (4-0)

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)

616 Medical-Surgical Nursing — **Six credits**

A course dealing with the characteristics of acute medical conditions and 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)

618 Nursing Skills I 6 (0-12) — **Six credits**

622 Nursing Skills II 6 (0-24) — **Six credits**

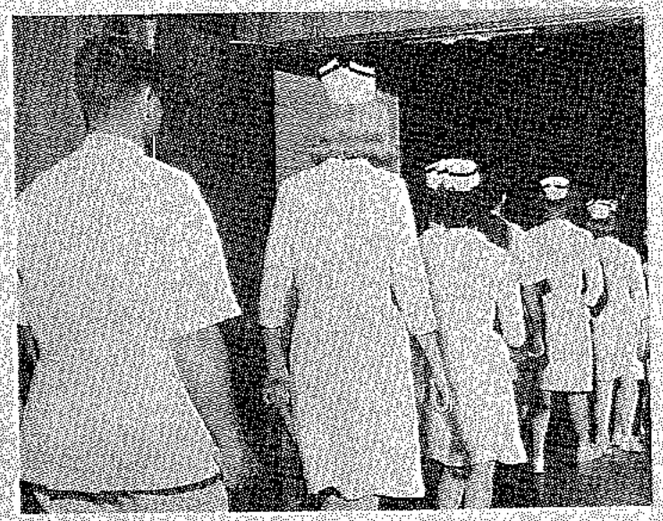
624 Medical-Surgical Skills 6 (0-24) — **Six credits**

626 Maternal-Child Skills 6 (0-24) — **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 judgments for meeting the nursing needs of the individual patient.

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 (including her own) and to deal effectively with the patient's behavior. 2 (2-0)



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Dr. Machtel

Department of Performing and Creative Arts

Chairman: Dr. David Machtel

The artist or artist-educator of today must have broad knowledge of his field, its history, its literature and its techniques. He must also understand its place in the cultural environment where it is practiced. To answer these needs, the Department of Performing and Creative Arts was established at Lansing Community College. Areas of emphasis include Art, Dance, Music and Theater.

The ultimate objective of the Department of Performing and Creative Arts is to occupy a major cooperative role in the artistic life of the area in which Lansing Community College serves. This will be achieved by providing extensive participative, collaborative and advisory community services. Through offering each student a process of personalized instruction to suit his specific needs, in a world of accelerated change, the college hopes to assist the community in intellectual, cultural and vocational progress.

This department offers individual courses, as well as two-year associate degree programs and one-year certificate programs. Course work completed in these one- and two-year programs may be applied to Bachelor of Arts and Bachelor of Music degrees offered by four-year colleges and universities.

Associate degree programs require the successful completion of 90 credits including one course in American Government. The more popular associate degree programs offered by this department are described in detail on the following pages.

The Associate Degree in Arts or Associate Degree—General may be granted for other groupings of courses upon approval of the department chairman.

The requirements for certificate programs vary considerably. In each case, the requirements are tailored to meet a specific objective. The most popular certificate courses also are described on subsequent pages.

The four offerings in the arts at Lansing Community College are designed to meet the needs of students with varying talents and goals, and to help each student realize his greatest potential for artistic development as performer, teacher or critic. Thus, the curriculums provide the student with the necessary technical skills while, at the same time, creating for the student an awareness of the fine arts world and its role in contemporary society.

Offerings in art at Lansing Community College are designed to meet the needs of students with varying talents and goals, and to help each student realize his greatest potential for artistic development as performer, teacher or critic. Thus, the curriculums provide the student with the necessary technical skills while, at the same time, creating for the student an awareness of the fine arts world and its role in contemporary society.

Fundamental courses in the department can also provide greater appreciation for and critical judgment of the arts to students from other divisions of the college.

Activities

Membership in a variety of groups and organizations engaged in extra-curricular activities is available to students who qualify. This provides an opportunity for growth beyond the academic requirements of a specific curriculum.

Students may participate in art exhibits, dramatic productions, choreography for musicals and operas; in student recitals, organizations and ensembles in music, including Community Concert Band, Stage Band, Chamber Orchestra, Piano Ensemble, Collegium Cantorum, LanSymphonic Choral Society, Opera Workshop, LanSingers Concert Choir, Lansing Men's and Women's Glee Clubs, and in small invitational groups which include the LanSing Tudors, Steinmen and Maids, and barbershop quartets.

ART

The programs in art at Lansing Community College are designed to provide a sound basis for students contemplating transfer to other institutions, those who intend to pursue art in depth, and those who wish to enrich their individual lives and careers.

The Art Department provides studio courses in four major areas: fine arts, commercial art, crafts, and environmental arts. A course of study leading to an associate degree is provided in each of these areas. An Art Certificate of Achievement also is available for the Commercial Art student.

The series of art exhibitions and lectures is an integral part of the Art Program. These provide a learning laboratory for experiencing works of art, for both the student and the community.

STUDIO COURSE DESCRIPTIONS

Foundation Courses

The Design I, Design II, and Design III courses provide the core of information which is basic to all of the art disciplines. They are recommended for all students and are prerequisites for fine arts and commercial art courses.

101 Design I (Introduction to Drawing) — **Four credits**
A practice course which acts as an introduction to the vocabulary of the visual arts. Emphasis upon the elements of composition and their application, media and their use. Limited to media of black and white. 4 (0-6)

102 Design II (Introduction to Painting) — **Four credits**
A continuation of Design I, but adding the problem of color. Prerequisite: Art 101. 4 (0-6)

103 Design III (Introduction to Sculpture) — **Four credits**
A survey of the fundamental problems of form. By studying the principles of structure, the student develops his response to the nature of materials and their relationships to form. Prerequisite: Art 101. 4 (0-6)

Crafts

The world of crafts is multi-dimensional. It provides unique opportunities for the student to learn craft methods while learning design form and color in the context of a particular medium.

104 Ceramics I — **Four credits**
Primary emphasis on elements of hand construction, decorating techniques, glazing, firing, and philosophy of ceramics. $10 lab fee.

105 Ceramics II — **Four credits**
Elements of wheel throwing. Prerequisite: ART 104.

106 Ceramics III — **Four credits**
Exploration of individual ideas, philosophy of ceramics and pottery, firing and kiln room procedures. Arranged projects. Students will be expected to assist in kiln room procedures. Prerequisite: ART 105.

107 Advanced Ceramics — **Four credits**
A continuation of ART 106. Prerequisite: ART 106.

111 Jewelry and Metalwork I — **Four credits**
Exploration and creative use of basic techniques in metalworking with emphasis on jewelry-scale objects. Includes silver soldering, enameling, casting, stone setting, forming, chasing, etc. 4 (0-6)

112 Jewelry and Metalwork II — **Four credits**
A continuation of Art 111. Prerequisite: Art 111. 4 (0-6)

113 Jewelry and Metalwork III — **Four credits**
A continuation of Art 112. Prerequisite: Art 112. 4 (0-6)

114 Advanced Jewelry and Metalwork — **Four credits**
A continuation of Art 113. Prerequisite: Art 113. 4 (0-6)

121 Weaving I — **Four credits**
Exploration of weaving and textile coloring techniques including macrame, wrapping, batik, tie-dying, etc. Creative use of fiber methods alone or in conjunction with other media. 4 (0-6)

122 Weaving II — **Four credits**
A continuation of Art 121. Prerequisite: Art 121. 4 (0-6)

123 Weaving III — **Four credits**
A continuation of Art 122. Prerequisite: Art 122. 4 (0-6)

124 Advanced Weaving — **Four credits**
A continuation of Art 123. Prerequisite: Art 123. 4 (0-6)

Fine Arts

The Fine Arts courses prepare students through systematic instruction in the fundamental fine art disciplines, their techniques and aesthetics.

131 Drawing — **Four credits**
A basic practice course where the student improves the skills learned in Design I. He is introduced to a variety of tools and methods in the art of drawing. Prerequisite: Art 101. 4 (0-6)

132 Life Drawing — **Four credits**
A continuation of Art 131 with the additional problem of the human figure. Prerequisite: Art 131. 4 (0-6)

133 Advanced Drawing — **Four credits**
A continuation of Art 132. Prerequisite: Art 132. 4 (0-6)

201 Painting I — **Four credits**
An introductory course in painting, designed to help the student develop professional studio attitudes, habits and procedures. Special attention will be given to help the student define and resolve his particular painting problems in his quest for making a visual statement. Prerequisite: Art 201. 4 (0-6)

202 Painting II — **Four credits**
A continuation of Painting I where the student employes his acquired skills in a quest to make a visual statement through the medium of paint. Prerequisite: Art 201. 4 (0-6)

203 Painting III — **Four credits**
A continuation of Painting II. Prerequisite: 202. 4 (0-6)

204 Advanced Painting — **Four credits**
A continuation of Painting III. Prerequisite: 203. 4 (0-6)

211 Sculpture I — **Four credits**

Basic work in three dimensions, including introduction to the various tools, techniques and methods of the sculptor. Projects will be done using traditional and contemporary materials. Prerequisite: Art 103. 4 (0-6)

212 Sculpture II — **Four credits**

Continuation of Art 211 with individual projects which further explore sculpture possibilities. Prerequisite: Art 211. 3 (0-6)

213 Sculpture III — **Four credits**

A continuation of Art 212. Prerequisite: Art 202. 4 (0-6)

204 Advanced Sculpture — **Four credits**

Continuation of Art 213. Prerequisite: 213. 4 (0-6)

221 Serigraphy I — **Four credits**

An introductory course in serigraphy (silk-screen printing) designed to expose the student to the potentials of this graphic process. The student will explore various stencil methods, and experiment with different printing surfaces and techniques to acquaint himself with the possibilities inherent in this form of printmaking. Prerequisite: Art 102. 4 (0-6)

222 Serigraphy II — **Four credits**

A continuation of Serigraphy I where the student develops his acquired skills. Prerequisite: Art 221. 4 (0-6)

223 Serigraphy III — **Four credits**

A continuation of Serigraphy II. Prerequisite: Art 222. 4 (0-6)

ART 260 - Basic Art for Elem. Teachers
4 credits

Environmental Arts

The Environmental Arts deal with design as generated by human behavior within the context of peripheral environments, including political, social, economic, natural and man-made environments.

251 Interior Design and Decoration I — **Four credits**

A survey of the decorative arts including basic design elements, period styles, color and texture as they relate to man's environment. 4 (3-3)

252 Interior Design and Decoration II — **Four credits**

More thorough research and application of design elements, color and texture, including their psychological and social influence on man and his environment. Prerequisite: Art 251. 4 (3-3)

253 Interior Design and Decoration III — **Four credits**

A continuation and synthesis of design elements and principles; space, color and texture with an emphasis on presentation. Prerequisite: Art 252. 4 (3-3)

Commercial Art

The goal of all commercial art is to increase the demand for a product or service. The following courses are planned to develop the student's understanding of the motivation and production techniques used to create and develop numerous communication media. These media include all forms of printed publicity such as newspaper and magazine advertising and illustration, package and label design, posters, catalogs, booklets, letterheads and outdoor displays, to name a few.

The fundamental classes for the beginning student are a most important study period in the commercial art program. The subject the student elects in the advanced Commercial courses will be based upon the knowledge and abilities gained from fundamental classes.

A knowledge of composition, color harmony, design and technique is required before a student undertakes any serious and advanced illustrative, design or decorative problems in commercial art.

Beginning students in art, with few exceptions, are encouraged to take fundamental classes before attempting advanced subjects. A student may carry an advanced course in addition to fundamental classes with the approval of the instructor.

271, 272, 273 Advertising Design I, I, III — **4 credits**

Instruction emphasizes the contemporary application of design for the printed media. Students discover the effectiveness of design in conveying messages in visual communications, gaining experience in lay-out tools and materials while working on designs for magazine ads, newspaper ads, posters, bill-boards, booklets and folders, and corporate materials.

281, 282, 283 Illustration — **4 credits**

The instruction in this course has been planned with an understanding of today's needs. Assignments and exercises will be closely tied to areas calling for the talents of illustrator, e.g.: book and editorial illustration, spot illustration, product illustration, architectural rendering.

291, 292, 293 Graphic Design — **Four credits**

Primary emphasis on the use of design and graphics in developing creative ideas and solutions to problems involved in visual communications and commercial art. The student enriches his imagination and improves his skills while working on assignments including symbols, trademarks, corporate identity design, and application of symbols and trademarks to package design, advertising and institutional identity programs.

294 Portfolio Seminar — **Credits arranged**

(Instruction on an arranged time basis.) Instructors will assign advanced problems in graphic design, advertising design and illustration utilizing contemporary as well as traditional media. Development of the final portfolio will be assessed upon individual needs and judged accordingly.

295 Lettering, Typography and Design — **Four credits**

Typography and lettering are vital elements of graphic design. The skill to select appropriate type is a must for the advertising designer, since the designer communicates a specific message or thought through typography. Many type faces are studied to give the student a background from which to work. Student will develop hand lettering skill and sensitivity to different type faces. Emphasis is placed upon the relationship of design with typography (packaging, posters, ads, etc.).

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DANCE

Dance includes all kinds of expressive movement—jazz, pantomime, ballet, and modern technique. The Dance program at Lansing Community College uses all these techniques in its classes, serving the needs of each student, whether interested in dance as a career opportunity or as a leisure time activity. With the growing number of community theater and dance groups, dance training can provide the basis for many years of stimulating creative activity for both the amateur and the professional. Dance not only provides an outlet for creative expression, but is excellent discipline for maintaining physical fitness.

The curriculum at Lansing Community College offers a sound foundation in the two mainstreams of dance discipline, ballet and modern. Every dance major is required to take work in both areas, and then may elect to specialize in one or the other. Music, acting, dance history and dance theory round out the students. Students not majoring in Dance may take classes in any area of the program in which they have an interest.

Dance Major

30 Credits Required

Thirty hours of dance practice are required, with classes to be chosen from ballet, modern, repertory. Placement in dance classes will be determined by audition. Emphasis on ballet or modern may be determined by the student.

Because Dance is a non-preparation course, the student should estimate two class hours for each hour of credit.

OTHER PROFESSIONAL COURSES 15 Credits Required

		Credit Hours	Prerequisite
DNC 108	Dance History (required)	3	None
DNC 110	Choreography I (required)	3	None
DNC 211	Choreography II	3	DNC 110
MUS 260	Introduction to Music Literature I	3	None
MUS 261	Introduction to Music Literature II	3	MUS 260
	or Instrumental or Voice Elective	2-4	
THR	Acting I	3	None
THR	Acting II	3	THR 251

GENERAL EDUCATION		36-43 Credits Required	
ENG 121	Freshman English	4	None
ENG 122	Freshman English	4	ENG 121
ENG 123	Freshman English	4	ENG 122
	or		
ENG 124	Freshman English	4	ENG 122
SS 101	Social Science I	4	None
SS 102	Social Science II	4	SS 101
SS 103	Social Science III	4	SS 102
HUM 201	Western Civilization I	4	None
HUM 202	Western Civilization II	4	HUM 201
HUM 203	Western Civilization III	4	HUM 202

Performing and Creative Arts

Dance

General Education

Educational requirements: 36-53 credits.

To complete course work for the Associate Degree and general requirements for a four-year university degree as a Dance major, the following are suggested:

		Credit Hours	Prerequisite
PSY 201	Introduction to Psychology	4	None
PSY 204	Educational Psychology	3	PSY 201—suggested for potential teaching major
ELECTIVES		3-9 Credits	
HUM 130	Introduction to Art Literature Courses	3	None

Students desiring to change curriculum are required to consult with a counselor in Student Personnel Services or with the departmental chairman.

DANCE COURSE DESCRIPTIONS

101 Modern Dance and Creative Movement (Beginning) **Three credits**

A basic modern technique course consisting of three kinds of training exercises for stretching and strengthening of muscles and for the development of balance, coordination and control of the body; introduction to the vocabulary of dance movements with gradually increasing degrees of difficulty, and improvisation exercises to expand the dancer's imagination and creativity in the use of the body as a tool of artistic expression. No prerequisite.

102 Modern Dance and Creative Movement (Intermediate) **Three credits**

Exercises for the training of the body are increased in complexity and duration. Subtle patterns of movement challenge the dancer's technical skills and encourage his ability to remember movement designs. Improvisation exercises present more complicated technical demands as well as opportunities to use the imagination. Prerequisite: Approval of the instructor.

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103 Modern Dance and Creative Movement (Advanced) **Three credits**

This class for advanced students will be adjusted to the maximum level of the participants in order to present them with challenging technical and imaginative problems. These include difficult turns, balance exercises, foot patterns, rhythmic patterns and demanding extensions of the body. Improvisational techniques will also increase in difficulty. Prerequisite: Approval of instructor.

104, 105 Applied Ballet (Private Study) **Credits: 104 (Major) Three**
105 (Elective) Two

Students are placed in a private studio in the Lansing area according to ability and previous training. Fees and credit are arranged through the college. The student may repeat the courses at the appropriate level until he is prepared for more advanced work.

Ballet classes consist of basic exercises for the development of strength, balance and coordination. Basic skills and terms found in the international vocabulary of ballet are learned and practiced in class. Since ballet is the foundation upon which all western dance is based, some training in this discipline is required for all dance majors. Ballet is encouraged for non-majors and as a basis for the appreciation of all dance activity.

104 Applied Ballet (Private Study) **Three credits**

Three -1hour class lessons per week for 10 week term: $30.00.

105 Ballet Elective or Minor in Dance (Private Study) **Two credits**

Two 1-hour class lessons per week for 10 week term: $20.00.

106 Dance History and Theory **Three credits**

To help students understand the origins of the dancer's art, this course is structured to introduce them to the important figures and events that have created dance as we know it today. The historical section begins with the court of Louis XIV and the innovations of Noverre and follows the professional dance theatre through the Romantic period in England, Italy, Russia and France. Important modern figures (Isadora Duncan, Balanchine, Jerome Robbins and Rudolph Nureyev) are included in the course. Students read the writings of contemporary dance personalities in order to become familiar with the philosophy and working methods of different schools of thought in the dance world. The fundamentals of ethnic dance and the contributions of ethnic dances to stage dance are essential parts of the course. Prerequisite: None.

110 Choreography I—Beginning **Three credits**

This course takes up the problems of creating dances for performance. It covers the questions of choosing accompaniment, planning entrances, exits, stage groupings, clarification and ideas, costuming rehearsal techniques, and selection of dancers. Students are introduced to various stimuli as sources for dance ideas, including poetry, painting, dramatic themes, abstract movement ideas. The student moves gradually from simple to more and more complex problems. Prerequisite: Some dance training.

211 Choreography II—Advanced **One-Three credits**

This course is designed for students interested in working on an individualized problem in dance composition. The teacher will critique the students' work and supervise his creative efforts. One final project will be performed in public. Prerequisite: Beginning Choreography.

215 Repertory **One-Three credits**

This is a performance course. Students participate by audition. Dancers may be working on concert pieces or performing in a musical comedy or opera produced jointly with the Music and Drama faculty. Prerequisite: Audition.

MUSIC

The Music program at Lansing Community College offers undergraduate work leading to a two-year Associate Degree or a one year Certificate. Course work completed in these programs may be applied to the Bachelor of Arts and Bachelor of Music degrees offered at four-year colleges and universities. Because requirements for degrees vary among colleges, the student should consult a counselor or the Music Department at Lansing Community College, or the college of his choice for specific curricular details.

The college offers courses for students with various goals and talents, through varying degrees of emphasis, instruction and activities.

The first two years of typical undergraduate music programs offered at four-year colleges and universities may be completed at Lansing Community College. These programs include:

Bachelor of Music, with Major in Applied Music

A major in Applied Music is primarily a performance major (strings, brasses, woodwinds, piano, voice, organ and harp). Emphasis is on repertoire, musicality and excellence in playing or singing.

Applied music majors, whose major instrument is not the piano, must meet certain basic piano requirements.

Bachelor of Music, with Major in Theory and Composition

For those students who desire to develop a technique of composition to prepare for further study in advanced Music Theory, Composition or Musicology.

Bachelor of Music, with Major in School Music

The Bachelor of Music degree qualifies the student for State Certification for teaching in Michigan schools. The three teaching areas emphasized are choral, instrumental, and stringed instrument.

Performance, musicianship, a broad basic education as well as training in methods, materials and practical teaching experience are stressed. Other music degrees offered in universities include:

Bachelor of Music Degree, with Major in Music Therapy
Bachelor of Music Degree, with Major in School Music and Music Therapy
Bachelor of Arts Degree, with Major in Music Literature

Curriculum: Associate Degree in Arts with Music emphasis

54 Credits Required

Required Courses		Credit Hours	Prerequisite
		MUSIC	
MUS 151	Music Theory IA	3	MUS 151
MUS 152	Music Theory IB	3	MUS 152
MUS 153	Music Theory IC	3	(Concurrently with MUS 151)
MUS 154	Ear Training IA	1	(Concurrently with MUS 152)
MUS 155	Ear Training IB	1	(Concurrently with MUS 153)
MUS 156	Ear Training IC	1	MUS 153
MUS 251	Music Theory IIA	3	MUS 251
MUS 252	Music Theory IIB	3	MUS 252
MUS 253	Music Theory IIC	3	(Concurrently with MUS 251)
MUS 254	Ear Training IIA	1	(Concurrently with MUS 252)
MUS 255	Ear Training IIB	1	(Concurrently with MUS 253)
MUS 256	Ear Training IIC	1	None
MUS 266	Elements of Conducting	2	MUS 265
MUS 267	Elements of Conducting	2	MUS 267
MUS 268	Elements of Conducting	2	None
MUS 260	Introduction to Music Literature	3	None
MUS 261	Introduction to Music Literature	3	None
MUS 262	Introduction to Music Literature	3	

*MUS 150 Fundamentals of Music is suggested as an elective for music majors whose background is not sufficient for MUS 151.

Electives — **From one to three credits**

Electives in voice, instrumental, piano, organ, harp and/or dance should be selected each term, from an approved list of local teachers, after consultation with the departmental chairman.

Applied Voice Major: Take Applied Voice and/or Voice class and Piano
Applied Piano Major: Take Piano and Elective
Applied Instrumental Major: Take approved Instrumental Study and Piano
Applied Organ Major: Take Organ and Elective
Applied Harp Major: Take Harp and Piano
One year of voice should be included in all of the above majors.

Performing Groups

Music majors also are required to perform in *at least one* organization each term. Performance activities may be selected from:

LanSingers Concert Choir
Glee Club
Collegium Cantorum
Dance
Tudor Singers
Lansymphonic Choral Society
Chamber Orchestra

Steinmen and Maids
Lansing Lassies
Theatre
Lansing Lads
Community Concert Band
Stage Band

General Education

The following courses are necessary to complete requirements for the associate degree as well as the general requirements for a four year university degree in music.

			Credit Hours	Prerequisite
		Language Arts		12 credits required
ENG	121	Freshman English	4	None
ENG	122	Freshman English	4	ENG 121
ENG	123	Freshman English	4	ENG 122
		or		
ENG	124	Freshman English	4	ENG 122
		Social Science		12 credits required
SS	101	Social Science I	4	None
SS	102	Social Science II	4	SS 101
SS	103	Social Science III	4	SS 102
		Humanities		12 credits required
HUM	201	Western Civilization I	4	None
HUM	202	Western Civilization II	4	HUM 201
HUM	203	Western Civilization III	4	HUM 202
		Electives		
Teaching Majors:				
PSY	201	Introduction to Psychology	4	None
PSY	204	Educational Psychology	3	PSY 201
MUS	176	Basic Music for Elementary Classroom Teachers	4	None
Voice Majors:				
THR	251	Acting I	3	None
MUS	501	Modern Dance Technique	2	None
		or		
MUS	505	Dance Repertory	2	None
TOTAL CREDITS			90	Minimum credit for graduation

Certificate Program in Music

			Credit Hours	Prerequisite
		Music		45 Credits Required
MUS	151	Music Theory IA	3	*
MUS	152	Music Theory IB	3	MUS 151
MUS	153	Music Theory IC	3	MUS 152
MUS	154	Ear Training IA	1	(Concurrently with MUS 151)
MUS	155	Ear Training IB	1	(Concurrently with MUS 152)
MUS	156	Ear Training IC	1	(Concurrently with MUS 153)
MUS	266	Elements of Conducting	2	None
MUS	267	Elements of Conducting	2	MUS 266
MUS	268	Elements of Conducting	2	MUS 267
MUS	260	Introduction to Music Literature	3	None
MUS	261	Introduction to Music Literature	3	None
MUS	262	Introduction to Music Literature	3	None

*MUS 150 Fundamentals of Music is suggested as an elective for music majors whose background is not sufficient for MUS 151.

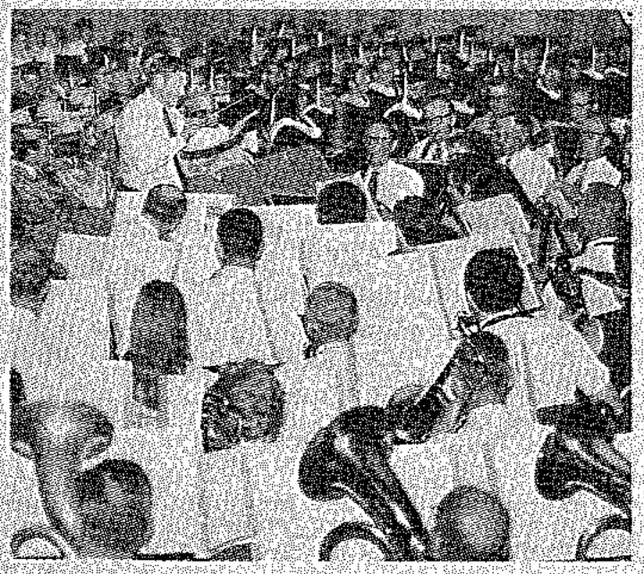
An elective (1-3 credits) in voice, instrumental, piano, organ, harp or dance should be selected each term, from an approved list of local teachers, after consultation with the departmental chairman.

Applied Voice Major: Take Applied Voice and/or Voice class and Piano
Applied Piano Major: Take Piano and Elective
Applied Instrumental Major: Take approved Instrumental Study and Piano
Applied Organ Major: Take Organ and Elective
Applied Harp Major: Take Harp and Piano

Music majors are required to perform in *at least one* organization each term. Performance activities may be selected from:

LanSingers Concert Choir
Glee Club
Collegium Cantorum
Dance
Tudor Singers
Lansymphonic Choral Society
Chamber Orchestra

Steinmem and Maids
Lansing Lassies
Theatre
Lansing Lads
Community Concert Band
Stage Band



***127, 128 C-S LCC Community Concert Band** — **One credit**

Open to anyone interested, male or female, from the College or the community. The college has joined with Lansing Community Band to offer this instrumental course. The band meets for one-two hour rehearsal each week.

Each term the band is directed by a different local experienced band director. This offers the student opportunity to broaden his music experience by performing under the direction of different leaders.

Students may register in the course during normal registration or at other times by special arrangement with the band director. The course is offered for one credit per term.

***130 Stage Band** — **One credit**

The study and performance of jazz and other forms of popular music. Class members will form the basis for groups to play for stage productions, high school assemblies, and athletic events. To receive credit, the student also must be enrolled in at least one other music organization for credit. A student may take the course for a maximum of six terms; materials are varied. Prerequisite: Permission of instructor.

***126 Chamber Orchestra** — **One credit**

Open to those who play one of the orchestral stringed instruments (violin, viola, cello, bass). Activities include the study and performance of string ensemble music as well as traditional and contemporary orchestral literature. Offers members an opportunity to continue their enjoyment of performing instrumental music in a group. Public performance opportunities are determined by the capabilities of the group. Entrance into the orchestra is determined by audition and invitation. Planned for Fall 1972.

***125 Piano Ensemble** — **Two credits**

Intermediate and advanced piano students play duets, two piano and piano quartets. Performance will be expected. Repertoire will include music of the masters of all periods of literature. Students may take this course for a maximum of eight terms. Materials are varied each term. The class will meet two hours a week. Prerequisite: An ability to play intermediate and advanced repertoire. Texts: Classic, romantic and contemporary literature for ensemble use. Laboratory fee: $10.00. Planned for Fall 1972.

Applied Music—Private Study

Private Study For Applied Lessons With Resident Teachers

MUSIC 176, 177, 178—Voice-Applied (Performing Major), Secondary (H.S. Teaching Major), Elective or Minor

MUSIC 179, 180, 181—Instrument-Applied, Secondary, Elective/Minor

MUSIC 182, 183, 184—Piano-Applied, Secondary, Elective/Minor

MUSIC 185, 186, 187—Organ-Applied, Secondary, Elective/Minor

MUSIC 188, 189, 190—Harp-Applied, Secondary, Elective/Minor

MUSIC 191, 192, 193—Fretted Instrument-Applied, Secondary, Elective/Minor

MUSIC 194, 195, 196—Harpsichord-Applied, Secondary, Elective/Minor

Lansing Community College now offers its students in Music a complete program of private sutdy, with LCC instructors locally qualified and approved, for applied music credits in both vocal and instrumental music.

Music Lessons: students should contact the LCC Music Office before registration for applied classes.

Fees: (Vocal and Instrumental) Applied: 3 credits, $65 per term, one hour of lessons; secondary: 2 credits, $40 per term one 40 minute lesson; electives and minors: 1 credit, $30 per term, one 30 minute lesson. All receive ten lessons per term.

Applied fees will be paid with regular tuition directly to the college business office.

Seniors in high school are eligible to study with approval of school counselor or principal.

Students may take as many as eight terms of applied music for college credit. Materials are progressively more difficult and comprehensive.

Music Theory

150 Fundamentals of Music — **Three credits**

Designed for students with no musical background who want to gain an insight into the theoretical side of music, this class is also helpful for those students taking "Music Theory and Ear Training" whose background is not sufficient. Offered each term. No prerequisites.

151, 152, 153 Music Theory — **Three credits**

A three term sequence of courses designed for music majors, but open to all students. After a thorough study of the fundamentals of music notation, scales, triads, and chords, the course covers four part harmonization, inversions, nonharmonic structures, cadences, altered chords, and modulations. Students write small works in chorale style.

251, 252, 253 Music Theory — **Three credits**

A continuation of MUS 151, 152, 153. A year's sequence which covers 9th and 11th chords, chromatic harmony, borrowed chords, and modulations to distant keys. The course also emphasizes late 19th and 20th century styles including serialization, use of modes, whole tone scales, and polytonal music. The student will write small original pieces in each of these styles.

154, 155, 156 Ear Training — **One credit**

A series of courses in ear training, sight singing, and dictation which parallels the basic theory sequence. Students must be enrolled in theory or have the permission of the instructor. Class meets for two hours a week. The student also is required to listen to tapes outside of class.

254, 255, 256 Advanced Ear Training — **One credit**

Ear training, sight singing, and dictation which parallels the 2nd year of theory. Students must be enrolled in advanced theory or have the permission of the instructor.

260 Introduction to Music Literature I* — **Three credits**

An overview of Music Literature from 1600 through 1800. The class emphasizes the aesthetic experience, through listening to recordings and live performances. This is not a course in music history, although it includes historical background of this era's greatest music. Open to non-majors and majors. Handel, J. S. Bach, Mozart, and Haydn will be emphasized. No prerequisite. *Fall term only.*

261 Introduction to Music Literature II* **Three credits**

A representative sample of 19th century composers is studied, including Beethoven, Schubert, Wagner, and Brahms. Emphasis is on listening, although major styles and trends will be discussed. Open to majors and non-majors. No prerequisite. Offered Winter term only.

262 Introduction to Music Literature III* **Three credits**

A study of late 19th and 20th century music, primarily through recordings. Study includes works by Schoenberg, Debussy, Copland, and Ives. Open to non-majors and majors. No prerequisite or musical background required. Spring term only.

*These courses may be taken in any order, although in sequence is advised. Each term covers a completely different period of music and materials.

263, 264, 265 Music History I, II, III **Three credits**

A three-term sequence of courses which surveys the history of music from the ancient Greeks and Romans to the present day. Composers, styles, trends, forms, and specific compositions will be studied in their historical perspective. Designed for Music majors, though open to non-majors; must be taken in sequence. Prerequisite: One full year of theory. Fall term.

269 Piano Literature Analysis **Two credits**

A four-term course with emphasis on analysis of classic and pre-classic material written for the piano. A comparison of writing styles and study of compositions representative of this period. The class is designed for study rather than performance, to meet the needs of piano teachers as well as those who perform and need to broaden their knowledge and repertoire. It is non-sequential and meets two hours per week. Offered Fall term. Prerequisite: An ability to understand and play written music of intermediate and advanced level. Texts: a textbook and supplementary material.

270 Piano Literature Analysis **Two credits**

A continuation of MUS 269 with emphasis on romantic music and masters. Offered Winter Term only.

271 Piano Literature Analysis **Two credits**

A continuation of MUS 270 with emphasis on contemporary music and masters. Offered Spring term only.

272 Piano Literature Analysis **Two credits**

A continuation of MUS 271 with emphasis on the contemporary theatrical music and current music of stature.

266, 267, 268 Elements of Conducting **Two credits**

A practical course for those who possess a musical background and who have a community need or interest in a career in music. Students conduct fellow class members in both choral and instrumental music in a laboratory situation. Besides basic conducting techniques, the course stresses score reading, interpretation, rehearsal techniques, and general musicianship. Prerequisite: one year of music theory or permission of instructor. The course is sequential.

158 Class Voice **Two credits**

Class instruction for 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. A student may take a maximum of eight terms for credit. All materials are varied with each term offered. Class limited to 20 students. 2 (2-0)

157 Class Piano **Two credits**

Beginning class piano instruction to develop ability to play melody and rhythms for use in the lower intermediate grades or in recreation work. Required of all music majors and minors who have inadequate proficiency on piano, the course is also recommended for piano majors to provide knowledge of piano class instruction. It is recommended that beginners in piano take Fundamentals of Music at the same time. A student may take as many as eight terms; course materials are varied each term.

159 Class Instruments **One credit**

Teaches the methods and materials of instrumental teaching and the basic skills for playing brass, string, woodwind, or percussion instruments. Since different instruments are studied each term, students should contact the Music Department to determine the selection for a particular term. Open to music majors only, or with consent of the instructor. A student may take a maximum of six terms. Materials are varied each term. $10.00 Laboratory fee.

160 Introduction to Guitar **Two Credits**

An ensemble class for beginning students of the guitar, or those who have little playing experience. Students will learn note reading and music theory, as they learn to play single note melody lead and chord accompaniment. Materials are drawn from the folk, blues, and classical traditions of the instrument. Both "Finger-Style" and "Flat-Pick" techniques are introduced. Any type of guitar may be used by students in the class: Nylon string or steel string acoustic, hollow body electric, solid body electric or 4 or 6 string bass guitar.

173 Basic Music for Elementary Classroom Teachers **Four credits**

Designed for the student preparing for Elementary Teaching, the class provides the basic skills and knowledge necessary to teach music in the classroom. More importantly, the student will learn the music needs and capabilities of young children and the possibilities for music in the classroom situation. Each student is encouraged to cultivate his own musical skills, including singing, keyboard skills, song leading, music reading and effective listening. Meets State Department of Education Certification. A one-term course, offered each term.

Theater

Lansing Community College offers the student a variety of theatrical learning experiences. Theater groups include the Studio Theater, the Imaginary Players, and the Ledges Playhouse.

The Studio Theater is an all-student theater club recognized by the Student Government. Club members participate in acting, directing, technical theater, costuming, publicity and theater management decisions simulating the organization of a community theater. Students become voting members by actively participating in some capacity in one theater production.

The Imaginary Players is the Lansing Community College Performing Arts Company presenting plays for young people every Saturday of winter and summer terms. The Company is composed of approximately twelve actors who win their coveted positions in an all-college auditions. New auditions are held prior to each winter and summer term. Members of the Imaginary Players receive theater seminar credit.

The Ledges Playhouse provides teaching and classroom experiences in the atmosphere of a professional theater. Here the theater student tests his career potential in acting, directing, and technical theater courses taught by the professional actor-director-managers of the Playhouse.

A one-year Theater Certificate Program is for the student who wishes to concentrate on theater courses for his personal development only, eliminating the additional required courses for transfer.

Curriculum: Associate Degree in Arts—with Theater emphasis

Theater — **30-34 credits required**

			Credit Hours	Prerequisite
THR	251	Acting I	4	None
THR	252	Acting II	4	THR 251 or approval of the instructor
THR	253	Acting III	4	THR 252 or approval of the instructor
THR	220	Introduction to the Theater for the Playgoer	3	None
THR	221	Play Production	3	None
THR	241	Technical Theater	6	THR 221 or approval of the instructor
THR	260	Directing	6	THR 221 or THR 251 or approval of the instructor
THR	265	Costume Design/Construction	3	None
THR	266	Costume Design/Construction	3	THR 265 or approval of the instructor
THR		Stage Make-up, Customs and Manners	3	None
THR	230	Apprentice Theater Workshop (offered only in the Summer)	4	None

Technical Theater majors may substitute ART 101, 102, Arch. Technology 100, 135, and an art elective in lieu of THR 251, 252, 253, 266. Appropriate art electives: ART 103, 201, 278.

Language Arts — **27-30 credits required**

ENG	121	Freshman English	4
ENG	122	Freshman English	4
ENG	123	Freshman English	4
		or	
ENG	124	Freshman English	4
SPH	104	Fundamentals of Speech	3
SPH	105	Voice and Articulation	3
SPH	201	Interpretive Reading	3
		Language Arts Electives	6-9

18-24 credits required

			Credit Hours	Prerequisite
HUM	201	Western Civilization	4	
HUM	202	Western Civilization	4	
HUM	203	Western Civilization	4	
		Humanities Electives	6-12	

Dance

DANCE	101	Modern Dance and Creative Movement—Beginning	3	
DANCE	102	Modern Dance and Creative Movement—Intermediate	3	Approval of instructor
DANCE	103	Modern Dance and Creative Movement—Advanced	3	Approval of instructor

Minimum—2 credits required

Music

Minimum of one term of Class Voice (MUS 158)
Introduction to Music Literature (MUS 261, 262, 263)

Language Arts Electives:

ENG	202	Introduction to Literature Drama	3
ENG	240	The Film as Art	3
ENG	290	Shakespeare	3

Literature
Music
Dance
Natural Science

Humanities Electives:

HUM	150	History of Art I	3
HUM	151	History of Art II	3
HUM	152	History of Art III	3
HUM	281	Music Appreciation	3

REVISED: February 2, 1972

General Education

The following courses complete the requirements for an associate degree or to fulfill the general requirements of a major in theater at a four-year university.

THEATER COURSE DESCRIPTIONS

220 Introduction to Theater for the Playgoer — **Three credits**

Designed to provide fuller understanding and appreciation for the living theater. Includes historical development for arena through proscenium, techniques of acting and directing, and principles of lighting, design, costuming and makeup. Requires viewing and critiquing assigned live theater productions. No prerequisites. (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 work in producing teams with each team producing a one-act play. Each student prepares a complete prompt book for the play in which he participates. No prerequisites. (3-0)

230 Apprentice Theater Workshop — **Four credits**

Principles of theatrical production, offered only in the summer at the Ledges Playhouse, Grand Ledge. Emphasis on practical apprentice experience in professional theater, using the actual Ledges production for laboratory projects. The student is required to attend a formal one-hour lecture and work on laboratory projects at least five hours each week during summer term. No prerequisites. (1-5)

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241 Technical Theater **Six credits**

Lecture and laboratory in the scenic elements of play production; analysis of theater forms in relation to visual design; applications of basic elements of scenery construction. The Ledges Playhouse is the laboratory. Prerequisite: THR 221 or approval of the instructor. 3 (0-6)

242 Lighting and Sound **Three credits**

Theory and practice in the illumination of stage productions, and in the use of recorded and live sound effects. Prerequisite: THR 221 or approval of the instructor. 3 (0-6)

245 Children's Theater Production **Three credits**

For students or persons in elementary and secondary schools, churches, and community theaters and organizations who wish to produce theater for children and/or with children. The course includes analysis of: dramatic literature for children; of improvisational theater with children; designing and mounting of the production; the work of the director, actors and technicians; the children's theater audience; business management, and of the preparations necessary for touring.

251 Acting I **Three credits**

Development of the vocal, physical and improvisational skills necessary to sustain public performance. No prerequisite. 3 (0-4)

252 Acting II **Four credits**

Vocal, physical and improvisational skills are now combined with classroom performance situations. Public performance is not recommended. Prerequisite: THR 251. 3 (0-4)

253 Acting III **Three credits**

Vocal, physical, improvisation and performance skills are applied to in-depth character analysis and the means of realizing character on stage. Public performance is required. Prerequisite: THR 251 and 252.

255 Stage Make-up **Three credits**

Designed to acquaint the student with the basic principles of the art and technique of makeup for creative use in the design and execution of make-up to materially assist the actor in the development and projection of his character. Each student works with his individual make-up kit, creating practical make-ups. No prerequisite. 3 (2-2)

260 Directing **Six credits**

An approach to the realization of a dramatic text on stage, from analysis of the text through rehearsal techniques to consideration of all ancillary problems. Students work directly with plays in rehearsal at the Ledges Playhouse. Prerequisite: THR 221 or THR 251 or approval of the instructor. 3 (0-6)

265 Costume I **Three credits**

Designed to acquaint the student with historical costume fashion, the class emphasizes the characteristics of different historical periods, the garments worn and fabrics used.

It offers the student instruction in basic sewing skills for theatrical costuming, and an opportunity to construct costumes to be used in productions of the department. No prerequisite. 3 (2-2)

266 Costume II **Three credits**

The emphasis of this course is theatrical costume design. The student employs a background in costume history to achieve the necessary effects in design.

While learning methods and techniques for costume construction the student will have an opportunity to constrct costumes to be used in various productions offered by the department. Prerequisite: THR 265 recommended but not required. 3 (2-2)

ADMINISTRATION

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Faculty and Staff Directory

Faculty and Staff Directory

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