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 pressured 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.

Those 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
President
LANSING COMMUNITY COLLEGE: COMMITMENTS, GOALS, AND OBJECTIVES

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

Henrik Ibsen

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 planning 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 to purpose and process in 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 activity services according to the student's academic, vocational, and personal needs.

4. To provide opportunities for students to develop leadership and social interaction 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 new 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 non-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.
FALL TERM 1972

Faculty/Administration Days .................. September 19-22
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 37, 38
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 30
Classes Begin .................................... June 21
Independence Holiday .......................... July 4
Last Day of Classes .............................. August 18
Division of Student Personnel Services

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 liaison, academic advising, educational and vocational information, financial aid, placement and college activities.

Divisional Service Objectives

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 enrollment and admissions, through recreational and social services 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 statement 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 students are urged to contact the Student Records Office and submit their application as early as possible to minimize time for testing if required, 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 not a non-refundable fee.
3. Students in high school or students who have graduated from high school in the past year must or personally deliver 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 must 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. Request 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.
Gross Applications

Gross students must submit a gross application form supplied by the registrar's office of the college they are attending. Both sides of this form must be completed. The gross student 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 gross 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 concurrently with their high school study. College credit will be awarded, according to the discretion of the participating high school. Advanced placement affects student 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 of 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 $5.00 application fee.
4. The application is completed by the high school records office and sent to the Administration Office of Lansing Community College.
5. 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 in the schedule of classes. Students interested in transfer to another college or university should consult a counselor at the college to determine the transferability of courses.

Late Registration

Students registering late will be required to make up the work missed. All required credits 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 student so that the registrar's office may keep accurate account of student records. During the first week of a term, a student may make changes in his schedule by following procedures outlined in the class schedule. A student may withdraw from a course before the end of the fourth week without academic penalty.
Student Personnel Services

5. Choice of the F-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 classes. Changes must be in accord with the stated procedures for change in enrollment.

Grading procedures of the credit-on-demand (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 grades.
4. The Registrar then converts the regular letter grades to the P-Z system in accord with the definitions 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 or 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 (on a series of examinations). The fee is 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 $1.00, 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 participating 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 average of a student is 2.0 or above on a 4.00 scale ('C'), the 'D' grades will be accepted as credit. When the transferring overall average of a student is below 2.00 on a 4.00 scale ('C'), 'D' grades will be accepted upon request of the student. 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 standing in serving as prerequisites as do 'C' credits earned at Lansing Community College.

Official transcripts of a Lansing Community College student's record will be mailed at no cost 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 formal 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 is enrolled. The departmental chairman has the 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 requirements of the course.

2. Credit may not be granted unless the course is a part of the academic curriculum at the college. The student is the responsibility of the student to determine the course curriculum at the college. The student is the responsibility of the student to determine the course curriculum at the college.

3. Credit may be granted following a comprehensive examination to determine proficiency in a particular subject area.

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 sections of each course for which he is enrolled. Failure to do so may result in a grade of 'F' or withdrawal from the course. Absence from a no-credit course results in the student from being responsible for completing all the work of the course to the satisfaction of the instructor in charge. Absence will be recorded when permitted by means 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 student is absent for classes from 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 be suitable for transfer to the student to the level of upper-division work in a four-year college of his choice or to 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.
Student Personnel Services

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 185, Public Acts of 1955, State of Michigan. (Social Science 101 Political Science, and 101 American Government will satisfy this requirement.)

Degrees

Associate degrees are granted to all who meet graduation requirements. A minimum of 60 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/her work is completed. Those students who maintain a 2.50 grade point average will be graduated Summa Cum Laude; those who maintain a 3.00 grade point average will be graduated Magna Cum Laude; those with a 3.50, 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, Foreign Language, 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/Religion to fulfill the 12 credit Humanities requirement.

II. No more than 12 credits in other than traditional liberal arts courses will apply toward this degree, unless specifically required by the curriculum guide, i.e., 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 all departmental chairmen, faculty and student representatives.

High School Articulation

Effort is made by Student Personnel Services and participating departments of the College to keep 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.
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 recognized as "cooperating" (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 455, Public Act of 1935, as amended by Act 371, Public Act of 1935 (students receiving benefits under the Michigan Veterans' Trust Fund).

e. The student is in the service of the United States of America, 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.


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

**Tuition and Fees**

- **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): $355.00

- **Tuition, Out of State Students**
  - Charged per credit hour: $21.00
  - 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): $15.00
- Registration fee (guest, special): $5.00
- College activities fee (each term):
  - 1-6 credit hours: $0.00
  - 7-11 credit hours: $2.00
  - 12 or more credit hours: $3.00

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 Aid 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

No refund other than one based on mathematical term 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 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 superior 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" grade will remain as a "I" until the student has satisfactorily completed the 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 a 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 "W" 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.

**Hour 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 hour points. The 45 hour 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, letter grades, 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 grade 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. Any 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 $3.00 fee.

Course Numbers

050-099 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.

Examples:

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 Anthropology
ANT Art
ANT Astronomy
AT Architectural Technology
ATR Applied Technology Related
ATS Applied Technology Seminars
AUT Automotive
BIO Biology
BTA Building Trades Apprentices
BJT Building Trades Journeyman
BTR Building Trades
BUS Business
CBR Court and Conference Reporting
CEM Chemistry
CIV Civil Technology
CHH Dental Hygiene
CHS Foundations of Science
CHE Chemistry
CHT Chemical Technology
CCM Communication
CSP Computer Science
DAN Dance
DAR Drawing
DCM Data Communications
DS Dental Science
DTR Drafting Technology
EC Economics
ED Education
ENG English
ET Electronics Technology
EVS Emergency Services
FBI Forensic Science
FHS Foundations of Science
FIC Foundations of Communication
FIS Foundations of Physical Science
FIN French
FOM Foundation of Management
HE Health Education
HST Health Science
HUM Humanities
HST History
HTR Hospitality
HTR Hospitality, Restaurant Management
HIST History
HUM Humanities
HST History
IEM Information Management
IST Information Technology
ISM Information Systems
JPS Journalism
KINES Kinesiology
LS Libraries
MATH Mathematics
MED Medical Technology
MGT Management
MUP Music
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NUR Nursing
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NS Natural Science
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PE Physical Education
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Student Personnel Services

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. Orientation, 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 videos are available in the three Counseling Service areas and in the main library.

Orientation

Lansing Community College 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 by the college to the Department of Vocational Rehabilitation and by the State Department of Education. Problems of mobility, limited occupational choices related to physical handicaps and culturally related 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, career counseling, 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 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 vocational goals in college.

Veterans Services

The Veterans 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, tuition assistance and for 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 as 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 FINANCIAL AID AND PLACEMENT

Administrative Officer - Neil Shimer

As increasing numbers 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 submit an application for each program of financial aid. Close attention to instruction is necessary if maximum assistance is to be received.

It is not necessary to apply for a specific type of aid. One application will initiate the student's consideration for every award offered by Lansing Community College. There are no exceptions.

Alvin M. Bentley Foundation Junior College Scholarship

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

The State of Michigan Competitive Scholarship

This scholarship provides tuition and fees for entering freshmen who meet the following requirements:
1. Michigan resident for at least one year preceding application.
2. Graduate of a Michigan public or non-public school with an academic average of 3.0 or better.
3. Participation in the required competitive examination administered by the Michigan Higher Education Authority.

High school applicants 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 at Lansing Community College. The scholarships are awarded on the basis of scholarship and need for funds. The scholarships are renewable so that a student may receive aid for a total of six years.

Truett Scholarship 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. K. Corwin Scholarship in Transportation and Traffic Management

A scholarship made possible by funds of Mr. A. K. Corwin, Traffic Manager of Oldsmobile, who retired after 45 years of service. The award pays $200 for one academic year (these terms). It is awarded with consideration of financial need and the applicant's potential contribution to the field of transportation and traffic.

Ukrainian Home Association 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 is given to Ukrainian students.

Lansing Women's Club Scholarship

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

Hirtz Foundation Grants

$10,000 is awarded each year for tuition and fees to students who have financial need. These grants are renewable and recipients may continue to receive a Hirtz grant even if they transfer to Michigan State University. Provided the financial need still exists.

John M. Sebenes Memorial Scholarship

Established by friends and the family of John Sebenes, associate professor of chemistry at LCC, a $500.00 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

At a part of the Higher Education Act of 1965, grants ranging from $200 to $1,000 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:
1. Be a full-time student 16 credits or more.
2. Be in need of the amount of his loan to pursue his course of study.
3. Be a citizen of the United States.

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

Federal Guaranteed Loans

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

LCC Veterans' 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.
Student Personnel Services

The Dwight and Eleanor Rich Loan Fund

This fund, established upon the retirement of Dr. Dwight D. Rich from the superintendency of the Lansing Public Schools in June, 1972, 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 $500 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 Boyadjian Memorial Loan Fund

This loan fund was established in memory of Tama Lee Boyadjian 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. It is explained below:

Grants

Students are eligible for grants if they are taking courses leading to a degree or certificate in a field relating to Law Enforcement, and provide tuition and fees not exceeding $300 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 $3,000 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 1/3 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. These funds are available for short-term loans at a maximum of $1,000. Applicants must have completed six credits with a 2.0.

College Work-Study Program

Lansing Community College participates in the Federal Government Program which provides jobs for students from low-income families. Information and applications for these jobs may be obtained from the 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.
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 athletic program, each participant should carry his own insurance.

Information on the student insurance program is available through the Office of the Dean of Students.

The Intramural calendar:

- Fall Term: Cross Country, Football, Gymnasium, Table Tennis, Touch Football, Volleyball
- Winter Term: Basketball, Bowling, Smashball, Table Tennis, Weightlifting
- Spring Term: Badminton, Bowling, Golf, Horseback, Softball
- 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 is also 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: DePauw, Indiana
- Basketball: Hutchinson, Kansas
- Golf: Fort Myers, Florida
- Wrestling: Waterloo, Minnesota
- Tennis: Orlando, Florida
- Track: Mesa, Arizona

Student Organizations

Intramural activities at Lansing Community College are sponsored and operated by the Student Government. 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 news coverage and publish information of general interest to the campus community.

*For additional information on the athletic programs, students may contact the Athletics Office (Room 215, Student Personnel Services Building), or call (517) 973-7350.
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 Aquatics
3. Individual and Dual "CARRY-OVER"
4. Gymnastics
5. Team Sports
6. Combatives and Weight Training
7. Rhythm
8. General

COURSE DESCRIPTIONS

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, 1 (1-2)

111 Fundamentals of Physical Education—Female
Two credits

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

132 Health—Coed
Three credits

Covers contemporary health issues such as human sexuality, drug abuse, weight control. Student interest will dictate issues discussed. 1 (1-4)

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 (1-8)

114 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 (1-4)

125 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)

123 Synchronized Swimming—Female
One credit

Encompasses fundamental strokes, and elementary, intermediate, and advanced synchro 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, flippers, and snorkel. 1 (0-2)

223 Swimming—Lifesaving—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 recompression. 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)
225 Lifeguard Training—Coed  
One credit  
Covers all aspects of the skills and responsibilities needed by the lifeguard to ensure 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  
See PE 131 Badminton—Coed. 1 (0-2)

133 Badminton—Female  
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 running 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 emphasis on 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 serve, forehand and backhand stroke. 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 spinal 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)

120 Advanced Tennis—Coed  
One credit  
Refines the skills of service, forehand and backhand strokes, and game strategy. 1 (0-2)

150 Beginning Gymnastics—Male  
One credit  
Prepares an introduction to the fundamentals of suitability, apparatus, and routine. 1 (0-2)

151 Beginning Gymnastics—Female  
One credit  
See PE 150 Beginning Gymnastics—Male. 1 (0-2)

150 Advanced Gymnastics—Male  
One credit  
Continuation of basic gymnastics covering more specific skills, developing into routines. Special emphasis is placed upon advanced stunts. 1 (0-2)

151 Advanced Gymnastics—Female  
One credit  
See PE 150 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 163 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 strategy, history, rules and values of volleyball. 1 (0-2)

167 Volleyball—Female  
One credit  
See PE 166 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—Cod
Instruction in fundamental techniques and rules of the art of fencing, including care of equipment. One course objective is development of grace and poise. 1 (6-2)

171 Judo—Male
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 (6-2)

172 Self-Defense—Cod
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 (6-2)

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 (6-2)

174 Wrestling—Male
One credit
Teaches the fundamental takedowns and breakdowns; offensive and defensive moves from the standing and the seated position; pinning holds; escapes; and various combinations of the above. 1 (6-2)

175 Karate—Cod
One credit
Develops skills in punching with fists and hands; kicking with feet and knees; and essential body movement in combat. 1 (6-2)

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 (6-2)

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, rumba, and cha cha). Includes practice in correct procedure in dance situations and other social gatherings. 1 (6-2)

182 Social Dance—Female
See PE 181 Social Dance—Male. 1 (6-2)

183 Social/Square Dance—Male
One credit
A beginning dance class to present the basic steps and variations of the fox trot, waltz, tango, cha cha, samba, and swing, and the basic skills and patterns used in square dancing. 1 (6-2)

184 Social/Square Dance—Female
One credit
See PE 183 Social/Square Dance—Male. 1 (6-2)

185 Square Dance—Male
One credit
Development of the basic skills and patterns used in square dancing. 1 (6-2)
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 Persin

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 B. Hitch Memorial Library (Business & Technology) in Old Central. These centers offer students and faculty the use of nearly 35,000 books, and 300 periodicals as well as information stored on microfilm, slides, and phonodisc. College catalogs, art prints and pictures, collections of 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 the student and curriculum needs. Faculty and library staff select the best of current materials and prepare a continuing basis to keep information up-to-date and 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.

Other facilities and services of the libraries include conference and typing rooms, and carrels designed for individual study and audio programming. Microfilm readers-printers and photostat machines provide low-cost copies. The Library Services staff of reference librarians and library technicians assist in student study by organizing resource readings, providing reference services, and by giving individual group instruction in library use. Instruction services are 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 B. Hitch Memorial Library. The staff of technical services librarians 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, mailing and catalog duplication center. Central records of the total collection of the library services department are housed in this area.
Department of Instructional Media

Chairman: Dale Donham

The Department of Instructional Media provides services from two audio-visual distribution centers, a photo-graphics 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 Photo-graphics Center produces trans and linen masters, and various forms of photography and graphic arts for new and continuing audio-visual material (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 courses located in the Arts and Science Library. A library of 3,600 audio tapes and 1,500 records are available on a regular checkout basis for both student and faculty. The television 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 instructional (AVI) laboratories within the college.

Faculty receive assistance from the co-ordinator 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 report 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 planetariums. With a 50' model projector, planetarium programs may portray the appearance of the sky from any vantage point 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 sought 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 interrelationships 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 105 and LT 140. The student's elective program should provide either an acceptable career alternative, 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 if they successfully complete the one-year program.

Upon application, the Michigan Department of Education Bureau of Library Services grants a Library Technician Certificate to students successfully completing the one-year curriculum. 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.
COURSE DESCRIPTIONS

101 Library Resources  Three credits
An introduction to contemporary patterns of library services. Library course opportunities are examined with emphasis on library techniques. Students learn basic resources and services common to most libraries by solving problems through library inquiry. Students become familiar with resources in area libraries. Required.

103 Public Service  Four credits
A review of technical work done in public, school, academic and special libraries. Special emphasis placed on special 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 collection are studied. Required.

110 Introduction to Photography  Three credits
History of photography; general principles of the "technically-perfect negative"; foundation of materials and operation of the 35mm camera. Black and white contact and enlargement printing, printing from negatives, and using enlargers to produce a finished enlargement. Must have shown camera to enroll. Not required.

201 Technical Services  Four credits
Study of the organization of a technical service department places the relationship between ordering and cataloging work. Amounts and giving an understanding of Dewey Decimal and Library of Congress classification schemes. Cataloging instruction emphasizes manual preparation, punched cards, cataloging tools, subject heading, cataloging, catalog maintenance and cataloging of non-book materials is included. Practice in physical preparation and maintenance of materials is provided. Required.

203 Audiovisual Services  Four credits
Exploitation of the use and handling of media at all levels of learning. Students learn to operate equipment and prepare simple audiovisuals. Ordering, organizing and circulating AV materials and equipment are studied. Required.

20S Library Studies  One or three hours—variable credit
A typology of seminars designed to meet the special needs of individuals and specialized interests of those preparing to work in libraries. Prerequisite: Departmental approval; Either 20S or 22S is required.

246 Library Practice  Three credits
An opportunity to integrate and apply previous course work during a minimum of 48 hours work in an area library. A series of planning and evaluation sessions with course advisor are included. Prerequisites: Departmental approval; Either 246 or 20S is required.
To burn always with this hard, gemlike flame, to maintain this ecstasy, is success in life.

Walter Peter
Division of Arts and Science

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 moral, 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 of this division of Lansing Community College study stated, 1972-1974

To provide general education for all students regardless of curricula.

To offer freshmen 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 students who earn 60 credits of study and who also meet the academic requirements for graduation as stated by the college.

To offer non-professional credits 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 heritage 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 tutorials, lectures, 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. These 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 think, write, and speak with clarity and simplification. To accomplish this, courses will assist them to read with greater comprehension and to write and speak effectively.

- Establishes honors courses, lecture-guest speaker, 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 Honor 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, psychology, forensic 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 office at his high school principal as to the courses offered in a particular summer.

Advanced Placement

Youthful 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 six or seven days during the summer. They enroll in regular sections of the courses for which they are registered and their credits are fully transferable to other colleges and universities.
Associate 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 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 in General. The requirements for these degrees are as follows:

1. The student is required to take at least 12 credits in each of the following areas: Humanities, Foreign Languages, Science, and Social Science.

2. It is recommended that the requirement of 12 credits in Humanities be fulfilled by the sequence in Western Civilization (HUM 105, 106, 200). As an alternate to the preceding recommendation, students who do not choose to follow this recommendation are required to take at least 12 credits in Humanities, which may include a foreign language and at least 12 credits in Humanities, and at least 12 credits in Social Science.

3. Each semester's curriculum must contain at least one course in each of the following areas: Humanities, Foreign Language, Science, and Social Science.

4. No more than 12 credits outside of traditional liberal arts would be accepted toward a degree except where specifically required by curricular guidelines. Courses such as Principles of Economics and Fine Arts will be considered as Liberal Arts.

5. Courses for institutional credit only will not be included in the 90 credit total.

The student who seeks an Associate Degree with a major may elect to follow 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 — Humanities Major with emphasis in History

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

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</tbody>
</table>

**Electives:**

1. Highly recommended: ENGL 101 American Literature
2. Recommended: ENGL 102 American Literature, ENGL 103 American Literature, ENGL 104 American Literature
3. Required: ENGL 105 American Literature, ENGL 106 American Literature, ENGL 107 American Literature
4. Strongly recommended: ENGL 108 American Literature, ENGL 109 American Literature, ENGL 110 American Literature

*Electives may be taken any term.*
# Arts and Science

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

<table>
<thead>
<tr>
<th>Term</th>
<th>Fall Term</th>
<th>Spring Term</th>
<th>Summer Term</th>
<th>Fall Term</th>
<th>Spring Term</th>
<th>Summer Term</th>
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## Associate in Arts — Language Arts Major with emphasis in Speech

<table>
<thead>
<tr>
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<th>Fall Term</th>
<th>Spring Term</th>
<th>Summer Term</th>
<th>Fall Term</th>
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<td>Year</td>
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<td>Courses</td>
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</table>

## Electives

- 1. Highly Recommended:
  - HST 100 American History I
  - HST 100 American History II
- HST 100 American History III
- HST 100 American History IV

- 2. Recommended:
  - HST 100 American History V
  - HST 100 American History VI

- 3. Required:
  - HST 100 American History VII

- 4. Electives should be selected from the following:
  - HST 100 American History VIII
  - HST 100 American History IX

- 5. Additional Electives:
  - HST 100 American History X

# Associate in Arts — Psychology Major

<table>
<thead>
<tr>
<th>Term</th>
<th>Fall Term</th>
<th>Spring Term</th>
<th>Summer Term</th>
<th>Fall Term</th>
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## Electives

- 1. Highly Recommended:
  - HST 100 American History I
  - HST 100 American History II
- HST 100 American History III
- HST 100 American History IV

- 2. Recommended:
  - HST 100 American History V
  - HST 100 American History VI

- 3. Required:
  - HST 100 American History VII

- 4. Electives should be selected from the following:
  - HST 100 American History VIII
  - HST 100 American History IX

- 5. Additional Electives:
  - HST 100 American History X

- 6. Additional Electives:
  - HST 100 American History XI

- 7. Additional Electives:
  - HST 100 American History XII

# Arts and Science
### Associate in Arts - Social Science Major

The prospective Social Science or Sociology 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 general interests and perspectives by taking advantage of the many seminars and lectures, as well as the applied areas within the college and the larger community.

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Sophomore</th>
<th>Fall Term</th>
<th>Credit Hours</th>
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<tr>
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<td>BIS 101</td>
<td>Modern American History</td>
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<tr>
<td>NS 112</td>
<td>American Diversity</td>
<td>1</td>
<td>NS 121</td>
<td>United States History</td>
<td>4</td>
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<tr>
<td>HUM 101</td>
<td>Western Civilization I</td>
<td>3</td>
<td>SPS 101</td>
<td>Physical Education</td>
<td>2</td>
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<tr>
<td>PST 101</td>
<td>Orientation</td>
<td>1</td>
<td>PST 102</td>
<td>Introduction to Psychology</td>
<td>3</td>
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<tr>
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</table>

**Notes:**
- *Academic units in the following areas must be completed: 15.*
- Students planning to transfer to a four-year college should consult the four-year college's catalog to determine the necessary courses.
- Psychiatry: Select one course from the following: PSH 201, 202, 203, 204.

### Associate in Science - Biology Major

<table>
<thead>
<tr>
<th>Freshman</th>
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<th>Credit Hours</th>
<th>Sophomore</th>
<th>Fall Term</th>
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<td>FNC 121</td>
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<td>Western Civilization I</td>
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<tr>
<td>MTH 101</td>
<td>College Algebra &amp; Trig I</td>
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<td>SPS 101</td>
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<td>SPS 102</td>
<td>Introduction to Psychology</td>
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</table>

**Notes:**
- *Academic units in the following areas must be completed: 15.*
- Students planning to transfer to a four-year college should consult the four-year college's catalog to determine the necessary courses.
- Psychiatry: Select one course from the following: PSH 201, 202, 203, 204.

### Recommended Electives

- MTH 111 Calculus I & IIL Cal. | 1 |
- MTH 211 Calculus II Cail. | 1 |
- MTH 211 Calculus III Cail. | 1 |
- BIO 101 General Biology I | 4 |
- BIO 101 General Biology II | 4 |
- **Total** | **Total** | **Total** | **Total** | **Total** |

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For the full catalog, please visit the following link: [www.lcc.edu](http://www.lcc.edu)
### Associate in Science — Chemistry Major

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENG 112 P1 English English</td>
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<td>HUM 221 Western Civilization</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MTH 161 College Algebra &amp; Trig I</td>
<td>5</td>
<td>HIS 112 History of Culture</td>
<td>3</td>
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<td>PHY 120 General Chemistry</td>
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<td>PHY 211 Physics</td>
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<td>CHM 121 Organic Chemistry</td>
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<tr>
<td></td>
<td>CHM 115 Laboratory</td>
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### Associate in Science — Physics Major

<table>
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<th>Year</th>
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<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>ENG 129 P1 English English</td>
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<td>HUM 221 Western Civilization</td>
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<td>MTH 161 College Algebra &amp; Trig I</td>
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<td>HIS 112 History of Culture</td>
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<td>PHY 120 General Chemistry</td>
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<td>CHM 121 Organic Chemistry</td>
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### Associate in Science — Earth Science

<table>
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<th>Year</th>
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<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
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<tr>
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<td>ENG 112 P1 English English</td>
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<td>HUM 221 Western Civilization</td>
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<tr>
<td></td>
<td>MTH 161 College Algebra &amp; Trig I</td>
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<td>HIS 112 History of Culture</td>
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<tr>
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<td>PHY 120 General Chemistry</td>
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<td>PHY 211 Physics</td>
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<td>CHM 121 Organic Chemistry</td>
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### Associate in Science — Mathematics Major

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<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>ENG 129 P1 English English</td>
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<td>PHY 120 General Chemistry</td>
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<td>CHM 121 Organic Chemistry</td>
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</tbody>
</table>

*Elective may be taken any term.*
Pre-Professional Program

The pre-professional curriculum offered by the College of Arts and Science parallels in content those offered by major institutions within the State of Michigan. They are planned to satisfy both general education requirements and the entrance requirements of the professional school. 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 thus 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 prerequisite for licensure.
Pre-Medical

Method school applicants must present at least 90 semester hours of credit. Twothirds of these, or 50 term hours, may be taken at Lansing Community College. Premedical students must be familiar with the requirements of the medical school of their choice and about their programs of study accordingly. The University of Michigan School of Medicine, for instance, requires facility with a foreign language.

Pre-Medical Science

The Michigan State Board of Medical Science requires that a licensed practitioner:
1. Complete 90 term hours of instruction at a recognized community college or university.
2. Graduate from a nine-month course at an approved college of medical science.
3. Complete one year of clinical training under the supervision of a licensed practitioner.
4. Be 31 years of age, a citizen of Michigan, a citizen of the United States, and of good moral character.

Pre-Medical Science

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.

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.

Pre-Nursing
Pre-Nursing

For Students Planning to Transfer to the University of Michigan

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 hours of credit, and will enter the University at the beginning of the first summer session.

Pre-Occupational Therapy

Students who plan to follow this curriculum should consult the catalog of Eastern Michigan University, Wayne State University, or Western Michigan University for detailed information concerning credit requirements. The specific nature of some of the courses will vary from year to year. The student is responsible for completing all of his sophomore year at Lansing Community College.

Pre-Pharmacy

A degree in pharmacy 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 Pharmacy.

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-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 University College for further information.
### 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 social 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.

<table>
<thead>
<tr>
<th>Preparatory</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
<th>Fall Term</th>
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</table>

### 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 and universities require a full year of a foreign language for graduation. Electives should be determined by one's major and minors (II). 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

<table>
<thead>
<tr>
<th>Elective</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
<th>Fall Term</th>
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</table>

#### Recommended Electives

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

- Biological Sciences
- Physical Sciences
- Mathematics
- Language Arts
- Social Sciences
- Humanities

#### Pre-Teaching General Education

<table>
<thead>
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<th>Elective</th>
<th>Fall Term</th>
<th>Credit Hours</th>
<th>Summer Term</th>
<th>Credit Hours</th>
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#### Pre-Teaching Semester

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#### Pre-Teaching Spring Term

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</table>
PART I: 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.

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Credit Hours</th>
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Pre-Teaching

Teacher Assistant Curriculum

The Teacher Assistant Program prepares students primarily for service in the elementary grades. It has three purposes: (1) to provide teachers with skills for working with children which will permit them to understand and utilize the professional abilities of the teacher; (2) to prepare teachers for teaching in the schools; and (3) to provide them for teaching in the schools in order to facilitate insightful decision-making. Training in the schools takes place under the supervision of fully certified 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 20 credit hours combining academic courses with courses which are task-oriented with high performance goals.
History

104 Recent European and World History   Four credits
Study of contemporary European History in its world setting since 1915, stressing the most recent political, economic, military, and diplomatic events and cultural trends of significance. 4 (40)

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 (40)

112 American History II   Four credits
Continuation of History I. The United States from the Reconstruction to the present. Prerequisite: History I or approval of the department. 4 (40)

150 Afro-American History   Four credits
Traces the developments which led to the African slave trade, the slave system 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 (40)

160 Modern Mexico   Four credits
Political, social, economic, and intellectual developments in Mexico since 1820. Particular emphasis on the Revolution of 1910 and relationships with the United States in the 20th Century. 4 (40)

210 Studies in American History   Four credits
Courses in special problems in 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 (40)

270 The Modern Middle East   Four credits
Historical survey of the region extending from the eastern Mediterranean to the Indian Ocean, with the main emphasis upon the contemporary Middle East, Islamic social, and political dynamics of the states in the area will be covered as a background to the modern, even explosive, career of Middle Eastern politics and problems. 4 (40)

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. This is the analysis of the impact of the West and its role in the transformation. 4 (40)

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 discovering how arguments follow from one to another and fit together systematically in writing or discussion. In addition, the distinction is made between inductive and deductive argumentation. 4 (40)

201 Survey of Western Philosophy I   Four credits
First of three courses dealing with the philosophies of Western Man. Surveys major problem and historical periods in Western philosophy. Designed around integrated readings to provide a survey of philosophy and their relation to the historical contexts in which they occur. Emphasizes philosophy of Greece and Rome. 4 (40)

202 Survey of Western Philosophy II   Four credits
Continuation of Philosophy 201. Devotes special attention to the philosophers of the Medieval, Renaissance, and Early Modern Periods. It is recommended that Philosophy 202 be taken prior to this course. 4 (40)

203 Survey of Western Philosophy III   Four credits
Continuation of Philosophy 202. Devotes special attention to the philosophers of the eighteenth, nineteenth and twentieth centuries. It is recommended that Philosophy 203 be taken prior to this course. 4 (40)

250 Survey of American Philosophy   Four credits
Examination of key concepts in American philosophy with special emphasis on the pragmatic school of thought. 4 (40)

260 Contemporary Social Philosophy   Four credits
Survey of current trends in social philosophy with emphasis on problems and questions about "human nature" and the search for solutions to social problems. Includes Hume, Bentham, Mill, Marx, and Nietzsche. 4 (40)

270 Philosophy of Science   Four credits
Department of Language Arts

Chairman: Hugh Scherm

English

010 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 (3-0)

031 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. (3-0-0)

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 (0-0)

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 122 or 122, depending upon his grades and the recommendation of his instructor. Prerequisite: English 101, 4 (0-0)

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 expressively 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)
122 Freshman English

Four credits.

English 122 is an alternate course to English 121. The student may choose either English 122 or English 121 to complete his Freshman English requirements. Devoted to the research paper, English 122 includes introduction to principles of argumentation and various research techniques; notes on library resources and organization of research papers; approximately 3,000 words. Prerequisites: 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, purpose of poetry, with emphasis on learning to read the literary text intelligently. Preparing 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 also for most students in pre-teaching. Open to freshmen. 3 (4-0)

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, Ibsen, Shaw, O'Neill, Williams, Synge. It 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 the short story. 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, Lost John, and Balladry. Student is expected to write analytical and critical papers and scheduled examinations. Required for English majors and minors. Prerequisite: English 122. 3 (3-0)

207 Introduction to Journalism I

Two 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 Causes of Journalism and Press Criticism, The News Operation, The Style Sheet and Headline Schedule, Use 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, News Bulletin in the News, News of News Variety, Sports, Features, etc., News of Speeches and Meetings, Interviews, News Conferences, Using the Pica Rule, Pictures and Graphics, 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 approval of the department. 3 (3-0)

209 Introduction to Journalism III

Three credits.

A continuation of English 208. Topics to be studied include the following: Writing Feature Stories, Writing Editorials, Writing Reviews, Newspaper Advertising, Make-Up, Typography, Printing Machines and Processes, Ethical Standards, Legal Problems, Legal Problems, Legal Problems. The student will spend a minimum of four hours weekly on the student newspaper as arranged. Prerequisite: English 209 or approval of the department. 3 (3-0)

210 The Nineteenth Century American Novel

Three credits.

Intensive study of some of the major 19th century American novels from James Fenimore Cooper to Theodore Dreiser and Jack London. General orientation is an historical development of the novel format in America and the novelist's response 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)
Language Arts

211 The Twentieth Century American Novel

Three credits

Introduction to the study of some of the major American novels of this century and of the environments (general or specific) which influenced their writing. Student will read novels by such authors as Anderson, Faulkner, Hemingway, Salinger, and Steinbeck. In addition to the reading of at least eight novels, critical and analytical papers are required. Prerequisite: English 121 or 123 or approval by the department. 3 (S-F)

240 Introduction to English Linguistics

Three credits

Designed to introduce the student to various aspects of the English language and its grammatical structure, significant sounds, historical change, borrowing, and meaning. Prerequisite: English 121, 122, and 123. Required for most students in pre-elementary teaching. 3 (S-F)

248 The Film As Art

Three credits

The importance of the film as an art form capable of making a meaningful and perceptive statement on our civilization. The viewing and analysis of 24 films, both foreign and American, of recognized merit. 3 (3.3)

249 The Film As Art

Same as 240 for continuing education without college credit. 0-3

290 Masters of American Literature

Three credits

Designed to acquaint the student with some of the 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. Student is expected to write analytical and critical papers and scheduled examinations. Required for most students in pre-elementary teaching. Prerequisite: English 121. 3 (S-F)

293 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 contributers. Student is expected to write analytical and critical papers and scheduled examinations. Prerequisite: English 121. 3 (S-F)

271 Advanced Writing

Three credits

Designs 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 often as possible in whatever area he chooses. The class provides an opportunity to develop critical awareness for creative efforts. Organized to encourage effective criticism from other students and the instructor. No papers. No exams. Prerequisite: Approval of the department by submission of an original manuscript. 3 (S-F)

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 career, and also selected 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 203 or approval of the department. 3 (S-F)

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

Three-term sequence of elementary French designed to teach pronunciation, vocabulary, conversation, and reading from graded texts. Emphasis is given to the oral and aural approach, yet the development of writing skills is not neglected. Geographical pattern and grammatical structure of the language is taught by a coordinated schedule of language laboratory sessions using tapes of native speakers and class discussions. Five 50-minute class periods each week, plus additional work in the language laboratory. Prerequisite: French 102, French 104, for French 103. French 102. Direct admission to 102 and 103 only under special circumstances. Twelve hours needed for transfer. 4 (S-F)

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 upon the cultural background of the French people and society. Prerequisites: French 101, French 103, and 102, for French 201, French 101, and 103, for French 202, French 102, French 104, etc. Completion of the elementary sequence and this sequence will fulfill the basic language requirements for liberal arts and associate degrees. Twelve hours lecture, one laboratory. 4 (S-F)

101, 102, 103 Elementary Spanish

Four credits

Three-term sequence of elementary Spanish based on multi-lingual techniques and emphasizing speech through practice. Pronunciation problems will be handled by contraversial analyses and classwork 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: Spanish 102, Spanish 101, for Spanish 103, Spanish 192. Twelve hours needed for transfer. 4 (S-F)
Language Arts

201, 202, 203
Intermediate Spanish

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. Prerequisite: Spanish 200.

204, 205, 206
Principles of Speech

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 cr.

301
Public Speaking

Designed to introduce student to techniques of preparing and delivering oral presentations. Emphasizes organization and effective delivery. 3 cr.

302
Advanced Public Speaking

Three credits

by Human Communication

Special Courses

264, 265, 266
Language Arts

Credits variable, one-three.

Special seminars or workshops on any area within the discipline 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.

307, 308, 309
Independent Study in English

One three credits

Special research project and/or individual readings in English. Credits variable from one to three. Cr. 207, one credit; 208, two credits; 209, three credits. 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.

Mathematics

016 - Slide Rule

One credit

020 - Desk Computer

Two credits

080 - Trigonometry

Two credits

090 - Logarithms

Two credits

Department of Mathematics

Chairman: Clarence A. Powers

The College will admit students who have deficiencies in mathematics. One year of high school algebra and geometry or, however, essential for certain college programs. These deficiencies may be remedied 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 or at least average performance in preparatory courses is prerequisite for all courses.

010 - Basic Arithmetic

Five institutional credits

Available only in the Mathematics Laboratory. Review of fundamental processes with integers, common fractions, decimal fractions and percentages. Includes work with word problems designed to promote good reasoning. Five class hours. 3 cr.

011 - Beginning Algebra

Five institutional credits

Contemporary course in elementary algebra designed to provide necessary review and updating 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. 3 cr.

012 - Beginning Algebra Laboratory

Five institutional credits

Available only in the Mathematics Laboratory. Same course as 011. Begins with 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. 3 cr.

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. Includes use of proof and construction principles and formulas. Prerequisite: One unit of high school algebra or Mathematics 010 or 011. Five class hours. 5 cr.

005 - Mathematics Laboratory

Five institutional credits

This is a facility rather than a course. Courses available include 010, 012, 013 and 121 with placement in the specific course determined by testing and interview at part of the laboratory procedure. Tuition paid is applied to the first course assigned. Prerequisites include: open registration; individualization of course content; rate of progress, assistance and completion; tuition by the course rather than by the course. Choice of programmed or audio-visual text materials, and flexibility in scheduling. No prerequisites. Five class hours. 5 cr.

101 - Intermediate Algebra

Five institutional credits

Available in the Mathematics Laboratory or as a conventional class. Deals with functions normally considered in second year high school algebra. Includes the real number system, solutions of equations, functions and graphs and the complex number system. Prerequisite: One unit each in high school algebra and plane geometry or Mathematics 010 or 011 and Mathematics 013. 5 cr.
MTH 157 - Basic Statistics  Three credits

In this introductory course provides a non-mathematical 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 measures of central tendency and variation, correlation, validity and reliability of data, sampling and tests of influence. Pre-requisite: Math 102 or equivalent. 5-50

170 Intro to Statistics  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. Pre-requisite: Mathematics 102 or equivalent. 5-50

105 College Algebra and Trigonometry I  Five credits

(Continuation of Mathematics 164. Pre-requisite: Mathematics 164. 5-50)

200 Mathematical Foundations (Formerly 204)  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. This includes review of all basic skills in arithmetic and emphasizes the meaning of the process used. An even format for some of the fundamental processes. Pre-requisite: 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. 5-50

201 Algebra for Teachers (Formerly 205)  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 all concepts and processes. Pre-requisite: Mathematics 200. 5-50

233 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, areas, volumes, transcendental functions, vector analysis, solid geometry, partial differentiation, multiple integrals, infinite series, power series, and differential equations. Pre-requisite: Mathematics 105. 5-50

214 Analytic Geometry and Calculus II  Five credits

(Continuation of Mathematics 213. Pre-requisite: Mathematics 213. 5-50)

215 Analytic Geometry and Calculus III  Five credits

(Continuation of Mathematics 214. Pre-requisite: Mathematics 214. 5-50)

216 Analytic Geometry and Calculus IV  Five credits

(Continuation of Mathematics 215. Pre-requisite: Mathematics 215. 5-50)

217 Theory of Matrices  Four credits

Algebra of matrices, rank, inverses, determinants, vector spaces, linear transformations, characteristic values and functions of a matrix. Pre-requisite: Mathematics 214. 4-1-10

MTH 236, 237, 238, 239, 240 - Honors

Seminar in Math - 2er ea.
Department of Science

Chairman Dr. David L. Shull

Astronomy

201 Introduction to Astronomy
Four credits
Designed to acquaint the student with the 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. Lectures, laboratory and planetarium. Prerequisites: Natural Science 102 and 103. Permission of instructor. 3 (2-2)

Biology

190 Microbiology
Three credits
A non-traditional 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 affected by our environment. One two-hour laboratory per week allows the student to work with animals performing exercises designed to teach skills in sterile technique, microbiology, isolation of pure cultures, staining, and sterilization. 3 (2-2)

197 General Biology
Four credits
First of a two-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, interactions between organisms and their environment, and taxonomy of the plant and animal kingdom. 4 (2-2)

198 General Biology
Four credits
Continuation of Biology 197. Prerequisite: Biology 107 or consent of department. 4 (2-2)

199 General Biology
Four credits
Continuation of Biology 198. Prerequisite: Biology 198 or consent of department. 4 (2-2)

150 Anatomy and Physiology 1

Part I of a two-term course devoted to the study of the musculature of the human body. Meets the needs of students taking further work in biology or related applied fields such as nursing and physical therapy. Emphasis will be placed on the anatomy and physiology of the skeletal, muscular, nervous, and sensory systems. 4 (2-2)

202 Anatomy and Physiology II

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)

Chemistry

050 Basic Chemistry
Four institutional credits
A fundamental chemistry course. Designed specifically for those students needing 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 (3-3)

110 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 101, or approval of department. 4 (3-3)

151 An Introduction to Inorganic Chemistry I
Four credits
The Chemistry 151, 102 and 103 series is designed to meet the needs of many curricula 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 curricula.

Chemistry 151 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 supplies 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)
Science

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.
Prerequisites: Chemistry 101 or approval of the department. 4 (S-3)

111 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 processes of life and industry.
Prerequisites: Chemistry 101 or approval of the department. 4 (S-3)

112 General Chemistry II (Inorganic)
Five credits
Part of a series of four 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, coordination compounds 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 Group I, VI, and VII. Prerequisites: The satisfactory completion of high school chemistry or the equivalent, high school algebra or approval of the department. 5 (S-3)

113 General Chemistry III
Five credits
(And introduction to quantitative analysis in the laboratory)
Continuation of Chemistry 112. Includes an introduction to electrochemistry, kinetics, equilibrium, solutions and thermodynamics and the descriptive chemistry of Groups II, III, IV and V. Prerequisites: Chemistry 112 or Core 101 and 102 or approval of the department. 5 (S-3)

251 Qualitative Analysis
Five credits
Laboratory course designed to give the student manipulative ability to determine the chemical and stoichiometric principles involved in analytical procedures of volumetric and gravimetric analysis. Prerequisite: Chemistry III through 113. 5 (S-3)

Science Foundation Courses for Teachers

210 Foundations of Conservation
Four credits
Study of the natural resources and the principles of utilization through management and conservation. Topics include history of conservation, nature, plants, minerals, water, forests, wildlife, human populations and man's effect on the environment. The laboratory consists of two parts: (1) field investigations and (2) conservation exercises. All students are graded in a second laboratory session according to their specific interests or declared vocations. 4 (2-3)

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 chemistry, earth and space science. Lecture and laboratory. Prerequisite: Sophomore status and General Science 101 or equivalent. College chemistry and physics recommended. 4 (2-3)

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 genetics. Laboratory activities involve the student directly with natural phenomena, their relationships, and application of principles studied. Lecture and laboratory. Prerequisite: Sophomore status and General Science 101 or equivalent college biology. Foundations of Physical Science recommended but not required. 4 (2-3)
Science
Geology
221. Physical Geology
Four credits
Minerals and rocks of the earth’s crust, constructive and destructive forces, volcanism, erosion by water, ice, gravity, wind and waves, mountains, building, rock deformation, concepts of the earth’s structure, crust and core, history of geology and geologic history, physiographic areas of the United States. Laboratory will consist of field investigations to nearby area as well as a one-weekend extended field trip. Prerequisite: Natural Science 102 and 103 or permission of instructor.

223. Principles of Earth History
Four credits
Historical development of the earth. Modern concepts in the general subject include changes in elevation, size and shape of the continents. Mountains building, ocean basins, 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.

Oceanology
225 Basic Oceanology + Limnology
Four credits
Physics
201. Physics (Mechanics and Heat)
Four credits
First of series of three courses designed to give the student an understanding of the fundamental principles of physics. Considers the principles of mechanics (the laws of motion and equilibriums 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.

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

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

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

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

213. Physics (Optics and Modern Physics)
Four credits
Principles of geometric and physical optics as well as recent developments in modern physics such as atoms and nuclear phenomena; relatively, special relativity, quantum mechanics, and elementary phenomena. Prerequisite: Physics 212, or approval of department.
Science

Seminars in Science
294, 295, 296 Seminars in Special Subjects in Science Variable credit
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 description of title each time a seminar is offered. Prerequisite: Department approval. (Variable)

297, 298, 299 Independent Study in Science Subjects Variable credit
Special studies, research projects or individual readings. Prerequisites: 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 Heeter

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, 250, 299, or ECON 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 103 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, group behavior, social control, population sociology, 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)

105 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 selected by invitation only. Students will be notified of their eligibility before registration. 4 (4-0)

106 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 selected by invitation only. They will be notified of their eligibility before registration. 4 (4-0)
Social Science

Education

Teacher Aide Practicum

103 Curriculum Reinforcement

One credit

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

104 Curriculum Reinforcement

One credit

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

105 Introduction to Education

Three credits

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

109 Teacher Aide Practicum

Three credits

Same as providing opportunities for teacher aides to discuss problems and
topics relevant to their academic and field experiences. Includes the application of
Education 104 to the school setting. Prerequisite: ED 104 and departmental ap-
proval. 3 (3-0) (Two credit hours for directed field experience)

201 Teacher Aide Practicum

Three credits

Same as providing opportunities for teacher aides with opportunities to explore and discuss
problems and topics relevant to academic and field experiences. Includes the ap-
lication of understanding gained through Psychology 201 to the school setting. Prerequisite:
Psy 201, ED 104 or departmental approval. 3 (3-0) (Two credit hours for directed field experience)

202 Teacher Aide Practicum

Three credits

Same as providing opportunities for teacher aides to discuss problems and topics relevant to their
academic and field 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 (3-0)
(Two credit hours for directed field experience)

261, 262, 263 - Early Childhood

Education 1, II, III

Four credits

Four credits

Geography

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,
world resources, landforms, maps, water resources, weather and climate, soils,
vegetation, natural resources, etc. which affect human life on earth. No prerequisite. 3 (3-0)

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

A 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
countries. 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 efforts to reconcile the economy and government, and serves as a guide to political action by the citizen. 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 (3-0)

205 State and Local Government Four credits
Three credits
Analysis of current domestic and international political problems utilizing the theoretical background and current reading to understand the ideologies, forces and interests shaping today's politics. Prerequisite: Social Science 101. 3 (3-0)

210 Intro to Comparative Government Four credits
Three credits
Introduction to the political institutions of modern governments, with emphasis given to the institutions of the United Kingdom, France, Germany, and the USSR. Dynamics of political behavior in those and other societies will be included. Also special problems of the newly emerging nations. Prerequisite: Social Science 101. 3 (3-0)

271 International Relations Three credits
Course in contemporary relations, with emphasis upon policies. Concepts, theories and remedial methods are examined. Relationships between international politics, foreign policy, and domestic policy in the U.S. explored. Prerequisite: Social Science 101. 3 (3-0)
Social Science

204 Educational Psychology
Three credits
An investigation of the contribution of psychology to education. It is concerned with child growth and development, learning, measurement, and group dynamics in the classroom. Observation of a classroom situation in the student's major field of interest is required. Prerequisite: Psychology 201. 3 [3:0]

205 Human Growth and Development
Five credits
Study of human growth and development from conception to senescence. Individual psychological development from birth through young adulthood stressed; emphasis on biological and sociological factors. Prerequisite: Psychology 201. 3 [3:0]

Sociology and Anthropology

160 Contemporary Chicano Problems
Three credits
170 The Indian 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]

290 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 104. 1 [4:0]

290 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, followed by a brief consideration of control and correction. Prerequisite: Social Science 102. 3 [3:0]

294 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 102 and Psychology 201. 3 [3:0]

295 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 related to particular problems, e.g., family stability, racism, urbanism, etc. Prerequisite: Social Science 103. 3 [3:0]

470 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 104. 4 [4:0]
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

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-year period. A minimum of ninety credit hours is required for an Associate Degree.

Objectives

The primary objective of 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 provide a balanced curriculum in these needed ingredients and then to apply them, to develop through research and experimentation new and better methods, and to develop new ways to apply these methods to business problems. The objective is not only to teach the basic fundamentals, but also to provide students with the skills and tools they can use in their career. The business division seeks to facilitate the professional growth of the individual who is a productive member of a business organization. The education provided is both broad general and vocational development, with the latter emphasized at a specific level of accomplishment in those skills which are recognized as either semi-professional or professional in character. Business education at Lansing Community College further aids the relationship between the student, the college, and the business community.

Specific objectives are:

1. To provide gainful employment and professional students with a practical and professional program of instruction as developed by a teaching-oriented faculty.

2. To make all educational subject matter meaningful to the individual by structuring and locating it toward 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.

3. To provide an educational system which is consistent with society.

4. To provide for greater accessibility to all students for guidance, counseling, and instruction needed to develop a self-awareness and self-direction to expand occupational awareness and aspirations and to develop appropriate attitudes toward the personal and social significance of work.

5. To perform articulation and assure students of services for placing every person in the next step in his development whether it is 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.

6. To provide opportunities for individuals to gain knowledge and skills deemed necessary for personal development and for upgrading and updating in new occupations, professions, and vocations.

Community Services

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

With national interest in view, 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 technical to those requiring considerable preparation and background.

Recent trends have occurred with increasing frequency during the last few years that require better educated personnel, and there is every indication that the rate of
Cooperative Internship

Internships are an on-the-job work experience programs carefully created and
integrated with a semester 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, students
are offered the opportunity to participate with the college and its community
in learning and work-related experiences. The student will receive course credit
(two hours per term) and a wage for his time spent at work. (Student must average at
least 20 hours per week.)

Advantages of internships include the development of occupational
competency by students and professional level training in jobs which represent the
most usual work area of employment in our community. The combination of theory and
practical experience provides students with the opportunity to evaluate themselves,
and provides real-world training in human relations. Internships contribute to
professional and personal development by providing a basis for decisions in choosing a
career, by fostering 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 their total academic endeavors is also gained by the student. The
future 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 appropriate basic courses
for job entry. The rate of employment is wide and varied, offering challenging
opportunities to those students with initiative, imagination, and skill.

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 for
the course at any time during the year. Instruction and practice sessions anytime
between the hours of 8:00 a.m. and 10:00 p.m. (subject to the availability of
instructors). The opportunity to complete courses at your own pace and at your own
convenience without time deadlines is provided. This system, called Audio Visual-Tutorial,
was designed to replace the traditional classroom instruction by programming instruction and demonstrations on
audio-visual media such as films, slides and tapes. These individual learning units
are supplemented by written instruction in manuals, and practice work is completed in
the student's own space. Courses include the same instruction as their classroom-type
counterparts and are indicated in the Course Description section by the letters A.V.T.
following the course name.
Accounting and Office Programs

Accounting

One-Year Certificate Program

The Accounting Curriculum offers courses in two-year programs preparing for professional levels of employment from Account Clerk to Account Executive, General Desk Clerk to Retail, Manager, Register, Cashier, and Bookkeeper to Chief Clerk. This four-year program includes courses in Accounting I and II, Accounting III and IV, Computer Accounting I and II, and Computer Accounting III.

Required Courses:

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<tr>
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<td>Bookkeeping Mathematics</td>
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<td>ACC 201</td>
<td>Principles of Accounting I</td>
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<td>Principles of Accounting II</td>
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<td>BUS 206</td>
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Recommended Electives:

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<td>BUS 127</td>
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<td>BUS 128</td>
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<td>BUS 129</td>
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<td>BUS 130</td>
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<td>BUS 131</td>
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<tr>
<td>BUS 140</td>
<td>Business Statistics XX</td>
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</tr>
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</table>

Two-Year Associate Degree Program

The two-year Accounting program offers job opportunities in the field of accounting and financial administration. It is based on the principle that accounting is the language of business as well as the management, presentation, 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 making and control. 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 theoretical knowledge to meet entrance requirements for business and to progress rapidly through the many sub-professional levels of accounting.

Recommended Electives:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>ACC 120</td>
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</table>

Computer and Conference Reporting

Two-Year Associate Degree Program

The two-year University of Michigan Business School program includes the study of management and computer technology. It is an associate degree program to prepare students for the many interesting positions open to full-time students. Some of the occupations for which graduates will be qualified include court reporters, conference interpreters, business interpreters, legislative reporters, and general court reporters. The program teaches computer science and develops the skills necessary for effective reporting. In addition, it teaches the legal, medical, and other technical vocabularies and essential information for success in the job.

<table>
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<th>Course Title</th>
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<td>BUS 101</td>
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</table>

1972-1974 Lansing Community College Course Catalog  www.lcc.edu
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 entering jobs in the modern office. Upon satisfactory completion of the program, a certificate is awarded. Further courses may be elected on a full-time basis, or part-time during evenings, which will lead to the associate degree.

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Spring Term</th>
<th>Full Term</th>
<th>Credits Hours</th>
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<td>ENG 113</td>
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<tr>
<td>Basic English</td>
<td>Communication I</td>
<td>Basic English</td>
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<td>BUS 110</td>
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<td>Business Mathematics</td>
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<td>Principles of Accounting</td>
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<td>BUS 130</td>
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<td>Applied Psychology</td>
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</table>
### Legal Assistant

**Two-Year Associate Degree Program**

A legal assistant is a professional in the field of law; he will work for a lawyer in law firms performing many duties from office management to preparing case materials for trial. The majority of the graduates will seek employment with law 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 curriculum guides provide needed background in legal procedures and also allow for widely elective courses to attain individual goals.

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<thead>
<tr>
<th>Term</th>
<th>Fall Term</th>
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<tbody>
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<td>Credit Hours</td>
<td>Credit Hours</td>
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<td>EN 106</td>
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</tbody>
</table>

### Legal Secretary

**Two-Year Associate Degree Program**

The Legal Secretary Program presents opportunities for students wishing to work in the field of law. The curriculum provides the student with skill and ability necessary to manage the office of an attorney, and develops understanding of the vocabulary and format used, in addition to the normal clerical skills. An Associate Degree is awarded upon satisfactory completion of the program.

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<thead>
<tr>
<th>Semester</th>
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<tr>
<td>Spring</td>
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</tr>
</tbody>
</table>

### Accounting and Office Programs

**Legal Assistant**

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### Accounting and Office Programs
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 advancement and self-sufficiency in the secretarial field. An Associate Degree is awarded upon satisfactory completion of the curriculum.

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<thead>
<tr>
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<th>Full Term</th>
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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 transcriber position allied to the medical field in a hospital or clinic.

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</table>

Secretarial Science

Two Year Associate Degree Program

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

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</tbody>
</table>

Note: General education requirements for a two-year associate degree include a minimum of 60 credits. The above program requires 64 credits.
Department of Management and Marketing

Chairman: James F. Peter

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 program of instruction to develop a teaching-oriented faculty. This faculty will maintain current evaluation and assessment of themselves and their methods to provide understanding and analysis of current issues and practices in the field of management and marketing.

II. The Department will make all educational efforts more meaningful and relevant to the individual by motivating and guiding them toward 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, especially in the fields of business and industry, to develop individuals and programs which will advance the economic and social development of the community.

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

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

James Peter
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. Businessmen are encouraged to make use of the management course in the implementation of their employee training 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
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<td>Management &amp; Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Managerial Writing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 122</td>
<td>Principles of Accounting</td>
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Winter Term

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<tr>
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<th>Course Title</th>
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<tr>
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Spring Term

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</table>

Management

Associate Degree Program

The Management program offers training for management in various fields determined by needs of students in the community. Classroom instruction, simulation, and related activities are planned to meet the needs in specific situations. Each course stresses the practical aspects of management in a professional setting to a student willing to make a career in business.

Lansing Community College facilities and personnel are available for organizing, conducting, and coordinating management programs to meet needs of interested organizations as well as individual students.

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<tr>
<td>BUS 130</td>
<td>Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 230</td>
<td>Accounting Principles</td>
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Spring Term

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 225</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Management &amp; Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Managerial Writing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 122</td>
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<tr>
<td>BUS 121</td>
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Recommended Electives

<table>
<thead>
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<tr>
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<td>3</td>
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<tr>
<td>BUS 128</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 129</td>
<td>Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>BUS 130</td>
<td>Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 230</td>
<td>Accounting Principles</td>
<td>3</td>
</tr>
</tbody>
</table>
Management and Marketing

Certificate Program

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

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

<table>
<thead>
<tr>
<th>Full-Time</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 118</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUS 224</td>
<td>Management and Supervision</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Development of Management Skills</td>
</tr>
<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>ENG 115</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>BUS 219</td>
<td>Communication in Business and Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Winter Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 111</td>
<td>Accounting I</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Intermediate Marketing</td>
</tr>
<tr>
<td>BUS 221</td>
<td>Managerial Accounting</td>
</tr>
<tr>
<td>BUS 222</td>
<td>Marketing I</td>
</tr>
<tr>
<td>BUS 223</td>
<td>Principles of Business</td>
</tr>
<tr>
<td>BUS 224</td>
<td>Business Communication I</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Management and Supervision</td>
</tr>
<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>BUS 227</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>BUS 228</td>
<td>Communication in Business and Management</td>
</tr>
<tr>
<td>BUS 229</td>
<td>Principles of Business</td>
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</table>

<table>
<thead>
<tr>
<th>Spring Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 111</td>
<td>Accounting I</td>
</tr>
<tr>
<td>BUS 220</td>
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</tr>
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<td>BUS 223</td>
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<tr>
<td>BUS 224</td>
<td>Business Communication I</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Management and Supervision</td>
</tr>
<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>BUS 227</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>BUS 228</td>
<td>Communication in Business and Management</td>
</tr>
<tr>
<td>BUS 229</td>
<td>Principles of Business</td>
</tr>
</tbody>
</table>

Marketing

Associate Degree Program

The Marketing Program offers specialized 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 of the training individual is to train individuals to participate more efficiently in business activities.

<table>
<thead>
<tr>
<th>Winter Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 118</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUS 119</td>
<td>Business Environment</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Intermediate Marketing</td>
</tr>
<tr>
<td>BUS 221</td>
<td>Managerial Accounting</td>
</tr>
<tr>
<td>BUS 222</td>
<td>Marketing I</td>
</tr>
<tr>
<td>BUS 223</td>
<td>Principles of Business</td>
</tr>
<tr>
<td>BUS 224</td>
<td>Business Communication I</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Management and Supervision</td>
</tr>
<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>BUS 227</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>BUS 228</td>
<td>Communication in Business and Management</td>
</tr>
<tr>
<td>BUS 229</td>
<td>Principles of Business</td>
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<table>
<thead>
<tr>
<th>Spring Term</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BUS 118</td>
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</tr>
<tr>
<td>BUS 119</td>
<td>Business Environment</td>
</tr>
<tr>
<td>BUS 220</td>
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</tr>
<tr>
<td>BUS 221</td>
<td>Managerial Accounting</td>
</tr>
<tr>
<td>BUS 222</td>
<td>Marketing I</td>
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<tr>
<td>BUS 223</td>
<td>Principles of Business</td>
</tr>
<tr>
<td>BUS 224</td>
<td>Business Communication I</td>
</tr>
<tr>
<td>BUS 225</td>
<td>Management and Supervision</td>
</tr>
<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>BUS 227</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>BUS 228</td>
<td>Communication in Business and Management</td>
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<table>
<thead>
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<tr>
<td>BUS 119</td>
<td>Business Environment</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Intermediate Marketing</td>
</tr>
<tr>
<td>BUS 221</td>
<td>Managerial Accounting</td>
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<tr>
<td>BUS 222</td>
<td>Marketing I</td>
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<td>BUS 223</td>
<td>Principles of Business</td>
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<tr>
<td>BUS 224</td>
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<td>BUS 225</td>
<td>Management and Supervision</td>
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<tr>
<td>BUS 226</td>
<td>Survey of Business</td>
</tr>
<tr>
<td>BUS 227</td>
<td>Freshman English I</td>
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<td>Communication in Business and Management</td>
</tr>
<tr>
<td>BUS 229</td>
<td>Principles of Business</td>
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</table>

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BUS 118</td>
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</tr>
<tr>
<td>BUS 119</td>
<td>Business Environment</td>
</tr>
<tr>
<td>BUS 220</td>
<td>Intermediate Marketing</td>
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<tr>
<td>BUS 221</td>
<td>Managerial Accounting</td>
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<td>BUS 222</td>
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<td>BUS 227</td>
<td>Freshman English I</td>
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<td>BUS 228</td>
<td>Communication in Business and Management</td>
</tr>
<tr>
<td>BUS 229</td>
<td>Principles of Business</td>
</tr>
</tbody>
</table>
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 a limited but comprehensive training to enable them to enter the labor market or transfer to a certificate in greater detail completion of this program. Also, the content may be transferred to the two-year program.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Winter Term</th>
<th>Spring Term</th>
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<tbody>
<tr>
<td>DP 100</td>
<td>Introduction to Electronic Devices</td>
<td>3</td>
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<tr>
<td>DP 110</td>
<td>Data Communication</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>DP 120</td>
<td>Basic Application Programming</td>
<td>3</td>
<td></td>
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<tr>
<td>DP 130</td>
<td>Advanced Communication Programming</td>
<td>3</td>
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<td>DP 140</td>
<td>Operating Systems</td>
<td>3</td>
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</tbody>
</table>

*In addition to these courses, there are elective courses for students to choose from based on their interests and career goals.*
### Hotel-Motel and Food Service Management

Lansing Community College offers Certificate and Associate Degree curriculums designed to prepare students for management positions in the hospitality industry.

#### Food Specialist - Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOF 111</td>
<td>Basic Food Management</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>HOF 112</td>
<td>Food Service Operations</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>HOF 113</td>
<td>Hospitality Industry Practices</td>
<td></td>
<td>1.5</td>
</tr>
</tbody>
</table>

#### Food Specialist - Associate Degree Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOF 111</td>
<td>Basic Food Management</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>HOF 112</td>
<td>Food Service Operations</td>
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<td>1.5</td>
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<tr>
<td>ENGL 111</td>
<td>English Composition</td>
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<tr>
<td>MTH 105</td>
<td>College Algebra</td>
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</table>

#### Hotel-Motel Management Specialist - Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOF 111</td>
<td>Introduction to Hospitality</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HOF 112</td>
<td>Hospitality Industry Practices</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>HOF 113</td>
<td>Hotel Food Management</td>
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<td>1</td>
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#### Hotel-Motel Management Specialist - Associate Degree Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOF 111</td>
<td>Introduction to Hospitality</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HOF 112</td>
<td>Hospitality Industry Practices</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>HOF 113</td>
<td>Hotel Food Management</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

#### Management and Marketing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 111</td>
<td>Principles of Management</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MGMT 112</td>
<td>Hospitality Management</td>
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<td>3</td>
</tr>
<tr>
<td>MGMT 113</td>
<td>Hotel Operations</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MGMT 114</td>
<td>Service Industry Management</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Note:** Courses in italics indicate electives. Students must complete a minimum of 12 units for the Certificate Program and 60 units for the Associate Degree Program.
Law Enforcement - Certificate Program

Certificate Program

Students who are currently engaged in law enforcement work will receive a certificate upon successful completion of the 36 hours of work. The field of law enforcement will be divided into three major areas:

1. Legal and Criminal Justice
2. Administration and Management
3. Police Procedure

Recommends Electives

- Legal and Criminal Justice
- Administration and Management
- Police Procedure

Law Enforcement - Natural Resources Officer Option - Associate Degree

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Term</td>
<td>101 Introduction to Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>Spring Term</td>
<td>102 Readings in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>Fall Term</td>
<td>103 PACF (Police Academy Certification)</td>
<td>6</td>
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<tr>
<td>Winter Term</td>
<td>104 Legal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Spring Term</td>
<td>105 Police Procedure</td>
<td>3</td>
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<tr>
<td>Fall Term</td>
<td>106 Police Administration</td>
<td>3</td>
</tr>
<tr>
<td>Winter Term</td>
<td>107 Police Organization</td>
<td>3</td>
</tr>
<tr>
<td>Spring Term</td>
<td>108 Police Procedure</td>
<td>3</td>
</tr>
</tbody>
</table>

Highly recommended additional courses

- Public Speaking
- Reading
- Writing

1972 - 1974 Lansing Community College Course Catalog - www.lcc.edu
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 Enforcement 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 Sheriff's Office, the State Police and the Scientific Crime Detection Laboratory, services available to law enforcement offices within the state.
5. Visit where feasible and become familiar with the functions and activities of all Divisions of the State Department of Natural Resources such as Fish, Game, Fish, Roads and Water Resources.
6. Maintain liaison with Lansing Community College and submit the quarterly 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 course of the Natural Resources Officers course.

Option 2:
Transfer as a Junior to a four year institution offering a Bachelor 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.B. members also may achieve the AIB Bachelor's Degree and Certified Certificate under the program. The local chapter of the AIB serves as the advisory committee for the program to ensure continuous relevancy for each course.

AIB Basic Certificate

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIB 101</td>
<td>Principles of Bank Management</td>
<td>3</td>
<td></td>
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<tr>
<td>AIB 102</td>
<td>Principles of Accounting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIB 103</td>
<td>Principles of Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIB 104</td>
<td>Principles of Economics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIB 105</td>
<td>Principles of Law &amp; Banking</td>
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</table>

Recommended Electives

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 201</td>
<td>Principles of Accounting</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>BUS 202</td>
<td>Principles of Economics</td>
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<td>BUS 203</td>
<td>Principles of Management</td>
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<td></td>
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<td>BUS 204</td>
<td>Principles of Marketing</td>
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</tr>
<tr>
<td>BUS 205</td>
<td>Principles of Law &amp; Banking</td>
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AIB Basic Certificate

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<tr>
<th>Course Number</th>
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<th>Credits</th>
<th>Spring Term</th>
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<td>AIB 101</td>
<td>Principles of Bank Management</td>
<td>3</td>
<td></td>
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<tr>
<td>AIB 102</td>
<td>Principles of Accounting</td>
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<td>AIB 103</td>
<td>Principles of Marketing</td>
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<td></td>
</tr>
<tr>
<td>AIB 104</td>
<td>Principles of Economics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIB 105</td>
<td>Principles of Law &amp; Banking</td>
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<tbody>
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<td>Principles of Management</td>
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<td>BUS 204</td>
<td>Principles of Marketing</td>
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<tr>
<td>BUS 205</td>
<td>Principles of Law &amp; Banking</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Management and Marketing

Cosmetology Management

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

Pro-Business Administration

Associate Degree Program

The Pro-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, and engineering, statistics or related business professions.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Fall Term</th>
<th>Credits</th>
<th>Spring Term</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIS 101 Intro to Business</td>
<td>3</td>
<td></td>
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<tr>
<td>DTH 101 Data Processing</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>DTH 201 Microcomputers and Systems</td>
<td>3</td>
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<tr>
<td>DTH 301 Business Systems</td>
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<tr>
<td>DTH 401 Operations Management</td>
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<td>DTH 501 Management</td>
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<td>DTH 601 Marketing</td>
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<td>DTH 701 Economics</td>
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<tr>
<td>DTH 801 Financial Management</td>
<td>3</td>
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</table>

Property Valuation and Assessment Administration

This course of study is designed to provide an in-depth analysis of the principles and practices of real estate appraisal and the complexities of the appraisal profession. The course emphasizes the application of the Uniform Standards of Professional Appraisal Practice (USPAP) and provides an introduction to the role of the appraiser in the real estate market.

Certificate Program

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Fall Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 101 Intro to Business</td>
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<td>DTH 101 Data Processing</td>
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<td>DTH 201 Microcomputers and Systems</td>
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<tr>
<td>DTH 301 Business Systems</td>
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<tr>
<td>DTH 601 Marketing</td>
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<td>DTH 701 Economics</td>
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<td>DTH 801 Financial Management</td>
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Management and Marketing

Property Evaluation and Assessment Administration—Associate Degree Program

Full Time

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>BUS 108</td>
<td>Property Evaluation and Assessment Administration</td>
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<td>BUS 109</td>
<td>Property Evaluation and Assessment Administration I</td>
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<tr>
<td>ECO 110</td>
<td>Principles of Economics</td>
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<td>ACC 111</td>
<td>Principles of Accounting</td>
<td>3</td>
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<tr>
<td>BUS 112</td>
<td>Management I</td>
<td>3</td>
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Winter Term

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<td>BUS 115</td>
<td>Principles of Accounting I</td>
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</tr>
<tr>
<td>BUS 116</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>BUS 117</td>
<td>Principles of Accounting III</td>
<td>3</td>
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<tr>
<td>BUS 118</td>
<td>Principles of Accounting IV</td>
<td>3</td>
</tr>
<tr>
<td>BUS 119</td>
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Spring Term

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<td>BUS 120</td>
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Recommended Electives

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<td>ECO 210</td>
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<td>ECO 214</td>
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Transportation and Traffic Management

Under the sponsorship of Lansing Community College, in cooperation with the Traffic Club of Lansing, a two-year, ten-credit hour Transportation and Traffic Management degree will be conferred at the College. A certificate in Transportation and Traffic Management will be issued by the College.

This program deals with the theoretical, historical, and practical 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 a department or a career's general office. This program is also transferable to other programs leading to degrees in the department.

Associate Degree Program

<table>
<thead>
<tr>
<th>Position</th>
<th>Full Time</th>
<th>Credit Hours</th>
<th>Employment</th>
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<td>BUS 103</td>
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Recommended Electives

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>BUS 255</td>
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<td>ECO 210</td>
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<td>ECO 211</td>
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<tr>
<td>ECO 214</td>
<td>Principles of Economics V</td>
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</table>

*The completion of the Transportation and Traffic Management course qualifies candidates for a Certificate in Transportation Management from the College of Advanced Traffic Management and Lansing Community College.
DIVISION OF BUSINESS COURSE DESCRIPTIONS

Accounting

118, 119, 120 - Applied Accounting I, II, III
Formerly Business 110
Designed to meet the specific needs of paraprofessionals in technical areas by offering a basic course in Accounting Principles in a student-oriented and flexible setting. The emphasis is on practical application of accounting principles in general terms and applications are related to meet the requirements of specific technical areas. Prerequisites approved by the student's academic advisor. 4 credits; Spring term.

119 - Financial Accounting
Three credits
Maintaining accounting records, preparing financial statements, analyzing financial statements, and interpreting financial data. Prerequisites approved by the student's academic advisor. 3 credits; 3 credits in Fall term.

210 - Principles of Accounting I (AVT)
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, investment and financial statements, accounting, alternative uses of information, economic decision making, management accounting, and the accounting system. 4 credits; 4 credits.

211 - Principles of Accounting II (AVT)
Formerly Business 211
Continuation of Accounting 210, Includes payroll and tax accounting, controlling accounts and reporting techniques, cash transactions and reconciliations, the accounting system, partnerships, corporations, and fiduciaries. Shows how the accounting systems contribute to the recognition and solution of management problems. Prerequisites: Accounting 210. 4 credits; 4 credits.

212 - Principles of Accounting III
Formerly Business 212
Continuation of Accounting 211, involving the study of income tax and valuation techniques; and analysis and comparison of financial statements. Course materials include the relationship between income tax and business operations, corporate accounting, partnerships, and sole proprietorships. 4 credits; 4 credits.

291 - Intermediate Accounting I
Formerly Business 290
Relates the accounting system to income and retained earnings statements; the accounting process (bookkeeping systems, voucher systems, accounts receivable and accounts payable, inventory, depreciation, capital expenditures, income taxes, and financial statements); and the accounting cycle, illustrated, cash and temporary investments, receivables, inventory, property, plant, and equipment (cost procedures and special valuation procedures); estimating procedures in the preparation of financial statements, including ratios and various types of current liabilities. Prerequisites: Accounting 212. 4 credits; Fall term.

Business
211 Intermediate Accounting I
Four credits
Formerly Business 201
This course introduces students to the complexities of the accounting profession and the legal and ethical considerations that affect business. It covers the preparation of financial statements, the interpretation of financial information, and the use of accounting information for decision-making. Prerequisites: Accounting 102, Introductory Business Courses.

212 Intermediate Accounting II
Four credits
Formerly Business 202
This course continues the study of intermediate accounting with an emphasis on advanced topics such as consolidations, partnerships, and federal income tax. Prerequisite: Accounting 211.

213 Cost Accounting I
Four credits
Formerly Business 203
This course covers the principles and methods of cost accounting, including job order costing, process costing, and cost control. Prerequisites: Accounting 102, Introductory Business Courses.

214 Cost Accounting II
Four credits
Formerly Business 204
This course expands on the concepts covered in Cost Accounting I with a focus on advanced topics such as activity-based costing and management. Prerequisite: Accounting 213.

215 Federal Income Tax
Four credits
Formerly Business 205
This course covers the principles and procedures of federal income taxation, including tax planning, tax law, and tax research. Prerequisites: Accounting 102, Introductory Business Courses.

216 Governmental and Institutional Accounting I
Four credits
Formerly Business 206
This course covers the principles and practices of governmental and institutional accounting, including budgeting, financial reporting, and financial management. Prerequisite: Accounting 215.

217 Governmental and Institutional Accounting II
Four credits
Formerly Business 207
This course continues the study of governmental and institutional accounting, with an emphasis on the management of public funds. Prerequisite: Accounting 216.

C.P.A. Review Courses
Four CPA review courses are offered at Lansing Community College, beginning about August 30 each year. These courses are designed to prepare candidates for the Michigan Board of Public Accountancy's CPA examination. Each CPA candidate who participates in the L.C.C. CPA review courses has a passing percentage significantly higher than that for all candidates in Michigan.

E. Theory of Accounts Review
Three credits
F. Commercial Law Review
Three credits
G. Auditing Review
Three credits
H. Accounting Practice Review
Six credits

Accredited Accounting Bachelor's degree programs are designed to prepare students for careers in accounting. All upper-level courses for bachelor's degrees are approved by the Board of Accountancy of the State of Michigan and the American Institute of Certified Public Accountants.
111. Applied Business Law

Three credits

For students who are interested in completing certain one or two-year business programs. Emphasis is placed on understanding the legal ramifications of various business problems. Topics include legal aspects of contracts, business organizations, employer-employee relations, sales, negotiable instruments, and other subjects relevant to business. 3 Cr. Spring term.

117. Business Mathematics

Three credits

Designed to develop skill and accuracy in mathematics. Includes study of decimals, fractions, algebra, percents, proportions, discounts, inventory, payroll, interest. 3 Cr.

118. Introduction to Business

Four credits

Survey of business activities, covering principles, problems, and practices related to the economic framework. Includes topics such as organization, production, marketing, and personal administration. Finance and economics. 4 Cr.

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. 3 Cr.

120. Sales

Three credits

Designed to familiarize the student with fundamentals of sales. Deals with such topics as customer behavior, sales practices, customer service, credit sales, and ethics. 3 Cr.

121. Retailing

Three credits

A comprehensive consideration of the activities involved in retailing. Emphasis placed on areas relating to the needs and interests of the consumer. 3 Cr.

131. Advertising

Three credits

Presents the methods and principles of modern advertising, giving information to do the entire advertising job. Covers research, selection of media, and how the advertiser can approach problems most effectively. 3 Cr.

133. Retail Advertising

Three credits

Planning, development, and execution of retail advertising programs. Each method of advertising is examined for strengths and weaknesses as feasibility is determined. The budget is carefully analyzed. 3 Cr.

137. Real Estate License Examination

Two credits

Prepares students for sitting the state examination required for real estate licensing. 2 Cr.

138. Independent Study

One credit

Pertinent to department approval. 1 Cr.
Business

201 Independent Study
Prequisite: Department approval.
Three credits.

203 Independent Study
Prequisite: Department approval.
Three credits.

204 Independent Study
Prequisite: Department approval.
Four credits.

205 Advanced Food Production
Advanced Commercial Food Production. A laboratory course. 3 (3-3)
Four credits.

206 Transcription
Designed to teach how to type legal and technical material. For secretaries. Business 100 and Business 102. 4 (4-4)
Four credits.

209 Shorthand Speed Building
Continuous Business 208. Attention given to specialized vocabulary and high speed writing. Prequisite: Business 100. 4 (4-4)
Four credits.

220 Executive Training
For the instruction of office procedures and responsibilities. Emphasizes the importance of pleasant, sincere personality and effective interpersonal skills. Prequisite: Business 100 and Business 102. 3 (3-3)
Three credits.

224 Business Correspondence
The principles of written business communications are taught by illustration and exemplification. The best effective practices for formulating the various types of letters to get the desired results are emphasized. 3 (3-3)
Three credits.

230 Business Procedures
The principles of written business communications are taught by illustration and exemplification. The best effective practices for formulating the various types of letters to get the desired results are emphasized. 3 (3-3)
Three credits.

235 Legal Shorthand
Designed to develop skill in writing and transcribing words and phrases commonly occurring in the spoken and written language of the law. Prequisite: Business 100. 3 (3-3)
Two credits.

236 Medical Terminology
Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine. Prequisite: Business 100. 3 (3-3) Spring Term
Two credits.

238 Principles of Accounting
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 system of accounting, alterations attributable to changes in organization, distribution of income, and financial statements. Emphasizes the principles for the use of data presenting standard cost vs. actual cost in performing accounting functions. Prequisite: Business 100. Spring Term. 4 (4-4)
Four credits.

239 Principles of Accounting II
Continuation of Business 238. Includes payroll and tax accounting, controlling accounts and subsidiary ledgers, cash records and reconciling, the voucher system, partnership, corporation and bond accounts. Emphasizes the principles for the recognition and solution of management problems. Prequisite: Business 238. Spring Term. 4 (4-4)
Four credits.

241 Business Law I
Introduction to the fundamental principles of our law for business and non-business students, and the understanding of civic responsibility. Prequisite: Business 100. 4 (4-4)
Three credits.

242 Business Law II
The nature and law of bills, commercial papers, security devices, agency, employment, partnerships, corporations, profit and nonprofit types of business, and the law of contracts, personal and real property, liens and mortgages, and liens. Prequisite: Business 241. Spring Term. 3 (3-3)
Three credits.

250 Office Management I
First of two semesters dealing with the principles of office management. Includes study of office organization and layout, record keeping, record keeping and information procedures, equipment, centralized services, and automation. 3 (3-3)
Three credits.

251 Office Management II
Deals with automation and new trends in the problem areas of nuclei, economic management, and automated service centers. 3 (3-3)
Three credits.

253 Small Business Management
Complete coverage of small business operation, including business and management forms and techniques. Course deals with principles of management for various kinds of small business concerns. Includes enforcement of small business, financial, marketing, and production management of the "new venture." Legal and governmental regulations are surveyed, with actual case studies relevant to those involved in the small business. 3 (3-3)
Three credits.

261 Management and Supervisory Development
Management principles oriented to the supervisory levels of responsibilities in business, government, and other activities. Emphasis is placed on management skills of planning, organizing, directing, coordinating, and controlling the activities, policies and procedures, and the responsibilities of supervisory personnel and subordinates. Emphasis is also placed on the importance of personnel management, employee development and evaluation, and leadership of workers, and ethics to be considered in decisions. 3 (3-3)
Three credits.

275 Personnel Management
Search for the principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees. Course includes the techniques of planning and implementing programs through the personnel department. Emphasis is on the use of the proper techniques to profit with the type and size of organization. Prequisite: Business 261. 3 (3-3)
Three credits.

277 Principles of Management
Study of the field of management in terms of the concept of scientific management. Development of the principles of planning, organizing, and controlling functions, including the relationships of decision making to the role of the organization's leadership in the development, organization, and coordination of management. 3 (3-3)
Three credits.
Business

228. Management and Financial Control of Small Businesses
Three credits
A study of the problems of small business management and financial control. Emphasis is placed on the development of managerial and financial techniques employed in small businesses.

229. Safety Management
Three credits
In-depth study of the principles and practices of safety management in small businesses. Topics include accident prevention, safety training, and the development of safety policies and procedures.

230. Human Relations in Business and Industry
Three credits
Application of psychological principles and methods to problems of personnel relations. Emphasis is placed on the development of effective communication and conflict resolution skills.

231. Business Relations
Three credits
Introduction to principles of human relations in business and industry. Emphasis is placed on the development of effective communication and leadership skills.

232. Introduction to Marketing
Four credits
Study of basic principles of marketing, with emphasis on the development of effective communication and market analysis techniques.

233. Sales Management
Three credits
Study of sales management, with emphasis on the development of effective communication and sales strategies.

234. Occupational Safety Laws
Three credits
An in-depth study of the Occupational Safety and Health Act, with emphasis on the development of effective communication and regulatory compliance.

235. Human Relations for Safety
Three credits
A study of human relations in the context of safety management, with emphasis on the development of effective communication and team building skills.

236. Management Accounting
Four credits
Study of management accounting techniques, with emphasis on the development of effective communication and decision-making skills.

237. Communication Techniques in Business Communication
Three credits
Investigation of special communication areas including leader-ship secrets, group dynamics, negotiation, and power. Emphasis is placed on the development of effective communication and leadership skills.

238. Financial Accounting
Four credits
The basic principles of financial accounting are introduced, including the development of financial statements and the use of financial ratios in decision-making.
1972 - 1974 Lansing Community College Course Catalog    www.lcc.edu

**Business**

197. **Cost Accounting II**

Four credits

This course is a continuation of Cost Accounting I with emphasis on cost system,

Considerable practice is provided in project cost accounting, estimated cost pro-

cesses, standard costs, budgeting control, and management reports. Prerequisite: Business 285. (4-40)

227. **Federal Income Tax**

Three credits

Course includes all aspects of Federal Income Tax as it concerns both indi-

viduals and corporations. Attention is given to current tax legislation, includ-

ing the Tax Reform Act of 1971. The student must complete all tax form-

ing requirements and file all tax returns. Prerequisite: Business 226. (3-40)

258-259. **Transportation Law I and II**

Three credits

The two terms of Transportation Law will include a study of the Interstate Com-

merce Act, general legislation, and practice of the Interstate Commerce

Commission and courts. The I.C.C. rules of practice, drafting of an I.C.C. con-

tract, causes of action applicable to I.C.C. practice, remedies of the I.C.C. Act. Prerequisites: Business 258 or 259. (3-40)

269. **Traffic and Transportation Management**

Three credits

A study of transportation and traffic management problems, including traffic analy-

sis, analysis of traffic problems and solutions, and traffic engineering. Prerequisites: Business 269. (3-40)

369. **Governmental and Institutional Accounting I**

Four credits

Continuation of the study of governmental and institutional accounting, including

the examination of governmental and institutional accounting for units such as hospital and school districts, and policies in governmental and institutional accounting. Prerequisite: Business 369. (4-40)

379. **Governmental and Institutional Accounting II**

Four credits

Continuation of Governmental Accounting I with emphasis on changes and

current problems in governmental units. Considerable instruction and work

is devoted to program budgeting and performance measurement. Prerequisite: Business 379. (4-40)

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**Real Estate Essentials**

Three credits

This certified course jointly offered by the Lansing Board of Education and the

College of Business requires enrollment by local board members and provides

the opportunity to become a Real Estate Licensee. The course is designed to

meet the requirements for the State Real Estate Licensee's examination. The course

will be repeated in the Spring term. Contact your local board member for further

information. Prerequisites: Business 279 or 280. Michigan Law 279 or 280. (3-40)

279. **Life Insurance Essentials**

Two credits

An introductory course in insurance covering various phases of insurance, includ-

ing the history, objectives, and development of the insurance industry and sale

methods of life insurance and estate planning and Michigan License Law. The course

is designed to provide a market for the opportunity to become a life insurance

agent. With the market with various types of insurance and insurance terminology,

this course is intended to educate the student to better understand the purposes of insurance and its

uses. Prerequisite: Business 279 or 280. (2-40)

289. **Consumer Insurance**

Three credits

Comprehensive course on insurance covering all phases of insurance, including

home, automobile, and other types of insurance. Provides information on the laws, regulation, and understanding

and application of insurance to everyday life. Prerequisite: Business 289. (3-40)

299. **Investment Essentials**

One credit

A study of the relationship of the stock market to the economy and the role of

investment in the economy. Emphasis on the function of finance in business.

Prerequisites: Business 299. (1-40)

309. **Property Valuation and Assessment Administration I**

Three credits

A study of the principles of property tax, public relations, local government, financing, prop-

erty tax law, assessment evaluation concepts and rules, assessment appeals, taxation, and valuation. (3-40)

319. **Property Valuation and Assessment Administration II**

Three credits

This course includes the valuation of property, the preparation of reports, the

administration of the appraisal process, and the assessment of property for taxation. (3-40)

329. **Property Valuation and Assessment Administration III**

Three credits

Provides examination of the valuation of property concepts and methodologies, and the

analysis of property values in the context of the appraisal process. (3-40)

339. **Property Valuation and Assessment Administration IV**

Three credits

A study of the appraisal of residential, commercial, agricultural, and personal

property, with reference to the application of the appraisal process to property valuation and assessment administration. (3-40)

349. **Property Valuation and Assessment Administration V**

Three credits

Continuation of the study of residential, commercial, agricultural, and personal

property, with reference to the application of the appraisal process to property valuation and assessment administration. (3-40)
### Community Service Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>200</td>
<td>Business Theory for Professional Secretaries</td>
<td>4</td>
</tr>
</tbody>
</table>

This 35-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 business and management of business, and who is interested in the study of human relations.

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

**Course Contents:**

1. Secretarial Procedures
2. Communications and Decision Making
3. Environmental Health/Science
4. Economics of Management

### Business

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>200.101, 200, and 301</td>
<td>Management Internship</td>
<td>9</td>
</tr>
</tbody>
</table>

This cooperative offering involves weekly on-the-job independent assignments with the coordinator and the student. The student also receives actual training and experience in tasks performed by owners, proprietors, and managers in organizing and operating a business in one enterprise system. Coordinator's approval required.

### 1972 - 1974 Lansing Community College Course Catalog

Fire credits

The 35-week course of study is designed for the secretary who wants to be well qualified in all office procedures, who wants to learn more about the business and management of business, and who is interested in the study of human relations.

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

**Course Contents:**

1. Secretarial Procedures
2. Communications and Decision Making
3. Environmental Health/Science
4. Economics of Management

### Law and Social Issues

Two credits

A survey course in the public's rights and responsibilities in relation to the law. The course provides an overview of court decisions on contemporary social issues and, through discussions regarding the foundations for these decisions, a deeper insight into the judicial system and the problems of enacting policies in an ever-changing social system. Topics covered include abortion and family planning, drugs and addiction, conscientious objection, discrimination, consumerism, and other areas in which law differs from society.

### Court and Conference Reporting

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Machine Shorthand I</td>
<td>6</td>
</tr>
<tr>
<td>102</td>
<td>Machine Shorthand II</td>
<td>6</td>
</tr>
</tbody>
</table>

### Data Processing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.101</td>
<td>Systems Analysis</td>
<td>6</td>
</tr>
</tbody>
</table>

Provides an introduction to the key punch machine—how to use it effectively. A programmed instruction guide is used to progress from the basic functions of the key punch machine. A student must be able to identify the function of the key punch machine and be able to use it effectively. The student will be able to perform the necessary tasks of the key punch machine under the direction of a certified reporter and key punch operator.

### 1972 - 1974 Lansing Community College Course Catalog

Fire credits

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

122 Basic Cobol Applications

Two credits.

The purpose of this course is to study (1) the syntax of the Basic Cobol language and (2) the techniques of designing an efficient Cobol program. The course is designed to be taken concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

131 Survey of Data Processing

Three credits.

The objectives of this course are to introduce the student to (1) the principles and practices of data processing, (2) the language of data processing, and (3) the operational aspects of data processing in a business environment. The course is basically an introduction to the field of data processing and familiarizes the student with the requirements of data processing personnel. Students who wish to develop expertise in the field of data processing should enroll in DP 112 as soon as possible.

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, and (4) the structure of an efficient Cobol program. The course provides the student with the technical knowledge necessary for writing of Cobol programs. Students who wish to develop expertise in writing Cobol programs should enroll in DP 112 in the same or a subsequent quarter that they enroll in DP 112.

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 requirement through the final phases of design. The topics include: (1) Forms planning and the layout of forms, (2) The design of printed forms and the preparation of master forms, (3) Forms reproduction with emphasis on types of reproduction, and (4) Forms control and analysis techniques and equipment, and handling and processing.

134 Standards of Documentation

Three credits.

The objectives of this course are to (1) define the purpose and types of documentation, (2) describe the role and content of documentation in project control, (3) the importance of documentation standards and methods of developing these standards, and (4) to outline a model documentation system. Note: This course is required for students who wish to become Bond 7000 operators.

141 Introduction to Electronic Computers

Three credits.

A beginning course to acquaint data processing majors with Electronic Computers. The purpose of the course is to study (1) the structure and design of electronic computers, (2) the programming of a computer, and (3) the use of computers in data processing. The course includes lectures, laboratory exercises, and a project. The course is offered concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

155 Data Processing Mathematics

Five credits.

The objectives of this course are to study (1) the Boolean Algebra of logic, sets and Boolean equations, (2) computational methods for solving systems of simultaneous equations, (3) matrix operations, and (4) linear programming. The course is designed to be taken concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

161 Operations I

Three credits.

The first of two courses in operations to provide the student the ability to handle data processing operations and operational experience in the field. The course is designed to provide the student with the technical knowledge necessary for writing of Cobol programs.

162 Operations II

Three credits.

The second of two courses in operations to provide the student the ability to handle data processing operations and operational experience in the field. The course is designed to provide the student with the technical knowledge necessary for writing of Cobol programs.

163 Cobol Applications

Three credits.

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

164 Advanced Cobol

Three credits.

This course is designed to cover advanced Cobol techniques and programming. The course includes lectures and programming assignments. The course is offered concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

171 Assembly I

Three credits.

This course is designed to provide the student with the ability to write assembly language programs. The course includes lectures and programming assignments. The course is offered concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

172 Assembly II

Three credits.

This course is designed to provide the student with the ability to write assembly language programs. The course includes lectures and programming assignments. The course is offered concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.

240 EP Internship or Field Project

Three credits.

This course is designed to provide the student with the ability to write assembly language programs. The course includes lectures and programming assignments. The course is offered concurrently with either DP 112 or 114, so the program is tailored to the specific area of DP 112.
Business

510 Business and I.D.P. Systems
The objectives of this course are to identify management tools for controlling, planning, and operating the organization, and the tools that a data processing staff needs to use. An integral part of this course will be the development of a data processing system based on these tools. 3 (3-0)

535 Advanced Techniques of Data Processing
The objectives of this course are to study: (1) computer tape and disk; (2) new developments in software and hardware; (3) assembly language. 3 (3-0)

531 Assembly Language and Software
The objectives of this course are to study a general assembly language, the nature of compiled, edited, and operating systems. 5 (4)

Economics

101 Applied Economics
Three credits
Introductory survey of business economics. Course work forms instruction on the overview and some basic concepts of economic analysis and in logical interpretation. Major subject areas relate to overall look at the 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 cover the economic interpretation of economic issues. Specific objectives are the knowledge and understanding of law as defined above. Contents of prior course: income, demand, cost structures of firms, the supply of goods and services, factor pricing, and income distribution. Perimeter 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 economic behavior of the domestic economy in international economic activity, together with understanding of broad forces within the economy. Perimeter Sophomore standing or Departmental Approval. 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, its management departments; the industry's responsibilities, and opportunities for creative employment. 3 (0-4)

110 Basic Food Management & Production
Five credits
Basic concepts in menu planning, food purchasing, nutrition, sanitation, and food storage. Demonstration and laboratory. 5 (3-0)

130 Food Production Techniques & Practice
Five credits
Food production as applied to specialty operations and application to include laboratory exercises. 5 (3-0)

140 Internship and Seminar
Three credits
Open 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 (3-0)

201 Food Service Operation
Three credits
The five functions of management: organization, supervision, service, and production. 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. 3 (3-0)

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

210 Maintenance and Equipment
Four credits
Provides basic technical information in electrical, air conditioning, plumbing, heating, electricity, acoustics and office equipment to establish preventative maintenance routine and to make necessary operating decisions. 4 (4-0)

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

230 Law and Ethics in Hospitality
Three credits
A course for the hospitality and food service industries with emphasis on legal and ethical issues. 3 (3-0)

240 Advanced Food Production
Three credits
Advanced commercial food production. A laboratory course. 3 (3-0)

250 Hospitality Management
Three credits
General concepts and management including personnel, guest, and operations control. 3 (3-0)

260 Food & Labor Cost Control
Three credits
Supervisory procedures in the control of two major items of expense. 3 (3-0)

270 Front Office Procedures
Four credits
Organization, control and operation of the front office as applied to the operation and sale of rooms, services, keeping of accounts, preparation of bills of departmental operations. 4 (3-1)

280 Catering & Beverage Operation
Three credits
Food and beverage sales and service. 3 (1-3)

290 Apartment Management and Leasing
Three credits

300 Tourism
Three credits
Provides insight into future growth potential and economic benefits of tourism. Techniques of analyzing tourism demand and supply are included.
Business 256 - Business Law

Provides a mastery of over 100 legal concepts, including their legal and efficient procedures. Teaches the meaning of international business and provides an overview of international business law. Provides the understanding of the laws of business, including business law concepts, torts, real estate transactions, municipal law, banking, business regulations, and labor-management relations. (3-4-1) Spring term

Law Enforcement

101 - Introduction to Law Enforcement and Criminal Justice

Five credits

Core course designed to acquaint the student with the fields of law enforcement, research, computer science, and federal policy organizations studied. Includes the history, philosophy, and administration of justice. (3-3-1)

102 - Police Organization and Administration

Five credits

Course covers the core of functional directions of the modern police department function to include an overview of the organization of law enforcement agencies, police administration, police operational policies, and the legal and administrative aspects of police operations. (3-4-1) Spring term

103 - Theory of Police

Five credits

Study of the police as a function of society and a basic operation of the police function, the organization of the police department, and the investigation of crime. (3-4-1) Spring term

104 - Basic Police Science

Three credits

Introduction to Law Enforcement Coordinator required. (3-3-1)

106 - Introduction to Criminal Investigation

Five credits

Fundamentals of criminal investigation, including the roles of the investigator, the tools of investigation, and the investigative techniques. (3-3-1)

107 - Criminal Law and Procedures

Five credits

Study of the elements of criminal law, including its purposes and functions. Covers criminal law and its role in society, the rights of the accused, the administration of justice, the courts, and the legal process. (3-4-1) Spring term

108 - Crime Prevention

Five credits

Analysis of crime and crime control. Topics include crime and methods of solving with criminal and potential criminal offenses. (3-4-1) Spring term
DIVISION OF
APPLIED ARTS
AND SCIENCE

Department of Engineering Technology

Department of Applied Technology

Department of Health Careers

Department of Creative and Performing Arts
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 jobs.
- For groups from industry, 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 hands-on, part-time faculty who are working full-time in careers related to their teaching specialties 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 150 careers. These career training opportunities include the following:

**Applied Technology**
- Automotive Technology
- Building Trades
- Computer Information Systems
- Computer Programming
- Electrical Systems
- Industrial Systems
- Machine Repair (Industrial)
- Water Treatment

**Industrial**
- Automotive Technology
- Building Trades
- Computer Information Systems
- Computer Programming
- Electrical Systems
- Industrial Systems
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**Industrial**
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- Building Trades
- Computer Information Systems
- Computer Programming
- Electrical Systems
- Industrial Systems
- Machine Repair (Industrial)
- Water Treatment
**COMMUNITY SERVICE PROGRAMS**

- individually designed to satisfy broad segments of the community served.
- ranging from production of major operas and Broadway musicals to special meeting 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 12 different seminars as part of this community service. Although these seminars are available upon request, other seminars can be offered upon request, through the office of the dean of this Division of Applied Arts and Sciences.

Recent seminars include the following:

Advanced Electrical Controls
Advanced Special Buoyancy Apparatus
Advanced Buoyant M.D.T.A.
Automotive Mechanics M.D.T.A.
Auto Repair Service M.D.T.A.
Draughting
Electronics
Fire Science
Heating and Air Conditioning
Industrial Management (Basic Skills)
Industrial Management (Field) Late Pupils
Information (Computers)
Michigan Department of State Highways
Nursing
Oil Burner
Pre-Apparatus
Piloting
Safety
Security
Steam Power Station
Water Supply and Distribution
Water Supply and Distribution (Water Supply and Distribution)
Water Supply and Distribution (Water Supply and Distribution)

**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.
Department of Engineering Technology

Chairman: Edwin C. Baggsman

The rapidly changing technological developments facing our industrialized society have resulted in the demand for technically trained personnel in all fields of industrial employment. Lansing Community College Engineering Technology Department has as its primary objective the responsibility for preparing 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 professional. 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 nature that will give him a better understanding, appreciation, and knowledge of his home, civic and community responsibilities. Upon completion of selected areas 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 60 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 programs 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 courses relating 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 sections 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.

MATHEMATICS

| 15-16 credits required |
| Credit Hours |
| Math 111: Calculus I |
| Math 112: Calculus II |

CIVIL-CONSTRUCTION AREA

| 15-16 credits required |
| Credit Hours |
| CT 101: Computer-Aided Drafting |
| CT 110: Environmental Science II |

SOCIAL SCIENCE

| 6 credits required |
| Social Science 101, 102, 104 |

ENGLISH

| 6 credits required |
| English 101, 102 |

RECOMMENDATIONS

3 credits minimum

Transfer students are encouraged to meet the following requirements prior to enrollment:

- Math 111: Calculus I
- Math 112: Calculus II
- CT 101: Computer-Aided Drafting
- CT 110: Environmental Science II
- Social Science 101, 102, 104
- English 101, 102
- English 103, 104
- English 105

**Note: Courses in basic mathematics are required for all students entering Architectural Technology.
Engineering Technology

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 28 credit hours is required from the following courses:

ARCHITECTURAL DRAFTING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 120</td>
<td>Beginning Architectural Drawing I</td>
<td>1.5</td>
</tr>
<tr>
<td>AT 121</td>
<td>Principles Drawing</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 325</td>
<td>Architectural Drafting-Plan</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 327</td>
<td>Architectural Drafting-Elevation</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 226</td>
<td>Architectural Drawing-Contractual</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 227</td>
<td>Architectural Drawing-Construction</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 228</td>
<td>Architectural Drawing-Project</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 229</td>
<td>Architectural Drawing-Production</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*For students with an background in drafting

RELATED INSTRUCTION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 107</td>
<td>Applied Algebra</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 108</td>
<td>Descriptive Geometry</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 109</td>
<td>Technical Mathematics</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 226</td>
<td>Architectural Drafting-Plan</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 227</td>
<td>Architectural Drafting-Elevation</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 228</td>
<td>Architectural Drafting-Contractual</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 229</td>
<td>Architectural Drafting-Project</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 230</td>
<td>Architectural Drafting-Production</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 231</td>
<td>Architectural Drafting-Production I</td>
<td>1.0</td>
</tr>
</tbody>
</table>

OPPORTUNAL COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 215</td>
<td>Architectural Short Course II</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 216</td>
<td>Architectural Drawing III</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 217</td>
<td>Architectural Drafting-Plan III</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 218</td>
<td>Architectural Drafting-Elevation II</td>
<td>1.0</td>
</tr>
<tr>
<td>AT 219</td>
<td>Architectural Drafting-Contractual II</td>
<td>1.0</td>
</tr>
</tbody>
</table>

For students with an background in drafting

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 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, including the design of bridges, roads, and canals. Civil engineers also design and supervise the construction of buildings, bridges, roads, and other structures. They are responsible for ensuring that structures are safe and functional, and that they conform to local, state, and federal regulations. Civil engineers also work with architects, surveyors, and other professionals to design and construct buildings and other structures.

Civil Technology—Construction Option

This option is designed to provide a background in the basic principles of construction technology, including construction materials, methods, and equipment. It is intended for students who wish to pursue a career in construction, or who wish to gain a basic understanding of construction technology.

Civil Technology—Highway Option

This option is designed to provide a background in the basic principles of highway engineering, including traffic engineering, transportation systems, and bridge design. It is intended for students who wish to pursue a career in highway engineering, or who wish to gain a basic understanding of highway engineering.

Civil Technology—Sanitary Option

This option is designed to provide a background in the basic principles of sanitary engineering, including water and wastewater systems, and environmental engineering. It is intended for students who wish to pursue a career in sanitary engineering, or who wish to gain a basic understanding of sanitary engineering.
Civil Technology - Structural Option

A two-year curriculum prepares the student for employment as a structural draftsman, design engineer, construction superintendent, construction inspector, material technician, technical specification writer, or building materials and supplies technician.

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 safety of the transportation system in our urban areas. It is essential to meet the demands of an increasing traffic volume. The traffic engineering technician is responsible for the development of a complete traffic system for 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 or 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:

<table>
<thead>
<tr>
<th>CONSTRUCTION TECHNOLOGY - OPTION</th>
<th>HIGHWAY TECHNOLOGY - OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT 101 Construction Materials I</td>
<td>CP 101 Surveying I</td>
</tr>
<tr>
<td>CT 102 Construction Materials II</td>
<td>CP 102 Surveying II</td>
</tr>
<tr>
<td>CT 103 Construction Methods</td>
<td>CP 103 Surveying III</td>
</tr>
<tr>
<td>CT 104 Construction Cost</td>
<td>CP 104 Surveying IV</td>
</tr>
<tr>
<td>CT 106 Construction Planning</td>
<td>CP 105 Surveying V</td>
</tr>
<tr>
<td>CT 107 Project Lab</td>
<td></td>
</tr>
</tbody>
</table>

The following courses are in the area of drafting, physics, English, and mathematics are requirements in the Associate Degree program:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAFTING</td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
</tr>
<tr>
<td>PHYSICS</td>
<td></td>
</tr>
<tr>
<td>ENGLISH</td>
<td></td>
</tr>
</tbody>
</table>

Students should consult with their instructor when selecting a course of study in the Civil Engineering program.
### Engineering Technology

#### 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 the design of 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, casting, forming, and assembly.

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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT 101: Basic Drafting</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DT 121: Drafting for Industry I</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DT 122: Drafting for Industry II</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DT 131: Drafting for Industry III</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DT 132: Drafting for Industry IV</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DT 300: Project Lab</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Related Instruction

**Mathematics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR 102: Applied Algebra</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ATR 122: Applied Geometry</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ATR 132: Applied Engineering</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>TEC 102: Math for Technicians I</td>
<td>3</td>
<td>3</td>
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<tr>
<td>TEC 112: Math for Technicians II</td>
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<td>3</td>
</tr>
<tr>
<td>TEC 122: Math for Technicians III</td>
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**Mechanical Design and Engineering**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MTH 103: College Algebra and Trigonometry</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MTH 153: College Algebra and Trigonometry</td>
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**Social Science**

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<tbody>
<tr>
<td>EGS 106: American Government</td>
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**Electronics Technology and Science**

<table>
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<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ETR 110: Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 120: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 130: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 140: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 150: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 160: Industrial Electronics</td>
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<td>3</td>
</tr>
<tr>
<td>ETR 170: Industrial Electronics</td>
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<td>3</td>
</tr>
<tr>
<td>ETR 180: Industrial Electronics</td>
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<td>3</td>
</tr>
<tr>
<td>ETR 190: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 200: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 210: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 220: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 230: Industrial Electronics</td>
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<td>3</td>
</tr>
<tr>
<td>ETR 240: Industrial Electronics</td>
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<td>3</td>
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<td>ETR 250: Industrial Electronics</td>
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<td>3</td>
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<tr>
<td>ETR 260: Industrial Electronics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ETR 270: Industrial Electronics</td>
<td>3</td>
<td>3</td>
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</tbody>
</table>

### 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 includes drafting, technical drawing, and mechanical design. 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST 101: Drafting I</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 102: Drafting II</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 103: Drafting III</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 104: Drafting IV</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 105: Drafting V</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 106: Drafting VI</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 107: Drafting VII</td>
<td>3</td>
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<td>1ST 108: Drafting VIII</td>
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<td>1ST 112: Drafting XII</td>
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<td>3</td>
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<td>1ST 113: Drafting XIII</td>
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<tr>
<td>1ST 114: Drafting XIV</td>
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</tr>
<tr>
<td>1ST 115: Drafting XV</td>
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<td>3</td>
</tr>
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<td>1ST 116: Drafting XVI</td>
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<tr>
<td>1ST 117: Drafting XVII</td>
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<td>3</td>
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<td>1ST 118: Drafting XVIII</td>
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<td>3</td>
</tr>
<tr>
<td>1ST 119: Drafting XIX</td>
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<td>3</td>
</tr>
<tr>
<td>1ST 120: Drafting XX</td>
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### Mathematics

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR 110: Applied Algebra</td>
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<td>3</td>
</tr>
<tr>
<td>ATR 130: Applied Engineering</td>
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<td>3</td>
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</tbody>
</table>

### Mechanical Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC 200: Math for Technicians I</td>
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<td>3</td>
</tr>
<tr>
<td>TEC 210: Math for Technicians II</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>TEC 220: Math for Technicians III</td>
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<td>3</td>
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</tbody>
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### General Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST 101: Technical Report Writing</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1ST 102: Applied Physics</td>
<td>3</td>
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</tbody>
</table>

### Optional Courses Toward Drafting Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits Required</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1ST 110: Basic Drafting I</td>
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<td>3</td>
</tr>
<tr>
<td>1ST 111: Drafting II</td>
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<td>3</td>
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<td>1ST 112: Drafting III</td>
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<td>1ST 113: Drafting IV</td>
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<td>1ST 115: Drafting VI</td>
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<tr>
<td>1ST 116: Drafting VII</td>
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<td>3</td>
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<tr>
<td>1ST 117: Drafting VIII</td>
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</tr>
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<td>1ST 126: Drafting XVII</td>
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<tr>
<td>1ST 128: Drafting XIX</td>
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<td>3</td>
</tr>
<tr>
<td>1ST 130: Applied Physics</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
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 electronic devices and be able to install and maintain complex electronic equipment such as digital and analog computers, measuring instruments, photovoltaic cells, automatic guidance equipment, and devices used in automation. He should be able to test electronic equipment such as surface control and navigation equipment, and design, build, and test circuits. He may design wired and printed circuitry to meet specified specifications, using "breadboard" techniques and modifying circuits to obtain desired performance.

Suggested Schedule for Associate Degree Electronic Technology Program

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Full Time</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Time</td>
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</tr>
<tr>
<td>ET 111</td>
<td>101</td>
<td>Electrical Circuits I</td>
</tr>
<tr>
<td>ET 112</td>
<td>110</td>
<td>Electronics Drawing</td>
</tr>
<tr>
<td>TAG</td>
<td>120</td>
<td>Math for Technicians</td>
</tr>
<tr>
<td>EN 135</td>
<td>135</td>
<td>Fundamentals of English</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Winter Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET 113</td>
<td>101</td>
<td>Electrical Circuits II</td>
</tr>
<tr>
<td>ME 203</td>
<td>203</td>
<td>Aerospace Systems</td>
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<tr>
<td>TCC</td>
<td>165</td>
<td>Math for Technicians II</td>
</tr>
<tr>
<td>EN 136</td>
<td>136</td>
<td>Fundamentals of English</td>
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<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Spring Time</td>
<td></td>
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<td>ET 114</td>
<td>101</td>
<td>Electrical Circuits III</td>
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<td>Math for Technicians III</td>
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<td>111</td>
<td>Technical Report Writing</td>
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<tr>
<td>Sophomore Year</td>
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</table>

Prerequisites for the Associate Degree in Electronic Technology:

Mathematics (algebra, trigonometry, calculus) and English are required.

COURSE WORK FOR CERTIFICATE PROGRAMS—ELECTRONICS TECHNOLOGY

Fundamentals of Electronics

Industrial Electronics

Communications

Computer Technology

Radio-TV Servicing

Electronic Background

Engineering Technology

ET 100

OR

ET 101

ET 102

ET 240

ET 241

ET 242

ET 243

ET 244

ET 245

ET 246

ET 247

ET 248

ET 249

ET 250

ET 251

ET 252

ET 253

ET 254

ET 255

ET 256

ET 257

ET 258

ET 259

ET 260

ET 261

ET 262

ET 263

ET 264

ET 265

ET 266

ET 267

ET 268

ET 269

ET 270

ET 271

ET 272

ET 273

ET 274

ET 275

ET 276

ET 277

ET 278

ET 279

ET 280

ET 281

ET 282

ET 283

ET 284

ET 285

ET 286

ET 287

ET 288

ET 289

ET 290

ET 291

ET 292

ET 293

ET 294

ET 295

ET 296

ET 297

ET 298

ET 299
Fire Science Technology (FST)

Throughout the country there is a shortage of skilled personnel in the area of fire protection, suppression, and prevention. Fire related 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, fire science personnel must be trained in a team effort with a variety of technical equipment. Accurate 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 aptitude, good health and the desire to preserve and protect property are eligible to enroll in the Fire Science curriculum.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FST 100</td>
<td>Fire Fighting Strategy and Tactics I</td>
<td>Three</td>
</tr>
<tr>
<td>FST 101</td>
<td>Basic Fire Science</td>
<td>Three</td>
</tr>
<tr>
<td>FST 102</td>
<td>Fire Prevention Systems and Equipment</td>
<td>Four</td>
</tr>
<tr>
<td>FST 103</td>
<td>Hazardous Materials I</td>
<td>Three</td>
</tr>
<tr>
<td>FST 104</td>
<td>Ordinances and Codes</td>
<td>Four</td>
</tr>
<tr>
<td>FST 105</td>
<td>Fire Hydraulics</td>
<td>Three</td>
</tr>
<tr>
<td>FST 106</td>
<td>Fire Fighting Strategy and Tactics II</td>
<td>Four</td>
</tr>
<tr>
<td>FST 107</td>
<td>Building Construction for Fire Security</td>
<td>Three</td>
</tr>
<tr>
<td>FST 108</td>
<td>Fire Investigation I</td>
<td>Three</td>
</tr>
<tr>
<td>FST 109</td>
<td>Emergency Rescue Procedures</td>
<td>Three</td>
</tr>
<tr>
<td>FST 110</td>
<td>Fire Investigation II</td>
<td>Three</td>
</tr>
<tr>
<td>FST 111</td>
<td>Organizational Procedures</td>
<td>Three</td>
</tr>
<tr>
<td>FST 112</td>
<td>Hazardous Materials II</td>
<td>Three</td>
</tr>
<tr>
<td>FST 113</td>
<td>Building Construction for Fire Security</td>
<td>Three</td>
</tr>
<tr>
<td>FST 114</td>
<td>Fire Administration</td>
<td>Three</td>
</tr>
<tr>
<td>FST 115</td>
<td>Project Lab</td>
<td>Six</td>
</tr>
</tbody>
</table>

Industrial Safety Management (SAM)

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 others in the field. The courses listed below are taught as needed to upgrade or prepare these technicians in practices and procedures according to the new standards.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SAM 100</td>
<td>Industrial Accident Prevention I</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 101</td>
<td>Industrial Accident Prevention II</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 102</td>
<td>Environment of Safety</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 103</td>
<td>Technical Safety Standards</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 104</td>
<td>Technical Regulations</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 105</td>
<td>Design and Construction</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 106</td>
<td>Hazardous Materials and Processes</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 107</td>
<td>Industrial Accident Statistics</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 108</td>
<td>Technical Communications</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 109</td>
<td>Applied Science</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 110</td>
<td>Mathematics (Min.)</td>
<td>Three</td>
</tr>
<tr>
<td>SAM 111</td>
<td>Fire Science (Min.)</td>
<td>Three</td>
</tr>
</tbody>
</table>

Certificates may be taken individually. Students desiring certificates or associate degrees in Fire Science may develop programs to fit their individual needs. Certificates programs require 40 credit hours of instruction; Associate degrees require 60 credit hours of instruction. Minimum credit hours in subject areas for a certificate or associate degree are shown below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Fire Science</td>
<td>15</td>
</tr>
<tr>
<td>Mathematics (Min.)</td>
<td>4</td>
</tr>
<tr>
<td>English (Min.)</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry and Physics</td>
<td>4</td>
</tr>
<tr>
<td>American Constitution</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

Certificates are awarded upon completion of the above requirements.
Engineering Technology

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. Man with a full understanding of machinery will never be able because the need for machines is expanding everywhere. Automation promises machines that operate themselves but production does not and will not replace the man who designs, who builds, or repairs the machine. The need for technical 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
3 Credits Required

<table>
<thead>
<tr>
<th>Credits</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ATR 164 Mechanical Shop I</td>
</tr>
<tr>
<td>3</td>
<td>ATR 165 Mechanical Shop II</td>
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<tr>
<td>3</td>
<td>ATR 166 General Shop</td>
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<td>3</td>
<td>ATR 167 Advanced Shop</td>
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<td>MGT 254 Shop Operations plus Lab</td>
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GEOMETRIC TECHNOLOGY
4 Credits Required

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<tr>
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<tbody>
<tr>
<td>5</td>
<td>TEC 161 Technical Manipulation</td>
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<tr>
<td>5</td>
<td>TEC 162 Industrial Manipulation</td>
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<tr>
<td>5</td>
<td>TEC 163 Industrial Drafting</td>
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<td>TEC 164 Industrial Electricity</td>
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ENGLISH
4 Credits Required

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<tr>
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SOCIAL SCIENCE
4 Credits Required

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<tr>
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MATHEMATICS
5.5 Credits Required

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<td>ATR 170 Applied Trigonometry</td>
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<tr>
<td>3</td>
<td>ATR 171 Mathematics for Technicians</td>
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DRAFTING TECHNOLOGY
11 Credits Required

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ELECTRICAL TECHNOLOGY
7 Credits Required

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<tr>
<td>6</td>
<td>ETV 161 Basic Electricity</td>
</tr>
<tr>
<td>6</td>
<td>ETV 162 Technical Electricity I</td>
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</table>

Pre-Engineering

The pre-engineering curriculum parallels the content offered by a four-year institution 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 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 select the courses which will allow him to meet the requirements of that institution.

Cooperative education programs are available to qualified students. The University of Michigan, Detroit College 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 Office for assistance in choosing a proper sequence of courses for their school or other schools of their choice.
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 automatically 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:

- Accidents Prevention and Reporting
- Air Brake System
- Communications
- Customer and Public Relations
- Driver's Daily Logs
- Driver's Responsibility & Maintenance
- Driver Training
- 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
- Psychology: Physical
- Registration
- State Code

Range instruction consists of 150 hours actual driving time to deal with. An extended road trip is taken during the first week of training. The four-week training course is conducted five days a week from 8:30 a.m. to 3:00 p.m.

The range program consists of exercises on the range 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 mental character, freedom from addiction to drugs or excessive use of alcohol. Students must be between the ages of 18 and 45.
COURSE DESCRIPTIONS

Architectural Technology (A1)

101 - Beginning Architectural Drawing
Three credits
For students without previous drafting courses or experience. Drafting and related techniques will be taught. Orthographic projection, types of pictorial drawings and sketching are included. 3 (3-2)

103 - 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 (4-2)

135 - Architectural Pictorial Illustration
Four credits
Fundamental course for those interested in or working as illustrators. Course covers principles of axonometric projection, perspective shading, and shadow, with experience offered in the use of rendering media. 4 (0-4)

201 - 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 drawing board and developing working drawings from architectural sketches. 4 (2-4)

203 - Architectural Drawing II
Four credits
Essentials of designing and drawing house plans. Course allows students to empirically develop 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 need of a practical customer, and as dictated by local building codes. Prerequisite: AT 201. 4 (2-4)

205 - Architectural Drawing III
Four credits
The student prepares final working drawings, primarily elevations and sections, to complete all of the 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 (2-4)

231 - 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 203, 231 and 232 for drafting technology majors; others, approval of department 4 (2-4)

251 - Architectural Composition
Four credits
The use and urban planning. Design and composition of architectural and natural elements in open spaces. 4 (3-4)

255 - 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 (3-4)

261 - 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)

262 - Building Utilities
Four credits
Components and arrangement of residential and commercial plumbing and electrical systems. Heating and cooling systems will be introduced. Emphasis is placed on code and specification requirements. 4 (2-4)

264 - Architectural Design
Four credits
The development of creative skills in architectural design, theory of aesthetic design, color, materials and lighting. 4 (2-4)

266 - 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 (2-0)

267 - Architectural History
Three credits
Development of architecture as an art form in each of the civilizations or architectural periods from antiquity to contemporary. 3 (2-0)

280 - 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 six-credit architectural course. Requires departmental approval before enrolling. 3 (3-0)

290 - 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 (4-4)
CIVIL TECHNOLOGY (CT)

Construction (CT)

101. Construction Materials I
Four credits
This course deals with the determination of the properties of aggregates, concrete, and other construction materials. Emphasizes the testing and quality control of concrete mixtures. (4 L-4)

102. Construction Materials II
Four credits
Continuation of Construction Materials I dealing with the determination of the properties of bituminous materials, brick, and masonry materials. Emphasizes the testing and quality control of bituminous mixtures. Prerequisite: CT 101. (S-4)

103. Construction Methods
Four credits
Study of techniques and equipment used in constructing bridges, buildings, highways and pipelines. Emphasis on the use of building codes and construction specifications. Prerequisite: CT 102. (3 L-3)

104. Construction Costs
Four credits
Covers methods of preparing material take-offs and labor estimates and applying current unit prices to estimate construction project costs. Prerequisite: CT 103. (3 L-3)

105. Construction Contracts
Three credits
Fundamentals of contract law, bidding and owner's compensation are covered with the various contract documents. Prerequisite: CT 104. (S-3)

106. 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. (3-3)

112. Hydraulics
Four credits
Covers hydraulics, laminar and turbulent flow in pipes and open channels, pump characteristics, venturi meters, orifice plates, critical flow, normal flow, and critical flow and channel transitions. Prerequisite: CT 111. (C-33)

113. Hydrology
Four credits
Study of the analysis of run-off and the design of control devices, such as detention, embankments, stream flow, pipes, channels, flow, and flood plain. Prerequisite: CT 112. (S-33)

114. Highway Technology I
Four credits
Covers plans and profiles, highway planning, financing, organization, construction, design, and cost of highway construction. Prerequisite: CT 113. (4 L-4)

115. Highway Technology II
Four credits
Continuation of Highway Technology I, with emphasis on the design of highway projects. Prerequisites: CT 114. (4 L-4)

116. Project Lab
Four credits
Gives the opportunity to undertake and complete an independent study of project in Highway Technology. Prerequisite: Graduation Term. (4 arranged)

Structural (CT)

121. Structural Concepts
Four credits
Introduction to structural terminology and concepts. Emphasizes the use of load models to study the behavior of structures. Emphasis on design of steel and concrete structures. Permits bridge and building to be designed. (4 L-3)

122. Statics
Four credits
Study of Applied Statics: form and forces in loads. Emphasis on statics and equilibrium in structural frames. Emphasis on statics of forces and member forces. Prerequisite: CT 121. (S-33)

123. Strength of Materials
Four credits
Covers stress, strain, creep, fatigue, yield, tension, compression, shear, bending, torsion, combined stresses and deflections. Prerequisite: CT 122. (S-33)

211. Structural Technology I
Four credits
This course deals with the basic analysis and design techniques related to structural steel bridges and buildings. Emphasis will be given to structural detailing practices. Prerequisite: CT 123. (S-33)

212. Structural Technology II
Four credits
Continuation of Structural Technology I, emphasizing basic analysis, design and detailing methods related to reinforced concrete structures. Prerequisite: CT 211. (S-33)

213. 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 surveying instruments, the use of topographic maps for measuring distances, elevations, and angles. Also analysis and use of tangents. (4 L-4)

132. Basic Surveying II
Four credits
Continuation of Basic Surveying I, which covers field notes and the indexing of survey data for future use. Traverse computations, dividing land, U.S. Public Land System, and subdivision plots. Prerequisite: CT 131. (S-33)
1972 - 1974 Lansing Community College Course Catalog   www.lcc.edu

Review for Registration Exams (CT)

111 Engineering Review I

First in a series of three courses which provide a theoretical background in the engineering sciences as a review in preparation for the Professional Engineer Examination. Topics include mathematics, physics, statics and dynamics. 4 (2-4)

112 Engineering Review II

Continuation of Engineering Review I includes fluid mechanics, hydraulics, thermodynamics, and mechanics of materials. 4 (5-4)

113 Engineering Review III

Continuation of Engineering Review II includes chemistry, electricity, electronics, economics, law and ethics. 4 (6-6)

211 Engineering Exam Part II

This course is open to qualified individuals who are preparing to write the flag staff Professional Engineering Examination. Topics covered are not mechanics, road design, road construction, bridge construction, highway drainage, traffic operations, traffic geometric design, highway planning and route location. 3 (3-4)

212 Land Survey Review I

This course is open to qualified individuals who are preparing to write the flagstaff Land Surveyor Examination. Topics covered are math for plane surveying, range of accuracy and route surveying. 3 (5-4)

213 Land Survey Review II

Continuation of Land Survey Review I. Includes legal requirements, instrument adjustments, control surveys, latitude, longitude and use of theodolite. 3 (5-4)

Traffic Engineering (CT)

214 Introduction to Traffic Engineering

This course covers a general overview of the field of traffic engineering technology and provides insight into related career opportunities. It relates basic hardware and software characteristics of the vehicle, roadway and environment; traffic characteristics are defined in terms of speed, design, speed zoning, design, speed limits, and signal volumes. The course serves as an introduction to traffic engineering technology students and as a survey course for students studying in other related fields. The laboratory is used for problem experiments and field trips. 3 (3-3)

215 Principles of Traffic Administration

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 law and urban transportation planning contribute to the major subject areas of traffic engineering technology. 3 (3-3)

216 Field Traffic Surveys

By collecting actual field data, the student solves problems relating to accident reporting, collision diagrams, intersection surveys, pedestrian volumes, and parking studies related to control, financing, design, and other characteristics of streets, terminals, vehicle dimensions, signs and parking. Emphasis will be placed on the methodology and equipment required for the collection of field data, the writing of reports and the formulation of recommendations to solve related problems. 4 (3-3-3)

217 Control Devices

In the general context of design maintenance and placement, the course emphasizes sign design, traffic signals, enforcement, traffic control, intersection design, special areas, and identification. 3 (5-3)

218 Traffic Control

HORIZONTAL, vertical, and transitional curves, vertical curves, super elevation, pavement shoulder design, road design, sight distance, traffic surveys, traffic operations, traffic geometric design, highway planning and route location. 3 (3-3)

221 Traffic Studies

Using actual field problems the student is taught to plan and execute traffic engineering studies. Studies covered include: traffic flow, speed and volume; design of traffic control devices, the basic concepts of counting procedures, counting equipment, AID, crossing, flow maps, crash counts, peak hours, platoon flow, composition, distribution, visibilities, and on-street parking. Emphasis is placed on the use of field exercises and the ability to reduce field data and analyze results. 4 (3-4-3)

174

175
100 - Basic Drafting

For students without previous drafting experience or who need a refresher course in the techniques of basic drafting. Emphasis is on the use of orthographic projection, sectioning, and dimensioning according to industry standards. Prerequisite: DT 100 or placement test. 3 credits

101 - Industrial Drafting I

A course in drafting designed to enable the student to become efficient in reading, understanding, and drawing, general drafting aids, drafting instruments, software, and dimensioning according to industry standards. Prerequisite: DT 101. 5 credits

102 - Industrial Drafting II

A continuation of the principles of drafting practices introduced in DT 101. Emphasis is on advanced drafting practices, techniques, and design considerations. Prerequisite: DT 101. 4 credits

103 - Descriptive Geometry

A survey course in the science of descriptive geometry and the projection of space. This course is designed to familiarize students with the techniques of fundamental principles of descriptive geometry. Prerequisite: DT 101. 3 credits

104 - Jigs and Fixtures I

A study of the design and fabrication of jigs and fixtures. Emphasis is on the design and construction of jigs and fixtures for use in the production of parts. Prerequisite: DT 101. 3 credits

105 - Jigs and Fixtures II

A continuation of the principles of jigs and fixtures. Emphasis is on the design and construction of jigs and fixtures for use in the production of parts. Prerequisite: DT 101. 3 credits

106 - Blueprint Reading I

Prerequisite: DT 101. 3 credits

107 - Blueprint Reading II

Prerequisite: DT 101. 3 credits

108 - Engineering Drawing - CAD

Prerequisite: DT 101. 4 credits

109 - Industrial Pictorial Illustration

Prerequisite: DT 101. 3 credits

110 - Die Design and Construction I

Prerequisite: DT 101. 4 credits

111 - Die Design and Construction II

Prerequisite: DT 101. 4 credits

112 - Body Design I

Prerequisite: DT 101. 4 credits

113 - Body Design II

Prerequisite: DT 101. 4 credits
ELECTRONICS TECHNOLOGY (ET)
Courses leading to the Electronics Technology Associate Degree and to Certification in Electronics Technology.

100 Basic Electronics
Four credits
A course covering the fundamental concepts of electricity to electronic equipment using transistors. Major emphasis on laboratory work. Not recommended for students in Electronics Technology Associate Degree program. 4 (3-4)

105 Electronics Drawing
Three credits
Describes a wide variety of electronic components and circuitry. How schematic diagrams are drawn and practice is afforded in relating the schematic diagrams 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 on the instrument and, using the schematic diagram as a guide, should be able to locate components in the equipment. 3 (3-2)

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, circuit theorems, Ohm's law, capacitance, and basic concepts. Laboratory work includes measurement of voltage, current and resistance in D.C. circuits using the VOM and VTM with constructing and testing simple circuits. Using the voltmeter to measure the period and amplitude of an A.C. signal. 4 (3-3)

112 Electrical Circuits II
Four credits
A continuation of ET 111 with emphasis on alternating voltage and current and vacuum tubes. Topics include analysis of N.C. RL and RLC circuits, both series and parallel, rectifiers and parallel resonant, coupled circuits; and vacuum tubes, grid leak 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 (3-3)

113 Electrical Circuits III
Four credits
A continuation of ET 112, with emphasis on semiconductor devices. Topics include PNP and NPN transistors, bipolar transistors, and field effect transistors. Small 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 (3-3)

200 Project Laboratory
One credit
This student selects a project compatible with his chosen field of work. The student under the guidance of the instructor and through research, concepts, and tests, learns and applies knowledge. Project approval must be granted by supervising instructor prior to registration. 1 (3-2)

205 Project Laboratory
Two credits
Same as ET 200 except 2 credits. 2 (3-0)

206 Project Laboratory
Three credits
Same as ET 200 except 3 credits. 3 (3-0)

300 Project Laboratory
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 laboratory procedure. Upon completion of two courses and 30 credits, the student meets the drawing requirements for a drafting certificate and is ready to become a drafter in industry. Class requirements include the design of a mechanical device and totaling a complete design drawing. The student is evaluated on his ability to create and complete the mechanical device. 6 (0-6)
221 Computer Circuits I
Four credits
A course designed to be an introduction to digital computer operation. Topics in digital 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)

222 Computer Circuits II
Four credits
A course designed to cover the subject of pulse and switching circuits. Topics include waveforms, wave shaping, logic, digital computer operation, computer memory systems, bistable multivibrators, flip-flops, and logical circuits for digital computer operation. Laboratory work will involve practical work with actual equipment through actual construction and testing of circuits. 4 (3-2)

223 Computer Circuits III
Four credits
A continuation of 222. Topics include time base generators and operational amplifiers with applications to the field of instrumentation and analog computer operation. 4 (3-2)

241 Industrial Electronics I
Fourth credits
First of a series of three courses dealing with industrial electronics. Includes the basics of AC and DC motor and generator characteristics, transformer construction, 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
Fourth credits
A continuation of 241. Topics include thyristors, ignitrons, resistive welding controls and photoelectric control circuits. Laboratory work includes construction and testing of thyristor and photoelectric circuits. 4 (3-2)

243 Industrial Electronics III
Fourth credits
A continuation of ET 242. Topics include closed loop control systems such as valve 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 dealing with AM, FM and FM-MEX radio operation. A block diagram of a superheterodyne receiver is used to introduce the student to radio concepts. During the course, students are oriented to bring their own radios to the laboratory for trouble shooting. Vacuum tube and transistor radio topics are discussed. 5 (2-4)

262 Television Servicing
Five credits
A laboratory oriented course dealing with the principles of operation of black and white television sets. A block diagram of a television receiver is used as a foundation for trouble-shooting techniques. Students are oriented to bring their own television sets to the laboratory so that they may be examined. 5 (2-4)

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 (2-4)

315 Audio Systems Servicing
Five credits
A laboratory oriented course covering both vacuum tube and transistor audio circuits. Topics covered will include transistors and stereo amplifiers and speaker systems. Emphasis will be placed on troubleshooting audio amplifiers, measuring power output, distortion and other characteristics of audio systems. 5 (3-2)

317 Communication I
Four credits
The first of a series of three courses dealing with electronic communication principles and devices. The purpose of the series is 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 modulation, RF power amplification and amplifier modulation. 4 (3-2)

318 Communication II
Four credits
A continuation of ET 317. Topics covered include single sideband, detection, frequency conversion, and IF & RF amplification. 4 (3-2)

319 Communication III
Four credits
A continuation of ET 318. Topics covered include frequency modulation and detection, television, and microwave principles. 4 (3-2)

General Electronics Courses

100 Basic Electronics
Four credits
A survey course covering the fundamentals of electricity to electronic amplifiers, wave transmission, and semiconductor devices and the operating characteristics of the electronic devices. Emphasis is on laboratory work. Not intended for students in Electronics Technology Associate program. 4 (3-4)

101 Basic Electricity
Four credits
A basic course covering the practical use 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 switching and control, lighting and parallel circuits, new lighting devices, and electrical heat. 4 (3-4)

311 Advanced Electricity
Four credits
A second course in Electricity. More advanced topics will be discussed in heat, light, power and magnetism. Pre-requisite: ET 110. 4 (3-4)

121 Electrical Blueprint Reading
Four credits
A basic course teaching the interpretation of electrical blueprints and wiring diagrams for buildings, buildings, machinery, controls, appliances and electrical devices. Special attention will be given to reading and interpreting practical problems that will be based on the latest National Electrical Code. Topics to include switches, motors, motor control devices, control systems, power distribution and safety. Emphasis will be placed on practical wiring diagrams and equipment used in the electrical trade. 4 (4-0)
104 Electrical Mathematics I
A first course covering basic mathematics from fractions to trigonometry used in electricity and electronics courses. Emphasis will be placed on measurements, Ohm's 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 wiring. The emphasis is on electrical concepts to extend electrical theory and application. Pre-requisite: Basic Math 103. 4 credits

105 Electrical Mathematics II
A second course for students with more advanced problems in electrical theory and application. Emphasis will be on practical solutions to develop understanding of the principles of resistance, capacitance, impedance and phase relationships to AC and DC circuits. Topics will include resistance of conductors, trigonometric functions in AC electricity, reactance in circuits and power factor connection. Prerequisite: ET 104. 4 credits

106 Industrial Electricity I
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 credits

107 Industrial Electricity II
A continuation of ET 106 with emphasis on static control. Topics cover logic diagrams and symbols, C.E. state control and NORSAM. 3 credits

201, 202, 203 International Morse Code
Principles of International Morse Code transmission, reception, and speed building. The course may be continued under the course number indicated in successive terms. 1 credit

251 Electric Vehicle Systems
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 oriented towards understanding of electric powered forklift trucks, automobiles, and other industry vehicles now being used. Topics covered will include basic circuits, DC motors, battery systems, and some pulse width, transistor, and computer systems testing, troubleshooting, and schematic diagrams. Prerequisite: ET 105 or approval of instructor. 3 credits

FIRE SCIENCE TECHNOLOGY (FST)

104 Fire Protection Systems and Equipment
Study of fire detection and alarm systems, special hazards protection systems, sprinkler systems and fire extinguishing equipment. 3 credits

162 Hazardous Materials I
Firefighting methods relating to hazardous materials, incendiary devices, liquids and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials. 4 credits

195 Ordinance and Codes
Study of state laws and regulations, local ordinances and national standards including Intermediate Commercial Code, regulations as to fire prevention. 3 credits

147 Fire Hydraulics
Fundamentals of firefighting. Studies include an introduction to water supply problems, standards on pump requirements, formulas, test criteria and physical laws relating to hydraulics, and practical application to fire fighting problems. 4 credits

159 Fire Fighting Strategy and Tactics II
In a study of various assignments for stations and apparatus in communities of various sizes. The course is designed to assist officers in making better decisions in organizing and operating fire fighting forces. 3 credits

203 Building Construction for Fire Security
Involves the essentials of building design and construction. Includes special features and considerations related to fire security. 3 credits

264 Fire Investigation
Fire behavior and importance of determining origin. Procedures used in identifying accidental, secondary, or even type fires. Methods of recognizing and identifying motivation for arson. Laws relative to the intentional setting of fires. 3 credits

265 Emergency Rescue Procedures
Study of emergency fire and rescue practices. Training with certification and rescue equipment and its application for mutual aid, major disaster and civil defense. 4 credits

266 Fire Investigation II
Continuation of FST 264. Preservation of evidence and photographic coverage of fires. Methods of interrogation related to fire investigation and combat for strike teams. Study of, and legal, safety and court procedures relative to evidence and statements. Importance of cooperation between investigative agencies. Model reports and case histories. 3 credits

267 Organizational Procedures
Further study of fire department organization. Considers personnel administration, communications, records, and reports, maintenance, training, fire equipment, and fire fighting fire company organization and duties of the company officer. 3 credits
208 Hazardous Materials II
Four credits
Designed to cover methods of detection, control and extinguishing methods of fires, which are likely to arise with hazardous chemicals, explosives and radioactive materials. May be repeated, six credits maximum. 1 (3-0-6)

203 Building Construction for Fire Safety II
Three credits
A study of building construction and protection of openings in floors, walls and partitions, walls, doors and doors and the methods, properties and materials used in the construction of buildings. 1 (3-0)

207 Fire Administration
Three credits
A study of public fire prevention and protection: theory and practice of fire service management; public fire service administration; and community fire service organization and development. 1 (3-0-3)

305 Project Laboratory
Three credits
Aids the student in the undertaking of an independent study or project. See Program Advisor. 1 (3-0)

317 Project Laboratory
Six credits
Aids the student in the undertaking of an independent study or project. See Program Advisor. 1 (3-0)

INDUSTRIAL SAFETY MANAGEMENT (SAF)

301 Industrial Accident Prevention I
Three credits
A study of the fundamentals of industrial accident prevention and its relationship to modern industry and to public and private agencies. Also includes industrial developments in accident prevention and control. Includes: nursing care, accident prevention in various areas; development of safety programs for hospital nurses; accident control legislation; workers' compensation laws. 1 (3-0-3)

302 Industrial Accident Prevention II
Three credits
A study of the development of a new accident prevention program. Discussion of the fundamentals of accident prevention and control. 1 (3-0-3)

303 Economics of Safety
Three credits
An introduction to the costs and factors in accident prevention and control. This course is intended for students in all fields and professions. 1 (3-0-3)

304 Industrial Hygiene
Three credits
A study of the prevention and control of industrial accidents, Occupational Health. Includes: the nature, incidence and prevention of industrial accidents. 1 (3-0-3)

305 Safe Practice and First Aid
Three credits
A study of the principles of safe practice and first aid. The course is designed to acquaint individuals with safe practices and first aid techniques. 1 (3-0-3)

306 Hazardous Materials and Processes
Three credits
A study of hazardous materials and processes. 1 (3-0-3)

307 Industrial Accident Analysis
Three credits
A study of the principles of industrial accident analysis. 1 (3-0-3)
MECHANICAL TECHNOLOGY (MT)

100 Materials and Processes in Manufacturing
Four credits
Covers a wide field of manufacturing including casting (sand, die, investment, centrifugal, etc.); forging; welding; cutting; lathing; machining; surface finishing; design; numerical control; drafting; aesthetics; quality control; and production control. A knowledge of basic math is recommended. 5 (3-2)

101 Machine Design
Three credits
Practical design and fundamentals, strength of materials and stress analysis are applied to solve basic machine design problems. Prerequisite: MT 200, MT 210 and Math for Technicians 120. 4 (3-3)

106 Project Laboratory (Mechanical)
Six credits
An advanced course, recommended only for students wishing to do in-depth work in the mechanical technology area after finishing basic prerequisites. The 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. 6 (3-3)

107 Project Laboratory (Mechanical)
Six 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 six credit course in the Mechanical Technology program. 6 (0-4)

SYSTEMS TECHNOLOGY (ST)

101 Critical Path Method
Four credits
The CPM method of project control involves planning, scheduling, and monitoring. Course content includes construction of the arrow logic diagram, float calculations, management and cost estimates, 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 assists 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 (3-4)

GENERAL TECHNOLOGY (TCG)

101 Technical Report Writing
Three credits
This course emphasizes the means for presenting information effectively, using drawings, graphs, sketches, and outlines. Methods for using graphical presentations in technical calculations will be included. Incorporation of such graphic media will be used in laboratory presentations projects. 3 (2-0)

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, elements 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 it is found necessary in writing AVO's safety reports, job letters, as well as oral communications. It emphasizes clear and accurate presentation of information utilizing effective language techniques and time saving for the writer. 4 (3-0)

104 Introduction to Radio Communications
Three credits
A basic course for those interested in learning the fundamentals of radio communication. Topics to be covered include how to interview people, write and deliver news reports, prepare deliver self commercials, select proper music to fit a format, talk about the industry, radio station, and who is making news for a fledgling station. 3 (3-0)
Department of Applied Technology

Cincinnati Harold J. Walper

The Department of Applied Technology offers programs and courses providing training which can lead to a career as a technician in the building trades, industrial trades, or in 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 these general areas. Courses are offered to accommodate students who desire to take special courses.

Primary Functions of Department of Applied Technology

The primary purposes of the Applied Technology Department are to provide: (1) related instruction for aptitudes in all skilled trades served by the College area, (2) one-year certificate programs to enable students to prepare for job entry positions requiring basic knowledge and skills, (3) two-year associate degree programs to help broaden breadth and depth, and (4) advanced knowledge in the field of technology to allow students to extend their skills and competencies in their present occupations or in new fields.

In keeping with the philosophy of the College, the Applied Technology Department strives to serve areas of need. The industrial and building trades occupations present different problems from those of other fields. A constant awareness of these differences is necessary for an effective educational approach to fulfillment of these needs.

This continually oriented department provides "hands-on" experience whenever possible, in the belief that participation enhances 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 add diversified and minority persons. The Department develops programs to assist government and local agencies in strengthening the educational and skill levels of these persons.
Apprenticeship Training

Lansing Community College does not provide apprenticeship placement services. However, the college has a variety of programs in building trades. Apprenticeship training offers the individual the opportunity to learn a skilled craft or trade while they work at that trade for wages and receive related instruction to learn more about the trade. A person desiring apprenticeship training must be employed as an apprentice before entering the program.

Upon completion of his training program, the apprentice is awarded the status of journeyman. Signaling that he is a skilled craftsman or tradesman. Many of the fields of industry today depend on apprentices.

To qualify for an apprenticeship in any of the skilled trades, a student must have mechanical aptitude, perseverance, ambition and initiative. In addition, he must have good health, be mentally alert and generally 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 are available at the Lansing Community College. All applicants must submit to the selection and placement procedure. An applicant must reside within the jurisdictional area of the joint apprenticeship committee. An applicant must have the written recommendation of a member of the committee.

Applications for apprenticeship training are accepted on a first-come, first-served basis. After enrollment, the 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 program. Apprentices must have the approval of the coordinator for courses selected each term in conformity with the apprenticeship standards for the individual trade and company.

Building trades apprenticeships include:
- asbestos Worker
- Bricklayer
- Carpenter
- Electrical Lineman
- Industrial trades apprenticeships include:
- Die Making
- Die Sinking
- Engraver-Die
- Machining Repair
- Machinist
- Millwright

Service trades apprenticeships include those of:
- Automotive Body Repair
- Automotive Painter
- Automotive Servicing

Seminar

Lansing Community College develops many seminars. In an effort to meet the educational needs of all citizens of our community. These seminars are usually related to the field of study. Seminar topics are offered on a one-time basis. In turn, those who are interested in seminars provide their individual's work experiences to the seminars committee. Seminars consist of lectures, laboratory experiences or a combination of both.

Human relations and technical skills are emphasized. Competence in selecting, organizing, preparing and presenting the seminars are essential. Methods of teaching, methods and skills which are being discovered and developed are presented. Seminars are offered on a one-time basis and credit varies.

The various curriculum in which students enroll are given on the following pages. In the subsequent section, each of these courses is described more fully.

Certificate Programs

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

Some students may wish to enroll in a certificate program for the purpose of job advancement or to gain the necessary skills for a new field of employment. Others may wish to transfer to a four-year degree program after completion. Students should be aware of the requirements for the certificate programs.

Students seeking placement should consult with the Apprenticeship and Training Committee of the appropriate Joint Apprenticeship Committee. In the Department of Technology, the Bureau of Apprenticeship and Technology, Lansing office of the U.S. Department of Labor, or the Applied Technology Office.

Certificates are awarded to students completing the requirements of the certificate programs offered by the Applied Technology Department of Lansing Community College. All students will be required to sign the certificate agreement and will be informed of the requirements for the certificate programs.

Associate Degree Programs

Courses completed in Applied Technology Certificate Programs are usually transferable toward an associate degree of similar nature within the department. Students are required to complete a minimum of 24 semester hours.

All associate degree programs require a minimum of 24 semester hours of credit. Each student should check with the departmental chairman or a counselor to determine the transferability of credits to a particular college or university.

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

1972 - 1974 Lansing Community College Course Catalog  www.lcc.edu
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 gain and load factors, and learn layout, planning and design of cooling and heating systems.

In the heating section, 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 section; building a background knowledge of the components of motors, pumps, 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 refrigeration.

Air Conditioning – Associate in Science Degree

(Minimum of 60 credits required)

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<th>Credits Required</th>
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<td>CIE 145 Fundamentals of Mathematics</td>
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Automotive Technology — Associate in Science Degree

Minimum of 30 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 emissions control. Students gain practical experience by working on and servicing the units in the laboratory courses.

<table>
<thead>
<tr>
<th>Automotive Technology</th>
<th>18 Credits Required</th>
<th>Automotive Specialization</th>
<th>12 Credits Required (may be taken in 1 term)</th>
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<tr>
<td>AUT 101 Auto Service</td>
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<td>AUT 111 Engine Laboratory</td>
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<tr>
<td>AUT 111 Auto Electrical Theory</td>
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<td>AUT 121 Engine Laboratory</td>
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<td>AUT 131 Automotive Transmission Laboratory</td>
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<td>AUT 141 Auto Brakes</td>
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<td>AUT 132 Auto Transmission Laboratory</td>
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<td>AUT 133 Auto Transmission Laboratory</td>
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<td>AUT 161 Auto Temperature Control</td>
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Social Science — 6 Credits Required

General Technology — 1 Credit Hour

ENR 101 Technical Report Writing
FON 111 Applied Physics
FON 112 Self-Finance and First Aid
FON 114 Machine Shop
MTH 101 Technical Writing
MTH 102 Basic Arithmetic
BUS 101 Introduction to Business
BUS 102 Small Business Management
## 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 him 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

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### 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 on 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

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**Note:** The curriculum is designed to prepare students for entry-level numerical control programming positions. Further study may be required for advancement to higher positions within the industry.
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 tool lathes, milling machine, shaper, drill press, grinder, metal sawing, bench work and measuring instruments. 115 Laboratory fee. 3 (3-4)

102 - Machine Shop
- Four credits
- Continuation of ATR 101 with emphasis on milling, shaping and planing. Precursory: ATR 101, 115 Laboratory fee. 4 (3-4)

105 - Project Laboratory (Machine Shop)
- Four 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. 115 Laboratory fee. 4 (3-6)

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. Emphasis on controlling costs. Introductory programming and limited machine operation. Precursory: Algebra. 4 (3-1)

- 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 flexible and vertical milling machine provides important part of this course. Precursory: ATR 106 Numerical Control I or equivalent. 4 (3-1)

108 - Computerized Control III—Introduction to Computer-Assisted Programming
- Four credits
- Study of types of parts which can be programmed and 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, teletype and numerically controlled milling machine. Precursory: ATR 107, Numerical Control II or equivalent. 4 (3-1)

112 - 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 (3-4)

113 - Machine Tool Construction
- Three credits
- Functions of tools and how to check tools using recommended gage. Functions of template and how they are made and used. Types of aids made from tools and how these aids are used. Interpretation of drawings, and reading and marking drawing for the tooling shop. Precursory: Machine Tool Construction. 3 (3-3)

114 - Machine Tool Construction
- Three credits
- Lapping and cutting tools. Methods of making and using templates. Types of tools used in the toolroom. Types of tools used in the machine shop. Types of tools used in the factory. Types of tools used in the laboratory. Precursory: Machine Tool Construction. 3 (3-3)

115 - Machine Tool Careers
- Twelve credits
- The first of a three-semester series for students who require in-depth experience and knowledge of manufacturing practices. A minimum exposure of seven hours per week includes set-up and manipulation of many machine and precision measurement equipment common in industry today. This course is recommended for those interested in manufacturing careers, industrial vocational teaching, and related careers such as numerical control programming and pre-apprenticeship training for the metal trades. 115 Laboratory fee. 12 (3-17)

116 - Machine Tool Careers II
- Twelve credits
- Continuation of ATR 115. Precursory: ATR 115 Machine Tool Careers I. 115 Laboratory fee. 12 (3-17)

117 - Machine Tool Careers III
- Twelve credits
- Continuation of ATR 116. Precursory: ATR 116 Machine Tool Careers II. 115 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, metal, acrylic, cellulose, flax, polyester, polyurethane, styrene and vinyl plastics, and the thermoset family, urea, and melamine, unsaturated polyesters, polyvinyl chloride, etc. 4 (4-0)

122 - Plastics II (Processing)
- Four credits
- Nylon, polystyrene, polyethylene and polypropylene, and the processing procedures used. These include the melting extrusion, injection molding, and blow molding processes. Precursory: ATR 120. 4 (4-0)
122. Applied Technology

122. Plastics III (Fabrication and Design)
- Four credits
- The cutting, finishing, and finishing of plastics, joining and finessing and types of tools and equipment used for plastic work. Also covers product design in plastics as it is influenced by manufacturing and fabrication. Prerequisite: ATR 121 or approval of instructor. 4 (4-0)

123. Machinery Handbook I
- Four credits
- Designed to familiarize the student with the application of information contained in this handbook. 4 (4-0)

130. Blueprint Reading for Die Sinksers
- Four credits
- An applied course in Blueprint Reading designed especially for the Die Sinking trades. The course is designed to familiarize students with the types of dies, their purposes, and the terminology used in the forging industry. There will be spent on transferring the information on part prints to forging and injection dies. 4 (4-0)

135. Blueprint Reading for Welders 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 Welders I. Prerequisite ATR 131. 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)

135. 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 actions, and maintenance systems as well as safety to the operator and set-up personnel. This course should be excellent for the following people: first machine shop apprentices, press repair and maintenance people, stamping plant foremen, press operators, die set-up engineers, students of Engineering Technology. 4 (4-0)

135. Industrial Presses II
- Four credits
- An advanced course concentrating on the mechanics of industrial presses of all types. This course is designed to be an in-depth study of how to maintain, adjust, and repair presses, with a study of how to use the presses efficiently. Prerequisite: ATR 135 Industrial Presses I. 4 (4-0)

138. Riveting
- Three credits
- The use and strength of rivets, clamps, black and tacks, and the construction and erection of glaze roofs are covered, with a study of rescue lettering and symbols. Also covers safe working strength of the rivets, clamps, black and tacks, and the use of personal safety equipment. 3 (3-0)

140. Metallurgy
- Three credits
- Physical and mechanical properties of metals, atomic structure, crystal structure, phases in metal systems, phase diagrams, and metallurgy. 3 (3-2)

143. Industrial Heat Treat
- Three credits
- Hardening, carburizing, annealing, case hardening, carbonizing, cyaniding, nitriding, flame hardening, induction hardening, shot quenching, air tempering, martempering, and production of steels. Prerequisite ATR 142 Metallurgy. 3 (3-2)

144. Hydraulics and Pneumatics I
- Three credits
- Pressure, viscosity, flow rate, fluid power, hydraulic and pneumatic fluid, pumps, motors, cylinders, valves, accumulation, control, receivers, reservoirs, filters, and basic circuits. 3 (3-2)

145. Hydraulics and Pneumatics II
- Three credits
- Continuation of ATR 144. Emphasis on applications of hydraulic and pneumatic circuitry to industrial machinery. Prerequisite ATR 145 Hydraulics and Pneumatics I. 3 (3-2)

150. Basic Mathematics
- Four credits
- Review of basic arithmetic operations whole numbers, common fractions and decimals, percent, ratios, and proportions. Introduction to basic algebraic operations and formulas in plane geometry. 4 (4-0)

153. Applied Algebra
- Four credits
- Applications of algebraic equations to shop work. 4 (4-0)

155. Applied Plane Geometry
- Four credits
- Applications of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: ATR 151. 4 (4-0)

155. Applied Plane Trigonometry
- Four credits
- Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: ATR 155. 4 (4-0)

154. Advanced Applied Trigonometry
- Four credits
- Continuation of ATR 154. Provides broad experience in solution of problems taken directly from industry. Prerequisite: ATR 154. 4 (4-0)

155. Compound Angles I
- Four credits
- Continuation of solid geometry and advanced industrial trigonometry enabling student to solve problems involving angles and tilted work. Prerequisite: ATR 155. 4 (4-0)

155. Compound Angles II
- Four credits
- Continuation of ATR 155. Emphasis on application of actual cutting angles for complex machining operations. Prerequisite: ATR 155. 4 (4-0)

160. Precision Inspection
- Three credits
- Techniques of tool and gage inspection, micrometers, versators, gauge blocks, Rule, Dial, and Thread gauges, test indicators, gage and comparator measurement, hardness testing. 3 (3-0)
### Automotive Trades (AUT)

**Auto Mechanics**

109 - Auto Service I  
Four credits  
Teaches the understanding of basic tools and equipment, safety, lubrication systems, and basic Oxy-aeolysis Welding.  
55 Laboratory fee.  
(2-4)

110 - Auto Electrical Theory  
Formerly STR 101.  
Four credits  
A theory course covering battery, starters, generators, regulators, ignition systems, and chassis wiring.  
55 Laboratory fee.  
(2-4)

112 - Tune-Up II  
Four credits  
A lecture-laboratory course covering fuel systems, equipment operations, and tune-up procedures.  
55 Laboratory fee.  
Prerequisite: AUT 110 or instructor approval.  
(4-4)

113 - Tune-Up I  
Four credits  
A lecture-laboratory course covering fuel systems, equipment operations, and tune-up procedures.  
55 Laboratory fee.  
Prerequisite: AUT 110 or instructor approval.  
(4-4)

120 - Auto Drive Train  
Teaches the student to service clutches, manual shift transmissions, universal joints, differentials, and rear axles.  
55 Laboratory fee.  
(4-4)

122 - Automatic Transmission I  
Four credits  
This is a basic course for automatic transmission repair.  
55 Laboratory fee.  
Prerequisite: AUT 120 and instructor approval.  
(4-4)

124 - Automatic Transmission II  
Four credits  
This is an advanced automatic transmission repair.  
Prerequisite: AUT 120, AUT 121.  
(4-4)

125 - Automatic Transmission III  
Four credits  
This is an advanced automatic transmission repair.  
Prerequisite: AUT 120, AUT 121.  
(4-4)

126 - Engine  
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.  
55 Laboratory fee.  
(4-4)

128 - 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.  
55 Laboratory fee.  
(3-4)

140 - Auto Brakes  
Four credits  
The student learns to service both regular and disc brakes.  
This includes alignment, shoe replacement, drum and disc turning, shoe grinding, and hydraulic system service.  
55 Laboratory fee.  
(4-4)

150 - Auto Suspension  
Four credits  
This course instructs the student in wheel alignment, wheel balancing, and front end replacement procedures.  
55 Laboratory fee.  
(3-4)
114 Automotive Internship
   Six credits
   This course allows students to practice skills learned in previous courses in a real work situation. The internship requires weekly meetings 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 45 credits.

Auto Parts
160 Parts Counter Math I
   Four credits
   Covers the mathematics of automotive parts and repair jobs on an automobile.
   4 (4-0)
161 Parts Counter Math II
   Four credits
   This course covers parts catalogs and their use. Prerequisite: AUT 160. 4 (4-0)
163 Parts Counter Math III
   Four credits
   This course covers product knowledge. Prerequisite AUT 161. 4 (4-0)

Building Trades (Open to Apprentices and Students)

Building Trades
108 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 (16-18)

105 Apprentice Asbestos Workers
   Three credits
   Open to Apprentice Asbestos Workers indentured to the Asbestos Workers Local 406. Offered by Apprenticeship Training Committee. Covers blueprint reading, related mathematics, estimating and manipulative practices. 3 (0-5)

107 Apprentice Carpentry
   Three credits
   For apprentice carpenters on registered programs with the Lansing Carpentry Joint Apprenticeship Committee. Covers blueprint reading and drawing, manipulative practices, mathematics, use of steel squares, estimating and layout, building codes, nailing practices, manipulative practices and applied sciences. Includes light and heavy construction practices. 3 (16-18)

100 Apprentice-Electrical (Industrial)
   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 (16-16)

104 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 (0-6)

108 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 theory, techniques, color mixing and matching, mathematics related to the trade, estimating and paperhanging. 3 (0-6)

113 Apprentice Plumbing or Pipelining
   Three credits
   For apprentice plumbers and pipelayers indentured to the Lansing Joint Plumbing and Pipelining Apprenticeship and Training Committee. Includes mathematics, manipulative practices, theory, blueprint reading and drawing, job analysis, physics and other sciences. 3 (16-16)

119 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 (0-6)

Building Trades (Open to Journeymen and Apprentices Only)

Building Trades
109 Journeymen Electricians Welding I
   Four credits
   Open to electrical journeymen. Includes setup and welding, and cutting. Major emphasis on arc welding and skills needed by the electrician. 4 (2-4)

110 Journeymen Electricians Welding II
   Four credits
   Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of welding. Includes use of welders and equipment. 4 (2-4)

112 Paper Hanging For Journeymen I
   Three credits
   Designed for journeymen paperhangers. Includes preparation of surface, selection and care of tools, selection of materials, and installing paper. 3 (2-2)

113 Paper Hanging For Journeymen II
   Three credits
   Continuation of Building Trades 112. Paper Hanging for Journeymen I. 3 (2-2)

116 Journeymen Plumbers Welding I
   Four credits
   Students who enter this class should be journeymen Plumbers or Steamfitters. Apprentices to the plumbing or fitter trade will be admitted when the degree of training they have achieved meets the approval of the Joint Apprenticeship Committee in Plumbing. Training begins with a review of welding fundamentals and proceeds rapidly into more advanced skills as the need of the individual student. 4 (0-4)
Building Trades (Open to Anyone)

113 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 level to determine a polygon and the use of the Esco board measure table is also presented. 5 (2-4)

153 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. P (4-0)

155 Blueprint Reading for Plumbers I
Four credits
Covers orthographic projection, linear and angular measurement and reading of prints where these views are given in the three principal planes of projection. Examples apply to the plumbing trade. 5 (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. 5 (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 speciality work. Prerequisite: BTR 176. 5 Laboratory fee. 3 (2-2)

191 Sheet Metal Welding I
Four credits
Arc welding as applied to sheet metal. Introduction to fusion. 4 Laboratory fee. 4 (3-1)

192 Sheet Metal Welding II
Four credits
Continuation of Building Trades 180 with additional emphasis on fabrication. Prerequisite: BTR 190 or approval of instructor. 4 Laboratory fee. 4 (3-1)

193 Heating, Air Conditioning and Refrigeration (HAC)
Four credits

101 Air Conditioning I
Four credits
Air Conditioning I is designed to acquaint students with the fundamental math, physics and hyd Dictionary; reading necessary to work effectively with heating and air conditioning equipment. Covered in detail is the interpretation of the trans-dity on the operating, wiring diagrams and manuals used with climate control equipment. 4 (4-0)

102 Air Conditioning II
Four credits
Designed to deal with the fundamental theories and principles of climate control systems. The course will correlate theory to actual practices used in the field. Prerequisite: HAC 101. 5 Laboratory fee. 5 (4-5)

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 (4-4)

104 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 refrigeration and refrigeration shop work. The student performs several tasks as these systems. 5 Laboratory fee. 5 (4-4)

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 refrigeration valves and controls and in troubleshooting multiple refrigeration systems. 5 Laboratory fee. Prerequisite: HAC 104. 4 (4-4)

120 Gas and Oil Burner Servicing I
Four credits
Information about construction and operation of various types of automatic heating equipment for service, stoker fires, electric motor, and other types. Material includes construction and operation of high pressure oil burners, installation of combustion chambers, servicing of nozzles, electrojets, and pumps, basic controls and central circuits. 5 Laboratory fee. 4 (4-4)

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 installing and correcting service faults in a variety of heating systems. Prerequisite: HAC 120. 5 Laboratory fee. 4 (4-4)

197 - 1974 Lansing Community College Course Catalog - www.lcc.edu
Special Projects

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, safety operation, and applications of the arc-arc welding, cutting, and electric arc and MIG (metal inert gas) processes. Each process consists of welding, butt, lap, and corner joints in the flat and horizontal positions. 115 Laboratory fee. 4 (3-4)

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 flux powdered electrodes and recommended procedures are presented in preparation for passing performance tests in the flat and horizontal position. Prerequisite: WLD 100. 115 Laboratory fee. 4 (3-4)

102. Gas Welding and Brazing

Four credits

A practical course designed to develop skills in jointing of low and medium carbon steels, cast iron and aluminum. Silver brazing alloys, tinned bronze, general purpose brazing alloys, and the common filler metals are presented. Prerequisite: WLD 100. 115 Laboratory fee. 4 (3-4)

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, welding practices and welding qualifications are explained. The use of grinders, and metal cutting and metal working are practiced. Prerequisite: WLD 100. 115 Laboratory fee. 4 (3-4)

104. TIG (Tungsten Inert Gas)

Four credits

A study of the principles and fundamentals of TIG (Tungsten Inert Gas) welding of steel, stainless steel, and aluminum. The spray and short circuiting arc (low voltage) and spot welding techniques in all positions are practiced. Prerequisite: WLD 100. 115 Laboratory fee. 4 (3-4)

Audio-Visual Nursing Practice Laboratory

The Department of Health Careers has developed a series of audio-visual study units to assist students in their study of health careers. These study units are designed to replace some traditional teaching methods and provide an effective supplement to the classroom and laboratory instruction. Study units include color slide film, color slides, audio-visual films, audiotapes, and slides. A printed study workbook manual is provided with all study units. The audio-visual study units are designed to enhance learning and to provide a more effective learning environment.

All study units are designed to be used in conjunction with the Department's audio-visual laboratory, which is located in Room 211. The laboratory is equipped with all necessary audio-visual equipment, including film projectors, audiotape players, and slide projectors. Students are encouraged to use the laboratory during their study sessions. The laboratory is open during regular business hours, and is staffed by experienced audio-visual technicians. Students are encouraged to utilize the laboratory to enhance their learning experience.
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 Test. It is not equivalent to the first two years of a baccalaureate program in nursing. A graduate of the program may work toward a baccalaureate in nursing but transfer credit and advanced standing are determined by the college of university to which the student may apply.

Courses in natural and social sciences and in English provide an educational background of scientific principles and communication skills. Among 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 critical thinking 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. This last 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.

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 Lansing Board Examination required by the Michigan State Board of Nursing.

The curriculum includes concurrent theory and clinical learning experiences in cooperating community hospitals, extended care facilities, and other health agencies.

Any student may be admitted to the program. Students are urged to apply one year before expected admission.

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Dental Assistant

The two-year curriculum for dental assisting combines business and science courses. This curriculum will prepare the student to assist the dentist in the 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's license. The student will receive certification after successful completion of the examination conducted by the American Dental Assistant Association Certification Board.

Eligibility for the Dental Assisting Program requires:
1. High school graduate: English—3 units, Mathematics general or business—1 unit, Recommended: Chemistry—1 unit, Typing (10 w.p.m. or better)
2. The A.C.T. (American College Test): All test batteries are 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 letter of intent to the Dental Assisting Program. This must be a detailed description of the field and a letter to the program coordinating the program.
4. All applicants will receive detailed information concerning the program.

Qualification for the Dental Assisting Program, recommended but not necessary, is a foreign transcript of at least one year of college work, to be verified by the college admissions office.

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Health Careers

COURSE DESCRIPTIONS

Associate Degree Nursing (NUR)

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, planning, 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 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.

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 technique, fluid and electrolyte balance are also considered.

Patient assessment with emphasis upon priority of needs provides 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.

Maternal-Child Nursing

Fall or Winter Term | Ten credits

A clinical nursing course which provides opportunities for students to develop critical thinking, and to apply basic principles in planning and implementing care for mothers, newborns, infants, and children. Selected experiences in the hospital and community provide opportunities for observation of normal health services. Prerequisites: Nursing Foundations I and II. 10 (10-11)

Physical and Mental Illness I

Spring Term | Ten credits

A clinical nursing course which provides opportunities for students to apply nursing principles in the care of patients with common physical and mental illnesses. 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 the hospital laboratory sessions each week during the term. Community health agencies are utilized for observation of periods of pre-post-hospitalization and health services which are available to the patient. Prerequisites: Nursing Foundations I and II. 10 (10-11)

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 and mental illnesses. Emphasis is placed on assessment of overt and 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 mental and physical pathologies. Prerequisites: Nursing Foundations I and II and Physical and Mental Illness I. 10 (10-11)

Dental Assistant (DA)

Admission to the program is a prerequisite for each course.

Dental Assisting I

Fall Term | Five credits

An introduction to dental assisting. An orientation to the dental profession, its purposes, laws, ethics, and personnel. Dental assisting including the basic structure of the teeth and related oral structures, and the growth and development of primary and secondary dentition are studied. 10 (1-4)

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, and methods of sterilization and disinfection procedures. One hour laboratory section will be assigned to an introduction to oral health, preventive dentistry, and patient counseling in the dental operatory. 10 (1-4)

Dental Assisting III

Spring Term | Five credits

Combination of DA I and II with emphasis on total operatory operations. Phannaco-therapy and anesthetics, plier set and use of drills, and form, color, and aesthetic aspects governing the use of restorations in dental practice will be discussed. The physiology of human response to injection, and antiseptic, anesthetic, and analgesic principles and common oral pathology will be reviewed.

Dental Assisting IV

Summer Term | Five credits

Supervised clinical practice and seminars. Each student will spend 150 hours working in dental office under the supervision of a practicing dentist. Seminars will be held to discuss experiences in various offices. Techniques and skills in applying for job positions, interview, and self-evaluation will be developed. 10 (1-4)

Dental Technician and Materials

Winter Term | Three credits

Utilization and manipulation of dental materials. Composition and choice of materials used in dentistry with emphasis on the physical properties, characteristics, and uses. Laboratory time is used in developing skills in the manipulation of materials in the same way they are used. 10 (1-4)
Health Careers

106 Dental Hygienist (DH)

Admissions to the program is a prerequisite for each course.

106 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 hygienist in providing dental hygiene services. Dentists and the ethics of the profession are discussed. 2 (25)

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 discussion of the morphology of the human dentition. Anatomy of the head and neck, oral structures, functional 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. 3 (24)

100 Oral Anatomy and Physiology (Winter Term) Three credits
A continuation of DH 101. 3 (25)

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 (20)

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. Prescribing, writing, actions and effects due to the administration of drugs, adverse reactions to drugs, and the management of common medical emergencies will be discussed. The laboratory will provide for development of skills in the common techniques used in administering drugs and in lifesaving procedures. 2 (21)

107 Dental Radiology (Spring Term) Two credits
Development of the theory and practice of radiology to prepare the student for routine dental office responsibilities. The student will expose, process, evaluate for quality, and read dental X-ray films. The lecture sections will cover the production and emission of dental X-ray radiation, calculations for exposure, techniques of exposure, and the processing and evaluation of dental radiographs. 2 (21)

150 Oral Health Practices (Fall Term) One credit
A laboratory and practical course which will introduce the student to the concept of oral health, provide experience in selecting and using the common health, and home care techniques for maintaining oral health, and initiate an appropriate oral health regimen for each student. 1 (20)

150 Preventive Dentistry (Fall Term) Two credits
This course surveys the theory and practice of preventive dentistry. A review of the etiology, pathology, and selected literature of the scientific literature pertinent to the related in general practice. The student will be expected to have completed the above courses. 2 (20)

500 Clinical Dental Hygiene I (Spring Term) Four credits
The beginning clinical course which offers each student opportunities to perfect skills in methods of patient evaluation and counseling, oral prophylaxis and restoration of dental caries, periodontal and prosthetic treatments, and perform a complete oral prophylaxis. The student will establish and maintain a recall program. 3 (25)

501 Clinical Dental Hygiene II (Fall Term) Four credits
A continuation of DH 201 and 202. 3 (25)

502 Clinical Dental Hygiene III (Winter Term) Five credits
A continuation of DH 201 and 202. 3 (25)

504 Clinical Dental Hygiene IV (Spring Term) Five credits
A completion of the clinical experience with emphasis on comprehensive oral prophylaxis. 3 (25)

505 Dental Materials (Fall Term) Three credits
A lecture and laboratory course which will prepare the student to use the materials utilized by dentists. The student will be introduced to the chemical composition, mechanical properties, and characteristics of the material used in the laboratory. 2 (21)

506 Periodontics I (Spring Term) Two credits
The first of two courses which will broaden the student's understanding of the anatomy, physiology, and pathology of the periodontium. The identification and etiology of periodontal diseases is introduced. The role of oral hygiene in the prevention of periodontal disease. 2 (20)

507 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 considerations of therapy. 2 (20)

508 Theory of Health Education (Winter Term) Two credits
A course of lecture and laboratory which will develop a theoretical and practical basis for teaching about personal health and health skills. Techniques of teaching personal health will be related to office staff instructions, patient motivation, and counseling. 2 (25)

700 Community Dental Hygiene (Spring Term) Two credits
A lecture and laboratory course which will the skills developed in DH 201 to equip health educators 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 (25)

710 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 system, record and appointment sheets, chairside assisting, and specialty practice. Various types of practices in public and private clinics will be visited. 3 (25)

711 Oral Pathology (Winter Term) Three credits
A study of the diseases affecting the oral region including developmental dermatological diseases of the teeth and supporting structures, and neoplasms. 3 (25)

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Health Careers

Practical Nursing (PN)

100 Pharmacy
Three credits
A course designed to prepare the student for the administration of oral, rectal, and subcutaneous medications to a limited number of patients. Includes knowledge of the action of drugs, their uses, their expected effect and undesirable reactions. Not transferable. 3 (3-0)

102 Foundations of Nursing
Five credits
A course designed to acquaint the student with the principles underlying clinical practice. Includes the physical and emotional aspects of illness, stress, and the special effects of long-term illness. 5 (3-0)

103 Anatomy and Physiology
Four credits
A course designed to teach the student to develop an adequate working knowledge of the normal structure and function 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)

104 Growth and Development
Three credits
A course dealing with the principles of physical, emotional, and intellectual development and with the characteristics of the normal individual throughout the various periods of life span. 3 (3-0)

106 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 nutrition is based. 2 (2-0)

109 Community Health
One credit
A discussion of the public and voluntary agencies of the community and their relationship to the health field, and how they function to prevent and control disease and promote health. 1 (1-0)

110 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)

010 Fundamentals of Nursing
Three credits
A continuation of the theoretical concepts relating to Nursing Practice, students learn to meet nursing needs, plan how to meet these needs and how to modify nursing practices to meet the unique needs of each patient. 3 (3-0)

014 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 (6-0)

018 Medical-Surgical Nursing
Six credits
A course dealing with the characteristics of acute medical conditions and the body's response to surgical procedures, and with the special nursing needs of these patients. It is in this course that the student learns the principles of rehabilitation and how to apply these principles to the care of ill patients. 6 (6-0)

019 Nursing Skills I 0.5 (1-0)
Six credits
020 Nursing Skills II 0.5 (2-0)
Six credits
024 Medical-Surgical Skills I 0.5 (4-0)
Six credits
025 Maternal-Child Skills I 0.5 (5-0)
Six credits
A sequence of four courses designed to develop in the student the necessary competencies to perform quality care for patients whose state of illness has become relatively stabilized. It should be able to apply the scientific principles of nursing and related subject matter to the needs of patients. 6 (6-0)

100 Psychology (PN)
Two credits
A sequence of courses designed to introduce the student to the principles of emotional development. Emphasizes the student to understand human behavior (including her own) and to deal effectively with the patient's behavior. 2 (2-0)
Department of Performing and Creative Arts

Chairman: Dr. David Markert

The artistic and aesthetic values of today must have broad knowledge of his field, its history, its literature and its techniques, the most basic of his training. To serve these needs, the Department of Performing and Creative Arts was established at Lansing Community College. Areas of emphasis include Art, Dance, Music, and Theatre.

The ultimate objective of the Department of Performing and Creative Arts is to occupy a major 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 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 Science degrees offered by four-year colleges and universities.

The Associate Degree in Arts or Associate Degree-General may be granted for other groupings of course units approved by the department chairman.

The requirements for certificate programs vary considerably. In each case, the requirements set forth in the specific objectives. The most popular certificate courses also are designed as subsequent programs.

The fine 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 fulfill his greatest potential for artistic development as performer, teacher or critic. Thus, the curriculum provides the student with the necessary technical skills while, at the same time, preparing the student for awareness of the fine arts and their role in society.

Performing arts at Lansing Community College are designed to meet the needs of students, with varying talents and goals, and to help each student fulfill his greatest potential for artistic development as performer, teacher or critic. Thus, the curriculum provides the student with the necessary technical skills while, at the same time, preparing the student for awareness of the fine arts and their role in society.

Fundamental courses in the department can also provide greater appreciation of and critical judgment of the arts to students from other divisions of the college.

Artistic Membership in a variety of groups and organizations related 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, symphony for concerts and operas in student theater organizations (to women, including Community Concert Band, Stage Band, Choral Society, Opera Workshop, Lansing University Choir, Lansing Men's and Women's Choirs, and several instrumental groups which include the Lansing University Orchestra and Bands and Orchestra.

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 personal lives and careers.

The Art Department provides studio courses in fine major areas of 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 Associate of Arts or Associate of Science Degree is available for the Commercial Art major.

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

Performing Arts

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.

111. Design I (Introduction to Drawing) Four credits
   A practice course which acts as an introduction to the vocabulary of the visual arts. Emphasis is upon the elements of composition and their application, media and their use. Limited to media of black and white. 4 (0-0)

112. Design II (Introduction to Painting) Four credits
   A continuation of Design I, but adding the problem of color. Prerequisite: Art 111. 4 (0-0)

113. 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 113. 4 (0-0)

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.

101. Ceramics I Four credits
   Primary emphasis on elements of hand construction, decorating techniques, glazing, firing, and philosophy of ceramics. $30 lab fee.

102. Ceramics II Four credits
   Elements of wheel throwing. Prerequisite: Art 101.

103. 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 exhibit in kiln-room procedures. Prerequisite: Art 103.

104. Advanced Ceramics Four credits
   A continuation of Art 103. Prerequisite: Art 103.

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, enamelling, casting, stone setting, forming, chasing, etc. 4 (0-0)

112. Jewelry and Metalwork II Four credits
   A continuation of Art 111. Prerequisite: Art 111. 4 (0-0)

113. Jewelry and Metalwork III Four credits
   A continuation of Art 112. Prerequisite: Art 112. 4 (0-0)

Fine Arts

The Fine Arts courses prepare students through systematic instruction in the fundamental fine art disciplines, their techniques and aesthetics.

111. Drawing Four credits
   A basic practice course where the student improves the skills learned in Design I. It is introduced to a variety of tools and methods in the art of drawing. Prerequisite: Art 111. 4 (0-0)

112. Life Drawing Four credits
   A continuation of Art 111 with the additional problem of the human figure. Prerequisite: Art 111. 4 (0-0)

131. Advanced Drawing Four credits
   A continuation of Art 112. Prerequisite: Art 112. 4 (0-0)

114. 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 helping the student define and resolve his particular painting problems in his quest for making a visual statement. Prerequisite: Art 201. 4 (0-0)

115. Painting II Four credits
   A continuation of Painting I where the student employs his acquired skills in a quest to make a visual statement through the medium of paint. Prerequisite: Art 201. 4 (0-0)

116. Painting III Four credits
   A continuation of Painting II. Prerequisite: Art 202. 4 (0-0)

117. Advanced Painting Four credits
   A continuation of Painting III. Prerequisite: Art 203. 4 (0-0)
ART 260 - Basic Art for Elem Teachers

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.

521. Interior Design and Decoration I
Four credits
A survey of the decorative arts including basic design elements, period style, color, and texture as they relate to man's environment. Prerequisite: Art 202. 4 (3.0)

522. Interior Design and Decoration II
Four credits
A continuation of Design and Decoration I. Prerequisite: Art 202. 4 (3.0)

523. Interior Design and Decoration III
Four credits
A continuation of Design and Decoration II. Prerequisite: Art 202. 4 (3.0)

Commercial Art

The goal of all commercial art is to increase the demand for a product or service. The following courses are designed to develop the student's understanding of the principles of design, color, and typography. These courses will be of value to students who will be involved in the fields of advertising, packaging, sales promotion, and sales training.

541. Advertising Design I, II, III
Four credits
A survey of the use of design in creating advertisements. Prerequisite: Art 202. 4 (3.0)

561. Illustration
Four credits
The student will be required to prepare illustrations for commercial use. Prerequisite: Art 202. 4 (3.0)

581. Lettering, Typography and Design
Four credits
The student will be required to prepare illustrations for commercial use. Prerequisite: Art 202. 4 (3.0)
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 mainstays of dance disciplines, ballet and modern. Every dance major is required to take work in both areas, and thus may elect to specialize in one or the other. Music, acting, dance history and dance theory round out the students' studies and majors 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, repertoire. Placement to 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.

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. Solide patterns of movement challenge the dancer's technical skills and encourage the students 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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Performing and Creative Arts

108. Modern Dance and Creative Movement (Advanced) Three credits

This course 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. (Effective) Two

Students are placed in a private studio in the Lansing area according to ability and previous training. Fees and credits 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-hour class lesson per week for 10 week term: $20.00.

105. Ballet Elective or Minor in Dance (Private Study) Two credits

Two-hour class lesson 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 in various periods of dance as we know it today. Historical sections begin with the court of Louis XIV and the innovations of Rovaere and follow the professional dance era through the Romantic period in England, Italy, Russia and France. Important modern figures (Isadora Duncan, Balanchine, Jerome Robbins and Rudolf 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 interaction of art and the contributions of ethnic dance to stage dance are essential parts of the course. Prerequisite: None.

119. Choreography I—Beginning Three credits

This course is for dance majors interested in choreography. It covers the problems of creating dances for performance in the areas of dance composition, planning, execution, editing, staging and production. Students are introduced to various methods of dance ideas, including poetry, painting, and drama. The selection of ideas of shifts and cuts is made gradually from simple to more complex problems. Prerequisite: None.

211. Choreography II—Advanced One-Two credits

This course is for students interested in creating dance for performance in the areas of dance composition, planning, execution, editing and production. The student will stage a short composition of his own choosing and supervise his creative efforts. One final project will be performed in public. Prerequisite: Beginning Choreography.

Music

111. Keyboard Harmony Three credits

A course in music theory emphasizing the problems of writing music. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Curriculum: Associate Degree in Arts with Music emphasis

112. Beginning Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

113. Intermediate Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

114. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

211. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

212. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

213. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

214. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

215. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

216. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

217. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

218. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.

219. Advanced Piano One credit

This course is designed for students interested in learning the fundamentals of music composition. The course begins with the basis of music theory and moves gradually to the more complex problems of music composition. Prerequisite: Keyboard Proficiency.

Note: The above courses may be taken for credit or non-credit. Students may elect to take courses for credit or non-credit, but they must maintain the same level of interest in the subject matter in order to receive credit.
Performing and Creative Arts

Music

Electives

Credits in voice, instrumental, piano, organ, harp and/or dance should be selected. 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:

- Lansing Community Choir
- Chamber Orchestra
- Chamber Chorus
- Dance
- Staff Band
- 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.

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<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>English Composition</td>
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<tr>
<td>ENG 102</td>
<td>English Composition II</td>
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<td>ENG 103</td>
<td>English Composition III</td>
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<td>S 123</td>
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<tr>
<td>HUM 101</td>
<td>Western Civilization I</td>
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<tr>
<td>HUM 102</td>
<td>Western Civilization II</td>
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<td>Western Civilization III</td>
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<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
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<tr>
<td>PSY 102</td>
<td>Educational Psychology</td>
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<tr>
<td>NUR 101</td>
<td>Basic Music for Elementary</td>
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<td>NUR 102</td>
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<tr>
<td>NUR 103</td>
<td>Practicum in Music</td>
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</tbody>
</table>

TOTAL CREDITS: 49

Minimum 3 credits required.
Performing and Creative Arts

Music

**197 - 198 C.S. O.C. - LCC Community Concert Band**

One credit

Open to students interested in music or from the College or the community. The college has a band directed by a different band director. This offers the student an opportunity to broaden his music experience by performing under the direction of different leaders.

**199 - 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 credits. Materials are varied. Prerequisite: Permission of instructor.

**200 - 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 performances opportunities are determined by the capabilities of the group. Entrance into the orchestra is determined by audition and invitation. Planned for Fall 1973.

**205 - Piano Ensemble**

Two credits

Intermediate and advanced piano students play duets, two piano and piano quartets. Performance will be expected. Requirements include mastery of the material in all phases 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: Ability to play intermediate and advanced repertoire. Text: Classics, Romantic and contemporary literature for ensemble use. Laboratory fee. $10.00. Planned for Fall 1973.

Applied Music - Private Study

Private Study For Applied Lessons With Resident Teachers

MUSIC 176, 177, 178 - Voice- Applied (Performing Major), Secondary (S.S., Teacher-Major), Elective or Minor

MUSIC 179, 180, 181 - Instrument-Applied, Secondary, Elective or Minor

MUSIC 182, 183, 184 - Piano-Applied, Secondary, Elective or Minor

MUSIC 185, 186, 187 - Organ-Applied, Secondary, Elective or Minor

MUSIC 188, 189, 190 - Harp-Applied, Secondary, Elective or Minor

MUSIC 191, 192, 193 - String Instrument-Applied, Secondary, Elective or Minor

MUSIC 194, 195, 196 - Woodwind-Applied, Secondary, Elective or Minor

Lansing Community College now offers its students a Music program of private study with LCC instructors locally qualified and approved. For each credit, the applied music credit is both vocal and instrumental music.

Music Lessons: All students must be enrolled in the LCC Music Office before registration for applied music credit.

**101 - Vocal and Instrumental Applied**

Three credits, 90 per term, one hour of lesson weekly, secondary credits. 2 credits, 90 per term, one 40 minute lesson per credit. All receive one lesson 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

**120 - 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 course is also helpful for those students taking "Music Theory and Ear Training" whose background is not sufficient. Offered each term. No prerequisites.

**130, 122, 132 - Music Theory**

These 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, inversion, non-harmonic tones, key changes, altered chords, and modulations. Students write small works in chorale style.

**151, 251, 252 - Music Theory**

Three credits

A continuation of MUS 121, 122, 123. 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 impressionism, use of modes, whole tone scales, and polytonal music. The student will write small original pieces in each of these styles.

**154, 153, 150 - 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.

**154, 152, 151 - Advanced Ear Training**

One credit

Ear training, sight singing, and dictation which parallels the 3rd year of theory. Students must be enrolled in advanced theory or have the permission of the instructor.

**300 - Introduction to Music Literature I**

Three credits

An overview of American Music literature from 1600 through 1800. The class emphasizes the aesthetic experience, through listening to recordings and live performances. This course is a course in music history, although it includes historical background of this era's greatest music. Open to non-majors and minors. Handel, J. S. Bach, Mozart, and Haydn will be emphasized. No prerequisite Fall term only.

238
291. Introduction to Music Literature II
Three credits
A representative sample of 19th century composers is studied, including Schubert, Wagner, and Brahms. Emphasis is on history, although major styles and trends will be discussed. Open to majors and non-majors. No prerequisite. Offered Winter term only.

205. 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 different period of music and materials.

293, 304, 305. Music History I, II, III
Three credits
A three-semester 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, although open to non-majors, must be taken in sequence. Prerequisite: One full year of theory. Fall term.

209. Piano Literature Analysis
Two credits
A four-semester course with emphasis on analysis of classic and preclassic 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 use musical notation and play written music of intermediate and advanced level. Text: A textbook and supplementary materials.

210. Piano Literature Analysis
Two credits
A continuation of MUS 209 with emphasis on contemporary music and masters. Offered Winter term only.

211. Piano Literature Analysis
Two credits
A continuation of MUS 210 with emphasis on contemporary music and masters. Offered Spring term only.

212. Piano Literature Analysis
Two credits
A continuation of MUS 211 with emphasis on the contemporary theatrical musical and current music at stature.

244, 245, 246. Elements of Conducting
Two credits
A practical course for those who possess a musical background and who have a community need or interest in careers 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, technical procedures, and general musicianship. Prerequisite: one year of music theory or permission of instructor. The course is essential.

155. Class Voice
Two credits
Class instruction for singers and speakers interested in learning the principles of voice production and technique as applied to solo singing and choral work. 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 30 students. 8:00 a.m.
Theater

Lansing Community College offers the student a variety of theatrical learning experiences. Theater groups include the Studio Theater, the Imaginary Players, and the Ledge Playhouse.

The Studio Theater is an all-student theater group recognized by the Student Government. Club members participate in acting, directing, designing, managing, and technical theatre production. Repertory series are offered each term, with one production each fall and spring term, and one production each summer term. Members of the Imaginary Players have the option to participate in productions at the Studio Theater. The Ledge Playhouse is a professional theater company that provides opportunities for college students interested in performing and working in theatre at a professional level.

Curriculum: Associate Degree in Arts – with Theater emphasis

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<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<td>THI 170</td>
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</table>

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

229 Introduction to Theater for the Playhouse Three credits

Designed to provide foundational understanding and appreciation of the living theater experience through participation in writing, directing, and technical theater. No prerequisites. (3ST)

311 Play Production Three credits

Designed to acquaint the student with practical problems in producing a play for an audience. Course work is centered 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. (3ST)

320 Scene Design Workshop Four credits

Prerequisites of theatrical production, offered only in the semester at the Ledge Playhouse. Prerequisites: Applicable experience in professional theater, significant involvement in productions at the Ledge Playhouse. Applicable experience in professional theater, significant involvement in productions at the Ledge Playhouse. The student is required to attend a formal one-hour lecture and work on laboratory projects at least five hours each week during semester term. No prerequisites. (3ST)
Performing and Creative Arts

Theater

241 Technical Theater
Six credits
Lecture and laboratory in the scenic elements of play production: analysis of theater form in relation to visual design; applications of basic elements of scenery construction. The Ledges Playhouse is the laboratory. Prerequisite: THR 231 or approval of the instructor. 3 (4-4)

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 231 or approval of the instructor. 3 (4-4)

243 Children's Theater Production
Three credits
For students or persons in elementary and secondary schools, church, 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; improvisational theater with children; designing and mounting of the production; the work of the director, actor, and technician; 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 (6-4)

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. 5 (6-4)

253 Acting III
Three credits
Vocal, physical, improvisational, and performance skills are applied to in-depth character analysis and the means of realizing characters 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 techniques 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 auxiliary problems. Students work directly with plays in rehearsal at the Ledges Playhouse. Prerequisite: THR 231 or THR 231 or approval of the instructor. 3 (4-4)

265 Costume I
Three credits
Designed to acquaint the student with historical costume fashion, the class emphasizes the characteristic of different historical periods, the garments worn and fabrics used. It offers the student instruction in basic sewing skills for theatrical clothing; 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 create costumes to be used in various productions offered by the department. Prerequisite: THR 255 recommended but not required. 3 (2-2)
ANDERSON, Joseph L.  
Chairman, Humanities  
A.B., Augustana College; B.D., Augustana Theology Seminary; S.T.M., Union Theology Seminary; Ph.D., Boston University.

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

ANSELMO, FeGaddi  
Assistant Professor, Social Science  
B.S., University of Santo Tomas; M.A., Michigan State University; Ph.D., Michigan State University.

ANTICO, John  
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