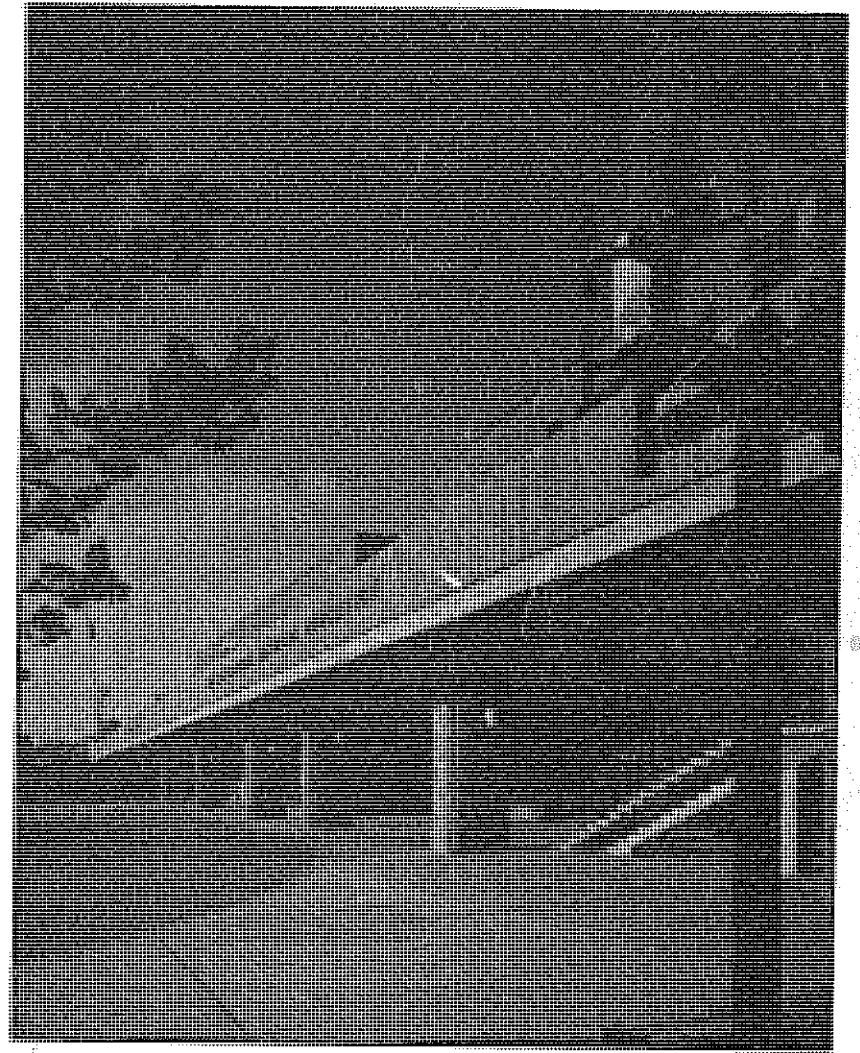


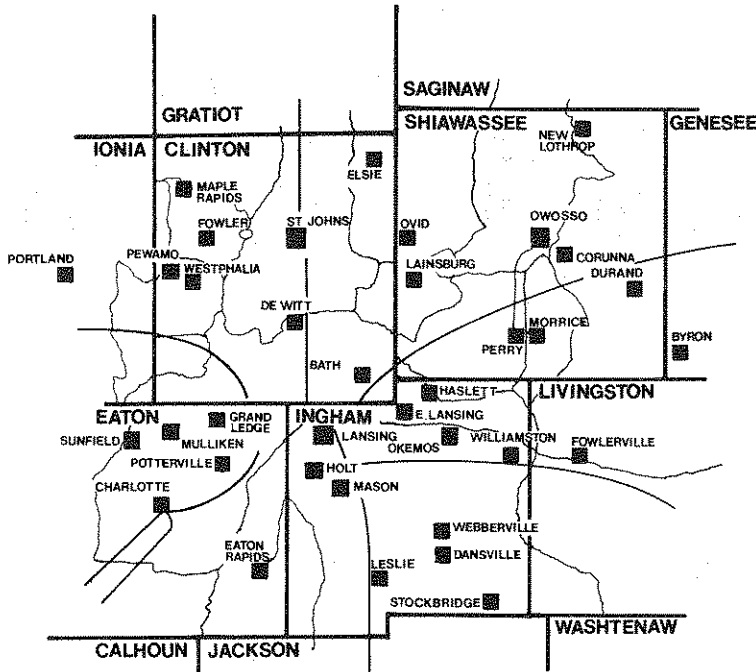
# LANSING COMMUNITY COLLEGE



## 1979-81 CATALOG



LANSING COMMUNITY COLLEGE  
SERVICE AREA

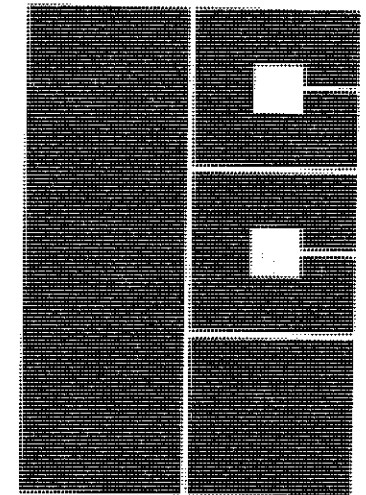


# LANSING COMMUNITY COLLEGE

419 North Capitol Avenue  
Lansing, Michigan  
Telephone 373-7400

CATALOG NUMBER FIFTEEN  
PUBLISHED WINTER 1979

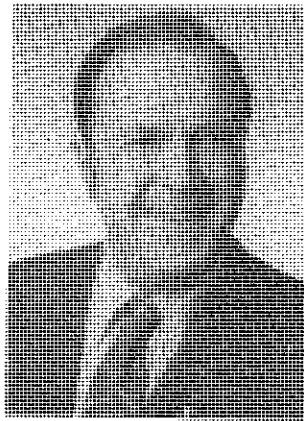
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Association of Colleges and Schools,  
Michigan Commission on  
College Accreditation



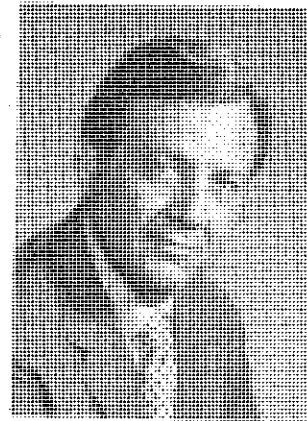
# BOARD OF TRUSTEES



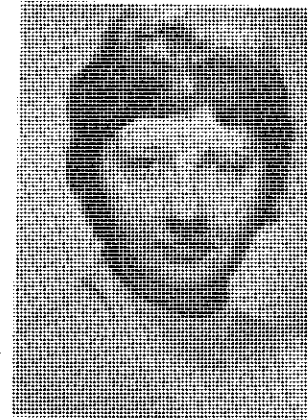
**PHYLLIS I. McKESSON**  
*Chairperson*



**JOHN H. DART**  
*Vice-Chairman*

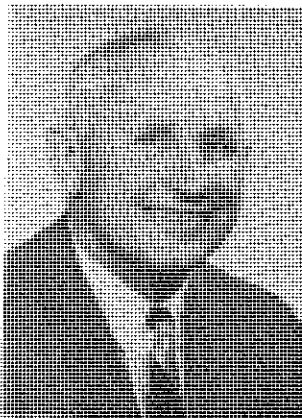


**DAVID L. FROH**  
*Trustee*

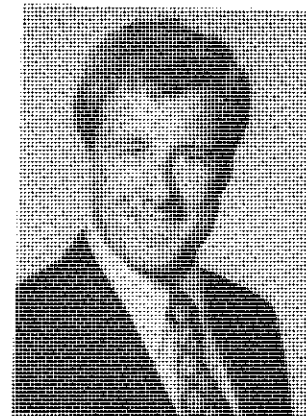
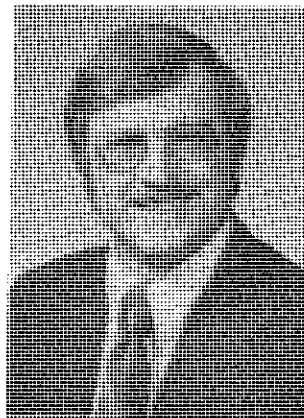


**CAROL A. HARDING**  
*Trustee*

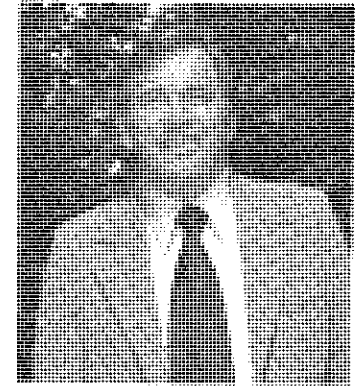
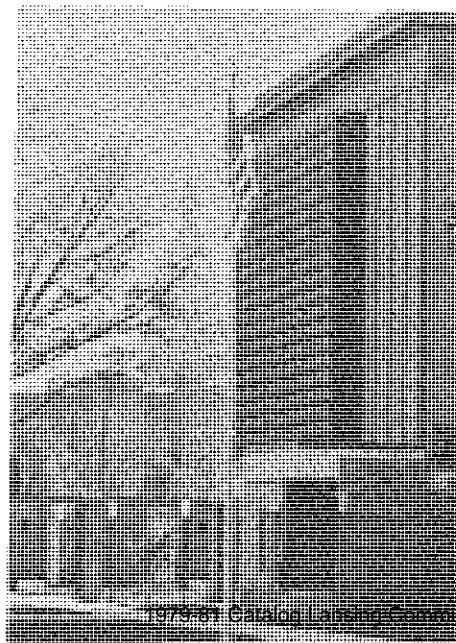
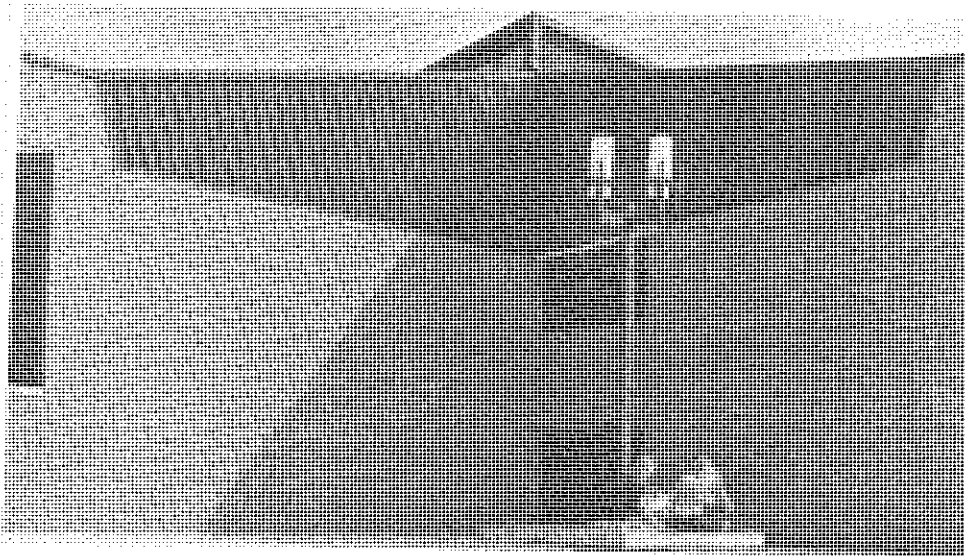
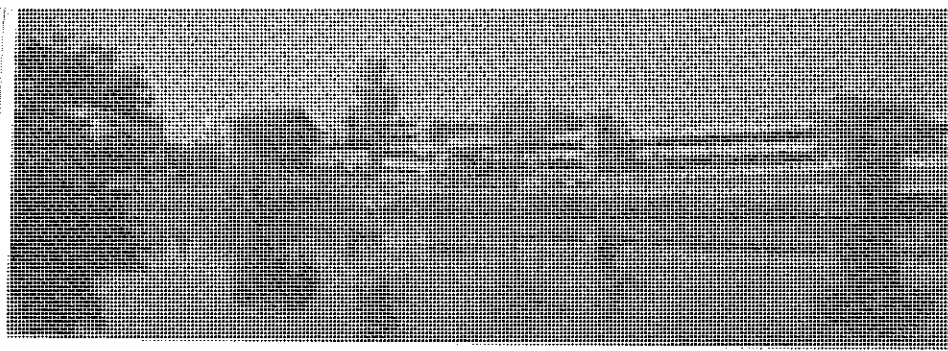
**DAVID D. DIEHL**  
*Secretary*



**JAMES L REUTTER**  
*Treasurer*



**WILLIAM C. HOLLISTER**  
*Trustee*



Dear Student:

A different student body and a different College...that is the story for the 1980's. If this were 1965, the average student age would be somewhere in the neighborhood of 22 or 23. Within a few years from now, the average will be approaching middle thirties.

What does this mean to you as a student and what is its impact on the College? We have learned over the years that age is no indicator of what will happen in the classroom, academically or any other way, but the diversity of ages offers you a real advantage. You will find a mix very similar to what you will find outside, in the community, with people representing all occupations, primarily meeting their needs as adults for their vocational and avocational direction.

In the first year of the College, our full-time students were 77 in number, 76 men and one woman. Today, out of approximately 17,000 students, a little over half are women.

LCC, the most diversified community college in Michigan, allows you, the student, to select from extensive curriculums found nowhere else in our State, and rarely across the Country. You will share your educational experience in an environment that is not atypical of everyday life, but unusual on a community college campus...one in which you can tie your education and your activities in the community closely together.

For the student just out of high school, the opportunity is even greater, for at Lansing Community College, you will have a chance to grow and learn in the best possible setting for attaining your goals, a setting that duplicates what you will be a part of throughout your life.

We have a very friendly institution, open and understanding, I am sure you will find this atmosphere conducive to learning and one in which you will enjoy participating.

Sincerely,

Philip J. Gannon  
President

## LANSING COMMUNITY COLLEGE

### COMMITMENTS

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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 the community are best served when the programs allow the student to integrate learning with experience. The programs are designed to support and guide the student in the achievement of career, social and personal identity through mastery of skills and search for meaning and belief. Confronted by the values of contemporaries and their heritage, the student gains insight into personal values.

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

### GOALS

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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 personal identity through a search for truth concerning individual culture and heritage.

3. To provide student services including counseling, employment placement, financial aids, informational services, tutorial assistance, and college entry services according to the student's academic, vocational, and personal needs.
4. To provide opportunities for students to develop leadership and social 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 now employed or contemplating employment in government, business, industry, and paraprofessional occupations.
7. To provide freshman and sophomore instruction in the arts, sciences, business, and other pre-professional programs.
8. To provide the curriculum opportunity for students to be graduated with Associate Degrees in arts, sciences, business and general education.
9. To provide special courses, programs or seminars—both on and off campus—in response to the immediate needs of the community.
10. To provide programs and activities that enrich the community's cultural life.
11. To make available the facilities and resources of the College to community groups to assist their organizational purposes.

### OBJECTIVES

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

*Not all courses described in this catalog are offered every term.*

**Lansing Community College is an equal opportunity college. Discrimination on the basis of race, color, religion, sex, national origin, age, height, weight, marital status or handicap is prohibited.**

# 1979

**JANUARY**

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## 1978-1982 Academic Calendar

**MINI-TERMS**

The College offers special mini-terms consisting of up to two weeks duration. These are especially attractive to students who wish to accelerate their education or improve their skills.

Mini-terms carry the same credit as regular term classes and offer the student an opportunity to complete a course requirement or gain elective credit on an accelerated basis.

Students should consult with the departmental chairperson for mini-term dates.

*The College reserves the right to make necessary changes in the academic calendar.*

**1978-1982 ACADEMIC CALENDAR****FALL TERM 1978**

Preparation & Faculty/Administration Days	September 14, 20
Registration Days	September 15, 18, 19
Classes Begin	September 21
Thanksgiving Recess	November 23, 24
Last Class Day	December 10

**WINTER TERM 1979**

Registration Days	January 3, 4
Preparation/Records Day	January 5
Classes Begin	January 8
Last Class Day	March 25

**SPRING TERM 1979**

Registration Days	April 2, 3
Preparation/Records Day	April 4
Classes Begin	April 5
Memorial Day	May 28
Graduation Day	June 10
Last Class Day	June 20

**SUMMER TERM 1979**

Registration Day	June 22
Classes Begin	June 25
Independence Day	July 4
Last Class Day	August 19

**FALL TERM 1979**

Preparation & Faculty/Administration Days	September 20, 26
Registration Days	September 21, 24, 25
Classes Begin	September 27
Thanksgiving Recess	November 22, 23
Last Class Day	December 16

**WINTER TERM 1980**

Registration Days	January 2, 3
Preparation/Records Day	January 4
Classes Begin	January 7
Last Class Day	March 23

**SPRING TERM 1980**

Registration Days	April 2, 3
Preparation/Records Day	April 4
Classes Begin	April 7
Memorial Day	May 26
Graduation Day	June 8
Last Class Day	June 22

**SUMMER TERM 1980**

Registration Day	June 23
Classes Begin	June 24
Independence Day	July 4
Last Class Day	August 18

**FALL TERM 1980**

Preparation & Faculty/Administration Days	September 18, 24
Registration Days	September 19, 22, 23
Classes Begin	September 25
Thanksgiving Recess	November 27, 28
Last Class Day	December 14

**WINTER TERM 1981**

Registration Days	January 5, 6
Preparation/Records Day	January 7
Classes Begin	January 8
Last Class Day	March 25

**SPRING TERM 1981**

Registration Days	April 1, 2
Preparation/Records Day	April 3
Classes Begin	April 6
Memorial Day	May 25
Graduation Day	June 7
Last Class Day	June 21

**SUMMER TERM 1981**

Registration Day .....	June 23
Classes Begin .....	June 24
Independence Day .....	July 3
Last Class Day .....	August 18

**FALL TERM 1981**

Preparation & Faculty/Administration Days .....	September 17, 23
Registration Days .....	September 18, 21, 22
Classes Begin .....	September 24
Thanksgiving Recess .....	November 26, 27
Last Class Day .....	December 13

**WINTER TERM 1982**

Registration Days .....	January 4, 5
Preparation/Records Day .....	January 6
Classes Begin .....	January 7
Last Class Day .....	March 24

**SPRING TERM 1982**

Registration Days .....	March 31, April 1
Preparation/Records Day .....	April 2
Classes Begin .....	April 5
Memorial Day .....	May 24
Graduation Day .....	June 6
Last Class Day .....	June 20

**SUMMER TERM 1982**

Registration Day .....	June 22
Classes Begin .....	June 23
Independence Day .....	July 5
Last Class Day .....	August 17

**GENERAL INFORMATION****System of Grades**

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

- A—Grade given to indicate distinct superiority in course work.
- B—Grade given to indicate better than average achievement but lacking distinct superiority.
- C—Grade given to indicate average achievement.
- D—Grade given to indicate below average achievement.
- F—Grade given to indicate insufficient achievement to pass.
- I—Incomplete. A grade given only when for good cause, the student has been unable to complete the required work of a course. "I" grades will remain as "I" until the student has satisfactorily completed the work. It will be the responsibility of the student receiving an "I" to consult with the instructor regarding the completion of work, which must be satisfactorily completed before the closing date of the next term of attendance. "I" grades will not be counted toward the establishment of an earned grade point average (GPA) nor toward graduation from the College.
- N—Given to indicate withdrawal passing from a course. Nothing is shown on the academic record for any student who withdraws officially from a class any time up to and including the last day of the fourth week of the term. On a complete withdrawal from the College, the official drop date will be posted to the academic record. A student withdrawing officially from a class after the end of the fourth week will be given a grade of "N" or "F" depending on the quality of work at the time of withdrawal, as determined by the instructor.
- P—Represents satisfactory performance.
- X—Audit.
- Z—No credit granted.
- R—Returning to course, no credit granted, for "open lab" courses only.

**Auditing**

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

**Honor Points**

Grade point averages are determined on the following basis:

A—4, B—3, C—2, D—1, F—0, N—0, P—0, X—0, R—0, Z—0

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

**Repeat Courses**

The student's academic record includes credit hours, honor points, and grade point averages 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. In the event that the second time through a repeated course is less successful than the initial time, the student may petition the Registrar to utilize the initial grade for the cumulative average rather than the second grade. It will be the responsibility of the student to submit such a petition to the Office of the Registrar. The privilege of option will be retroactive to all previous terms.

**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 academic work is unsatisfactory.

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

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

**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 has not fulfilled all financial obligations to the College.

**Examinations**

Students are required to take examinations at the appointed time and place in order to receive credit for a course. An examination taken at any time other than that officially scheduled is a "special examination" and the student must make the necessary arrangements with the instructor to have it administered.

**Withdrawal from College****A. Student self-initiated withdrawal**

1. If a student finds it necessary to withdraw from the College, the Registrar's Office should be contacted immediately, and the necessary forms for official withdrawal should be completed.
2. If a student withdraws prior to the end of the fourth week of class, no final grade is issued and no record of attempting the class appears on the academic record. A copy of the student initiated withdrawal form is maintained.

3. If a student withdraws after the end of the fourth week of class, a letter grade is issued by the instructor at the time of the withdrawal. This same grade will be placed on the final grade report and be recorded on the academic record. The withdrawal form will be in multiple copies allowing a copy to be given to the student, one to be sent to the Registrar for processing, and one to be retained by the instructor, and the option of one copy to be retained by the departmental chairperson.
4. A student withdrawing will receive a refund if the withdrawal takes place within the established refund period for each term.

**B. College initiated "Administrative Withdrawal"**

1. A student may be withdrawn from a class or a group of classes for the following reasons:
  - a. Non-attendance
  - b. Lack of proper prerequisites for the particular course
  - c. Student behavior that interferes with the instructional process
2. A student who is withdrawn prior to the end of the fourth week will not receive a grade and no record of attempting the class will appear on the academic record. A copy of the administrative withdrawal form is maintained.
3. A student who is withdrawn after the end of the fourth week of class will be given a letter grade at the time of the withdrawal. This same grade will be placed on the final grade report and be recorded on the academic record. The withdrawal form will be in multiple copies allowing a copy to be given to the student, one to be sent to the Registrar for processing, one to be retained by the instructor, and the option of one copy to be retained by the departmental chairperson.
4. A student who is administratively withdrawn may appeal the withdrawal. (See Administrative Withdrawal statement)
5. A student who is withdrawn will receive a refund if the withdrawal takes place within the established refund period for the term.

**Credits**

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

**Credit-No Credit Grading (Student Option)**

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

1. Course prerequisites and other criteria for enrolling in any course shall be determined by the department or division offering the course. These prerequisites apply to both the letter and the P-Z systems.
2. The choice of letter or P-Z system does not effect admission to the course.
3. All courses in every department or division are available on a P-Z basis except courses:
  - a. Listed in the student curricular guide as required courses, or
  - b. Specifically excluded from P-Z enrollment by the department offering the course.
4. No student may enroll in more than one course in a single term on the P-Z system without the departmental chairperson's permission; and may not accumulate more than one-fourth of the total credits on a P-Z basis.
5. Choice of the P-Z system must be made during enrollment in consultation with the academic advisor. Following registration, this decision may not be changed after the first week of class. Changes must be in accord with the stated procedures for change in enrollment.

**Dual Enrollment**

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

**Honors Program**

The Division of Arts and Sciences offers an Honors Program for students of outstanding academic ability. This program offers the advantages of independent study as well as regularly scheduled honors courses, and provides these students with the opportunity to explore their academic interests in depth. Recognition of the student's participation in the Honors Program is noted on the Associate Degree diploma upon graduation. Those students who wish to continue in Honors at major Michigan colleges will receive special consideration at those institutions.

Twenty-one awards covering full tuition and fees are offered each year to new students of superior academic ability who intend to study in this division. These awards are competitive and are based solely on academic excellence. Application forms are available on request from the Honors Program Coordinator, Division of Arts and Sciences.

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

1. Grades on the P-Z system are not included in computing the term or cumulative grade point average.
2. Enrollment in the P-Z system is recorded with the academic advisor and with the Registrar. The instructor's class list does not indicate which students are on the system.
3. When the course is completed, all students are graded on the regular letter system.
4. The Registrar then converts the regular letter grades to the P-Z system in accord with the definition of P and Z as follows:
  - 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 a major, credits earned under the P-Z system which are required for the new major will be converted to the letter system by the Registrar. This is done at the request of the department of the new major.
6. If the student requires a regular letter grade for transfer purposes, or for maintenance of academic eligibility, the office of the Dean of Student Personnel Services should be petitioned.

**Credit-No-Credit Grading: Departmental Option**

Some academic departments will grade students in selected courses or programs on credit-no-credit grading system. Students will be informed of this practice at the beginning of the term.

**Credit by Examination**

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

**SATISFACTORY PROGRESS****Good Standing**

A student whose cumulative Grade Point Average is in the Good Standing Range is considered to be making satisfactory academic progress.

**Warning Range**

A student whose cumulative Grade Point Average is in the Warning Range will be considered by the College as making minimum satisfactory academic progress. A student who falls in this range is strongly advised to make use of the academic support services that are available at the College. These services include: *consultation with instructor or Department Head, Testing and Counseling* (Arts and Sciences Building, Student Services Building, Old Central Building, Voc-Tech Building), *Tutorial Center* (Student Services Building), *Communication Lab and Math Lab* (Arts and Sciences Building).

**UNSATISFACTORY PROGRESS****Withdrawal Range**

A student whose cumulative Grade Point Average is in the Withdrawal Range is considered to be making unsatisfactory academic progress. This student will be withdrawn from the College because of unsatisfactory academic progress.

However, a student whose cumulative Grade Point Average falls in the Withdrawal Range during the student's first term of attendance may be allowed to reenroll on Probation as if the student were making satisfactory progress. If the student's cumulative Grade Point Average falls in the Withdrawal Range for a second consecutive term or any term thereafter, the student will be academically withdrawn from the College because of unsatisfactory academic progress.

**COMPLETION OF CREDITS ATTEMPTED**

In addition to the preceding, and beginning with the second term of attendance, a student who does not complete 50% of the credits attempted on a cumulative basis, will be considered as making unsatisfactory academic progress and may therefore be withdrawn from the College. Grades of completion include: A, B, C, D, E, F, Z, and X. Grades such as I and N are grades of non-completion.

**APPEAL OF ACADEMIC WITHDRAWAL**

Any student who has been academically withdrawn from the College may appeal the withdrawal to an academic hearing officer in the Registrar's Office. The decision to reinstate or not reinstate a student will be based on the individual merits of each appeal.

In the event that the academic hearing officer *does not* reinstate a student, that student may appeal within seven calendar days, but not later than through the fourth day of classes, in writing to the Matriculation Board of Review on a form provided by the Office of the Registrar. The Board will be convened in an expeditious manner, and a decision will be rendered within seven calendar days of the student's written appeal. Members of the Matriculation Board of Review are: Registrar (chairperson), Administrative Assistant to the Dean of Student Personnel Services, and a Counselor appointed by the Dean of Student Personnel Services.

In the event that the student is not in agreement with the decision of the Matriculation Board of Review, the student may appeal the decision to the Board of Appeals. This appeal must be submitted *in writing* to the Chairperson of the Board of Appeals within seven calendar days of the student's receiving the decision of the Matriculation Board of Review.

Members of the Board of Appeals are: Dean of Student Personnel Services (chairperson), the Dean of the Division of the student's curricular choice, and the Chairperson of the Department of Student Development Services. The Board of Appeals may, upon reviewing the merits of the case, render a decision or schedule a hearing with the student prior to rendering a decision. The review by the Board of Appeals will be conducted in an expeditious manner and a decision will be rendered within seven calendar days of the date of the student's appeal. The decision of the Board of Appeals is final.

The decisions of the Matriculation Board of Review and the Board of Appeals will be reached by simple majority vote, and a record will be maintained (in the student's cumulative records) regarding the decisions of these Boards. The student will be notified in writing of the decisions of these Boards.

**DISCIPLINARY CASES**

A student violating the rules and regulations of the College other than those involving academic performance and achievement (See Academic Policies) shall be subject to the following disciplinary action which is appropriate to the nature of the offense and that may take into account the student's previous conduct record:

1. Reprimand
2. Restrictions on activities or privileges
3. Requirement of restitution
4. Loss of course credit or reduction in grade points (for academic offenses)
5. Denial or revocation of a College honor or degree
6. Suspension
7. Dismissal

**DISCIPLINARY ACTION**

In situations involving minor offenses, disciplinary action may be taken by an appropriate officer of the College, and no report for further proceedings is necessary. However, the student may appeal any decision to the Judicial Board for review.

In situations involving serious offenses, the student's case will be handled according to the rights, privileges and procedures outlined in the College Policy on "Due Process." As a minimum, this process includes: 1) notice to the student of the nature of the proceedings against him/her, 2) a hearing before a quasi-judicial body at which the student has an opportunity to see the evidence or be apprised of the evidence against him/her and be allowed an opportunity to defend against this evidence, 3) notification of the Judicial Board's decision, 4) notification of the right to appeal to a higher body.

**LITERATURE TABLE PROCEDURES**

1. There will be two single tables available for the purpose of distributing literature by College clubs and organizations.
2. Only College-approved clubs and organizations will have use of the literature distribution tables.

3. Each organization must have a sample of materials being distributed on file in the Student Activities office and with their advisor prior to their distribution.
4. All materials distributed must have the name of the distributing organization clearly printed on the materials.
5. The literature tables will be attended at all times by members of the organization distributing the materials. (No organization will leave materials unattended by its membership on the literature tables.)
6. Registration for the use of literature tables will take place in the Student Activities Office prior to the time of desired use.
7. Each club using a literature table will clearly identify itself by use of an appropriate identifying sign.
8. Failure to comply with the above procedures may lead to the denial of the use of the literature table or disciplinary action.

### OTHER REGULATIONS

Lansing Community College reserves the right to change or add to the rules and regulations at any time.

### DUE PROCESS

Lansing Community College holds firm to the philosophy that matriculation in college does not deny any rights of citizenship to a student. At the same time, matriculation in college does not relieve a student of the basic responsibilities of citizenship. Thus, the College is constantly aware of the joint responsibilities, shared by the student body and the College, to uphold the principles of "due process" in all disciplinary action taken by the College or on the behalf of individual students.

The following principles are enunciated for the guidance and direction of all bodies hearing students accused of violating rules and regulations of the College:

1. The student shall be notified by an appropriate College official that he/she is accused of violating a regulation.
2. The student shall be notified that he/she may elect one of three courses of action.
  - a. The student may admit the alleged violation and request, in writing, that the administrative officer take whatever action seems appropriate. Should the student elect this course of action, he/she shall be notified that he/she is entitled to appeal the administration's decision to the Judicial Board. Any action assessed by the administrative officer shall be held in suspense until appeal processes to the Judicial Board have been completed. The student shall have seven days from the date of being informed of the administrator's decision to indicate, in writing, a desire to appeal the administrator's decision to the Judicial Board. If the student does not indicate in writing a desire to appeal the administrator's decision within the seven days, the action assessed by the administrative officer will be put into effect.
  - b. The student may admit the alleged violation, and request a hearing before the Judicial Board.

3. Prior to the hearing, the student shall be entitled to the following:
  - a. Written notification of the time and place of the hearing
  - b. A written statement of the charges of sufficient particularity so that the student may prepare his/her defense
  - c. Written notification of the names of the witnesses who are directly responsible for having reported the alleged violation to the Judicial Board, or, if there are no such witnesses, written notification of how the alleged violation came to the Board's attention
4. The student shall be entitled to appear in person and present his/her defense to the Judicial Board, and may call witnesses in his/her behalf. The student may also elect not to appear before the Judicial Board. Should he/she elect not to appear, the hearing shall be held in his/her absence.
5. The student shall be entitled to be accompanied by counsel.
6. The student or his/her counsel shall be entitled to ask questions of the Judicial Board or of any witnesses.
7. The student shall not be required to testify against himself or herself.
8. The student shall be entitled to an expeditious hearing of the case.
9. The student shall be entitled to an explanation of the reasons for any decision rendered against him/her.
10. The student shall be notified of his/her right to appeal the decision of the Judicial Board. Should the student appeal, any action assessed by the Judicial Board shall be held in suspense until acted upon by a higher body. The student shall have seven days from the date of notification by the Judicial Board of its action on the student's appeal to indicate, in writing, a desire to appeal the Judicial Board's decision to the Board of Trustees through the Office of the President of the College. If the student does not indicate, in writing, a desire to appeal the decision of the Judicial Board within the seven days, the action assessed by the Judicial Board will be put into effect.

The preceding shall serve as general guidelines with respect to the hearing of students accused of violating regulations. The implementation of the guidelines shall be left to the appointed administrative personnel.

The Judicial Board will hear cases referred to it by individual students through the established lines of appeal or by administrative officers of the College. Decisions rendered by the Judicial Board will be made by a simple majority vote of the total membership of the Judicial Board. The Judicial Board shall be empowered to make recommendations to appropriate parties for appropriate action, based on decisions rendered by its collective membership. The Judicial Board will consist of the following members:

1. The Dean of Student Personnel Services Division (Chairperson);
2. The Chairperson of the Student Development Services Department;
3. Two students appointed by the President of the Student Government from the student body with consent of the Student Government, with one alternate appointed in the same way, to serve in the absence of any student member;

4. Two faculty members appointed by the dean of the division in which the concerned student is enrolled or matriculating, with one alternate faculty member appointed in the same way, to serve in the absence of any faculty member.

The line of appeal to the Judicial Board of the College and the instructional division membership of the Judicial Board shall be explicit, depending on the type of case being presented.

When the case involves a disciplinary action based on an alleged violation of the general rules and regulations of the College (for example: explosives, alcoholic beverages; treatment of College property), the line of appeal shall be:

- a. The office of the Dean of Student Personnel Services Division;
- b. The Judicial Board of the College.

The instructional division membership of the Judicial Board shall be the two faculty members of the division in which the student is matriculating, when hearing a case involving a disciplinary action based on an alleged violation of the general rules and regulations of the College. When the Judicial Board is hearing an appeal based on a disciplinary decision of the office of the Dean of Student Personnel Services Division, the Dean of Student Personnel Services Division will relinquish chairmanship of the Judicial Board. A temporary chairperson will be elected by the remaining members of the Judicial Board from the remaining members of the Judicial Board.

When the case involves an academic imposition, based on alleged violation of the academic rules and regulations (for example: plagiarism and cheating) or alleged mistreatment of students by faculty, the line of appeal shall be:

- a. The faculty member involved;
- b. The chairperson of the instructional department involved;
- c. The dean of the division involved; and
- d. The Judicial Board of the College.

The instructional division membership of the Judicial Board will be the two faculty members of the division in which the class is offered where the academic imposition or alleged mistreatment is being appealed.

## GRAPHIC EXPLANATION OF LINE OF APPEAL

Office of  
Dean of Student Personnel

Judicial Board

(DISCIPLINARY ACTION)

Instructor

Chairperson of  
Department

Dean of  
Division

Judicial  
Board

(ACADEMIC IMPOSITION)

On June 28, 1976, the Lansing Community College Board of Trustees adopted the following resolution:

### RESOLUTION

WHEREAS, Title IX of the Educational Amendments of the United States Congress of 1972 specifically states, "no person in the United States shall on the basis of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination, under any educational program or activity receiving federal financial assistance. . . ." with certain exceptions.

NOW THEREFORE, it shall be the policy of Lansing Community College to fully comply with Title IX under guidelines adopted by the Department of Health, Education, and Welfare and approved by the President of the United States and the United States Congress.

**HANDICAPPED STUDENTS**

It is the policy of Lansing Community College to fully comply with Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112) as amended (P.L. 93-516) and the regulations issued pursuant thereto. Section 504 provides for equal opportunity for handicapped students in educational activities and programs.

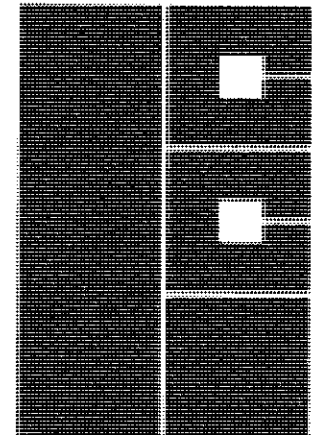
Lansing Community College does not discriminate on the basis of handicap in the recruitment and admission of students, the recruitment and employment of faculty and staff and the operation of any of its programs and activities, as specified by federal laws and regulations.

All handicapped students are urged to contact the Special Services Counselor, Room 105, the Arts & Sciences Building prior to entering the College and while they are attending the College for special services.

Special facilities for the physically handicapped include locations of access routes, ramps, reserved parking areas, elevators, telephones, drinking fountains, rest rooms and curb cuts. Handicapped persons are advised to apply at the Public Safety Offices, Room 250, Physical Education Building, telephone 373-7175, for a permit to park in areas designated for the handicapped.

# DIVISION OF STUDENT PERSONNEL SERVICES

Admissions  
Student Records-Registrar  
Department of Student  
Development Services  
Women's Resource  
Center  
Student Financial Aid,  
Placement and  
Veteran Services  
Student Activities  
Department of Physical  
Education and Athletics  
ROTC  
Center for Aging Education

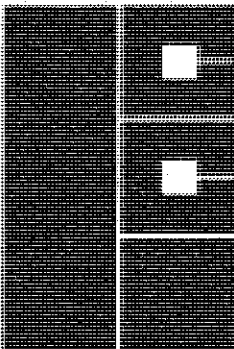




# DIVISION OF STUDENT PERSONNEL SERVICES



Dean William Schaar



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

## Student Personnel Services

The function of Student Personnel Services is to provide support services for the student as a learner in an instructional environment. The program and service objectives of the division are:

1. To assist the student in gaining access to the instructional program of the College through admissions processing, counseling and advising, informational services, registration, and orientation.
2. To assist the student in maintaining a status of academic good standing in the College by providing record maintenance, counseling services, financial aids, career exploration, individual assessment, academic advising, achievement monitoring, tutorial services, and student employment placement.
3. To assist various student populations in meeting their special needs. Some of these student populations are veterans, the older adult student, the returning mature woman student, the economic high-need student, and students involved in agency sponsored programs.
4. To assist students with learning experiences outside of the formal classroom, such as student government, student interest clubs, travel trips, intramural athletics, intercollegiate athletics, student publications, and cultural involvement with the service community.
5. To assist students with formal instructional opportunities designed to help students acquire adjustment and activity skills, such as physical education, student development, college survival, military science, and aging and retirement education.
6. To help students to enter a field of work or career, or to continue their career developments by providing employment placement assistance, job market information, college transfer articulation, and student follow-up.

## Divisional Services

### ADMISSIONS

#### Application for New Students

The Admissions Department has as its main objective the smooth and uncomplicated processing of all applicants to the College. In our attempts to accomplish this objective, every effort will be made to properly inform the College community of existing programs and the proper method of matriculating into them.

Application forms for college entry and consideration for financial assistance are available at the Admissions Office. You may call Area Code 517-373-7160 or write: Admissions Office, Lansing Community College, 419 N. Capitol Ave., P.O. Box 40010, Lansing, MI 48901.

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 desiring to attend should refer to the section on "Dual Enrollment" 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. The College does encourage all persons seeking admission to complete their high school preparation.

Early completion of the application form allows the maximum opportunity for an applicant to enroll in the desired course at the desired class period. Procedural directions for making application are as follows:

1. Complete all items and information asked for in the application for admission.
2. Attach a \$10 application fee (check or money order) to the application. This is a non-refundable fee. Once paid, the fee does not have to be paid again if attendance is interrupted.
3. If you are in high school or have graduated from high school in the last year, mail or personally deliver the application and fee to the high school, to be completed and forwarded with a high school transcript to Lansing Community College.
4. Other applicants may personally deliver the application and fee to the admissions clerk's desk on the first floor of the Student Personnel Services Building.
5. Lansing Community College suggests the starting point in English, mathematics and/or reading courses from high school grades and national test scores. If you would like further assistance in selecting a starting point in these areas you may contact the proper laboratory: English and Reading—Communications Department Laboratory located on the third floor of the Arts and Science Building at LCC Mathematics—Mathematics Laboratory located on the first floor of the Arts and Science Building at LCC.

### High School Articulation

Effort is made by Student Personnel Services and participating departments of the College to keep the area high schools informed about various aspects of the College program. Participating 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.

### Residency

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

#### *Before acceptance into College*

Students under 18 years of age qualify as residents if:

- a. The student's parents or legal guardians have resided within the LCC district for at least six months immediately prior to the first day of classes.
- b. The student is married and has resided within the LCC district at least six months immediately prior to the first day of classes.
- c. The student is unmarried and is recognized as "emancipated" (receives no financial support from parent or legal guardian) and has resided within the LCC district for at least six months immediately prior to the first day of classes.

- d. The student is enrolled under the provisions of Act 245, Public Acts of 1935, as amended by Act 371, Public Act of 1965 (students receiving benefits under the Michigan Veterans' Trust Fund).
- e. The student is an employee of a business or industrial firm within the LCC district, and the employer, by written agreement, agrees to pay directly to the College all tuition and fees of the sponsored student for employer-approved classes.

Students over 18 years of age qualify as residents if:

- a. The student has resided within the LCC district at least six months immediately prior to the first day of classes.
- b. The student is an employee of a business or industrial firm within the LCC district, and the employer, by written agreement, agrees to pay directly to the College all tuition and fees of the sponsored student for employer-approved classes.
- c. The student is enrolled under the provisions of Act 245, Public Act of 1935 as amended by Act 371 Public Act of 1965 (students receiving benefits under the Michigan Veterans' Trust Fund).

#### *After Acceptance into College*

Students under 18 years of age qualify as residents if:

- a. The student's parent or guardian has established residency within the LCC district for at least six months immediately prior to the date of petitioning for a change in residency status.
- b. Student is married and has established residency within the LCC district for at least six months prior to the date of petitioning for a change in residency status.
- c. Student is unmarried and is recognized as "emancipated" and has established residency within the LCC district for at least six months prior to the date of petitioning for a change in residency status.

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

#### *Residency for Migrant Students:*

Michigan migrants are defined as individuals who have been continually engaged, with their families, in interstate travel while in the pursuance of their livelihood via seasonal agricultural work or related industry in the State of Michigan.

- a. Criteria for "residency" status

The individual must have been employed within the College district for a minimum of six months. Employment need not be in consecutive months, but the migrant must work at least two months during three of the preceding five years or seasons.

## b. Criteria for "Out of District-In State" status

The individual must have been employed within the State of Michigan for a minimum of six months. Employment need not be in consecutive months, but the migrant must work at least two months during three of the preceding five years or seasons.

## c. Documentation for Migrant Status

Notorized affidavit from relevant agencies working with Michigan migrants. The relevancy of the agency will be determined by the Office of Admissions at Lansing Community College.

*Petitioning for Change in Residency Status*

The student is notified of residency status upon acceptance into the College. If there has been an error in being coded as a non-resident, residency status will be changed when proof of error is presented. If the student has attended the College under a non-resident code, residency status may be changed by meeting one of the preceding qualifications.

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

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

*A non-resident, owning property in the LCC District* will receive credit for property taxes paid in support of the College by the student or the student's guardian. The taxes paid must be in support of the current academic year and the credit cannot exceed the differential between resident and non-resident tuition rates for the current academic year.

Purchasing of resident property within the LCC College District eliminates the waiting periods for the establishment of residency for the purposes of tuition and fees. The student or student's guardian must reside on the property.

**Application for Transfer Students**

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

1. Complete the student portion of the application form.
2. Attach a \$10 application fee.
3. Present the application to the admissions clerk's desk on the first floor of the Student Personnel Services Building or mail it to: Admissions Office, Lansing Community College, 419 N. Capitol Avenue, P.O. Box 40010, Lansing, Michigan 48901.
4. Request that official transcripts from all other colleges or universities which student has attended be sent to the Admissions Office. An evaluation of credits from institutions previously attended will be made by the Registrar's Office and a copy will be sent to the student.

**Guest Applications**

Guest applicants must submit a guest application form supplied by the registrar's office of the college they are attending. Both sides of this form must be completed. The guest applicant must also complete the LCC application form. Transcripts are not necessary. A non-refundable application fee of \$5.00 is required. A guest application must be renewed each term if the applicant wishes to continue in that category of admission.

**Dual Enrollment**

This program is designed to provide an opportunity for qualified high school students to earn college credit commensurate with their high school study. The credit will count toward a degree program at Lansing Community College. High school credit will or will not be granted according to the discretion of the participating high school. Dual enrollment also affords students an opportunity for educational enrichment in specific areas where students have displayed unusual ability and interest in high school; i.e., auto mechanics, art, music, drama, typing, shorthand, etc.

For eligibility in the Dual Enrollment Program:

1. Applicant must be working toward graduation requirements at an accredited high school.
2. Applicant must have attained junior or senior high school standing prior to applying for the program. Prior to attaining junior standing, a student may audit LCC courses in designated approved programs.
3. Applicant must have a written recommendation from the high school principal or representative each quarter while attending Lansing Community College. Applicant must be sure the LCC enrollment does not conflict with high school day classes.
4. The final decision for acceptance rests with Lansing Community College.

Application procedure for Dual Enrollment:

1. Applicant must obtain a written recommendation from the high school principal or counselor.
2. Applicant must complete a College application.
3. Applicant must submit the completed application, with a non-refundable \$10 application fee, to the high school records office.
4. The application is finalized by the high school records office and sent to the LCC Admissions Office.
5. A decision and notification will be made within three weeks after receipt of the application.

**Admission to Health Career Programs**

Applicants to any of the Health Career Programs at Lansing Community College are advised to check with the Admissions Office for specific and detailed information concerning the prerequisites for admission to these programs. You may call Area Code 517-373-7160 or write: Admissions Office, Lansing Community College, 419 N Capitol Ave., P.O. Box 40010, Lansing, Michigan 48901.

**International Students**

Lansing Community College admits International students within the following guidelines, which are designed to create a maximum positive experience for the International student, the service community and the College community. All International student applicants are urged to contact the Admissions Office prior to applying.

1. The International student must present proper visa credentials as a student.
2. The International student must present proper and translatable academic credentials in meeting the admissions requirements of the College.
3. The International student must provide evidence of English competency to assure reasonable success in the basic English program of the College. (This will include a personal interview with an admissions officer of the College or with the International Student Admissions Committee prior to a statement of admission.)
4. International students must provide evidence of full financial support, including college expenses, costs of housing, full medical and dental services and all other expenses incurred during their stay in the U.S. The Admissions Office will determine the method by which the student will provide this evidence.
5. It must be determined that the instructional program of the College can meet the specific educational needs and desires of the International student.
6. The preceding guidelines must be completed by the International student three weeks in advance of the day classes begin for the term the student is applying. No applications will be considered after this specified date.

In addition, the student must complete a regular application form for attendance and the necessary immigration forms which are available in the Admissions Office.

Lansing Community College charges an administrative fee for International students admitted under Federal, State, or local governmental, private agency, individual, or group contracts.

The administrative fee covers the costs of services that are attendant to the special needs of the International students, such as accounting services, agency reports, emergency funding, personal assistance, and contract implementation. This administrative fee is currently \$125.00 per student for each academic term.

**Registration Procedures**

Registration periods are indicated in the school calendar. Students will register for classes according to instructions which are published each term in the Class Schedule. The schedule indicates general information on the dates, times, and locations for registration.

**Drops and Adds**

Dropping or adding courses involves procedures which must be carried out by the student so that the Registrar's Office may keep accurate accounting. During the first week of a term, a student may make changes in class schedules by following procedures outlined in the class schedule booklet. A student may withdraw from a course before the end of the fourth week without academic penalty.

**Tuition and Fees\***

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

**Tuition, Resident Students**

Per credit hour .....	\$11.00
Average Tuition per term (15 hours) .....	\$165.00

**Tuition, Non-Resident**

Per credit hour .....	\$17.00
Average Tuition per term (15 hours) .....	\$255.00

**Tuition, Out of State Students**

Charged per credit hour .....	\$27.00
Average Tuition per term (15 hours) .....	\$405.00

Tuition for apprenticeship students varies according to the program of study.

**Fees, all students**

Application fee (new and transfer students) .....	\$10.00
Registration fee (guest) .....	\$ 5.00

**College activities fee (each term)**

1-6 credit hours .....	\$ 1.00
7-11 credit hours .....	\$ 3.00
12 or more credit hours .....	\$ 5.00

Summer term (all students) .....	\$ 1.00
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**Tuition Refund Policy (All terms)**

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

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

Refunds are not retroactive to previous terms. Special questions relating to refunds should be addressed to the Registrar's Office.

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

Laboratory fees vary according to the course of study. The class schedule for each term will list all laboratory fees.

Lansing Community College charges an administrative fee for International students admitted under Federal, State, or local governmental, private agency, individual, or group contracts.

The administrative fee covers the costs of services that are attendant to the special needs of the International students, such as accounting services, agency reports, emergency funding, personal assistance, and contract implementation. This administrative fee is currently \$125.00 per student for each academic term.

#### Transfer of Credits from LCC to other Colleges

The official transcript of a student's record at Lansing Community College will be mailed to another institution at the written request of the student. An official transcript is signed by the LCC Registrar and bears the Lansing Community College official seal.

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 a minimum of 24 hours.

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

#### Acceptance and Evaluation of Transfer Credits

Credit will be given for courses transferred from accredited institutions. The credit value of each of these courses will be determined by the Office of the Registrar at Lansing Community College.

Credits only, not grades, are transferred for "C" or better courses. When the transferring overall grade point average of a student is at or above a 2.00 on a 4.00 scale ("C"), the "D" grades will be accepted as credit. When the transferring overall grade point average of a student is below a 2.00 on a 4.00 scale, "D" credits will be accepted upon request of the student. But the "D" grade will be averaged in the student's Lansing Community College record. It will be the responsibility of the transferring student to request the Office of the Registrar to evaluate "D" credits. "D" credits transferred to Lansing Community College have the same limitations in serving as prerequisites as do "D" credits earned at Lansing Community College.

Official transcripts of a Lansing Community College student's record will be mailed to another institution at the request of the student. An official transcript is signed by the Registrar and bears the college seal.

#### Criteria Used in Credit Evaluation

1. Freshman and Sophomore level courses are accepted in transfer. Higher level courses are accepted if they correspond to a specific course at LCC.

2. Credits only, not grades, are accepted for "C" or better grades earned in transfer courses. "D" grades are only accepted in transfer when your overall GPA at that School was 2.00 ("C") or above. If your GPA was below 2.00 ("C"), you must petition the Registrar's office; otherwise no "D" credits will be accepted.
3. No evaluation is made when a student has received a 2 or 4-year degree from another institution. This may be done upon request.
4. Credits from non-accredited institutions are evaluated by departmental chairpersons of the area in which the student enrolled. If the student's curriculum is changed, the Registrar's office should be notified, as there may be a difference in the evaluation made.
5. A student may request review of this evaluation if it is felt that a course description differs from the way it is evaluated. Verification of the change will be made with the departmental chairperson concerned.
6. All courses will be considered for evaluation. In most cases the course will be accepted for a corresponding LCC course. In some cases where LCC has no department or area similar to the course in question no credit will be given.
7. Only official transcripts will be evaluated. Student grade reports or unofficial copies of the record are not acceptable.
8. You will receive one copy of the evaluation. One copy is kept in your LCC folder. One copy is on file in the Registrar's office.
9. Your total number of transfer credits will be shown on your academic record. They will also be indicated on the grade report you receive at the end of each term.
10. Fractional credits shown in your total credits transferred in will not be included in your LCC records. Fractional credits are rounded down to the nearest whole number.

#### Evaluation of 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 chairperson of the department in which the student has enrolled. The departmental chairperson has four prerogatives for evaluating transcripts issued by non-accredited institutions and for granting credits toward graduation from Lansing Community College:

1. Credit may be granted if the student demonstrates skills commensurate with the performance required for satisfactory completion of existing courses.

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

The departmental chairperson 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 chairperson of the department in which the student is enrolled will be responsible for consulting with the additional departmental chairpersons. The written reply to the office of the Registrar will include the signatures of each involved departmental chairperson.

#### Student Access to Records

A student and/or parent of a student, if the student is less than 18 years of age, shall have the right, upon proper identification, to inspect and review any and all official records, files and data directly related to the student. These records include all materials that are incorporated in the student's cumulative folder, including, but not limited to, identifying data, completed, academic work, standardized test scores, attendance data, inventory results, health data, family background data, and instructor or counselor ratings and observations.

Requests to inspect and review student files shall be in writing to the Registrar and shall be responded to within a reasonable period of time, but in no case more than forty-five days after the request is made.

The student shall have an opportunity for a hearing before a College official designated by the President, to challenge the contents of the student's records, to insure that the records are not inaccurate, misleading, or otherwise in violation of the privacy or other rights of the student, and to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein.

Written approval of the student or parent concerned is required before release will be given of personally identifiable information from the student's records or files. Exceptions to this statement include releasing information to:

1. Academic and administrative staff of Lansing Community College;
2. High schools, colleges and other educational institutions in which the student is enrolled or intends to enroll; (students will be notified as to the information released if the request does not emanate from the student).
3. Individuals and organizations who provide financial aids or scholarships to students;
4. Authorized representatives of the Comptroller General of the United States, the Secretary of the Department of Health, Education and Welfare, and administrative heads of State and Federal educational agencies authorized by law;

5. Appropriate authorities in compliance with judicial orders and pursuant to lawfully issued subpoenas. The student shall be notified of any such orders or subpoenas prior to compliance by the College.

Those individuals, agencies or organizations who desire access to the student's records and files, who fall within the preceding excursions, shall sign a written form indicating specifically the legitimate interest for seeking the information. These forms shall be maintained permanently in the student's files.

A hold may be applied to the release of a transcript or other information requested from the academic records of a student who has an overdue indebtedness to the College, except that the student shall have personal access to such records.

Students may request that their academic records be given to any person or group by asking the Registrar in writing.

Student lists shall not be distributed to non-College agencies.



**COURSE DESCRIPTIONS**

Throughout the catalog, there are course descriptions that are followed by digits with parenthesis; for example, 5 (5-0). The first digit (in this case, 5) refers to the number of credits for the course; the second digit (5) refers to the number of hours per week for lecture/discussion; the third digit (0) refers to the number of laboratory hours per week.

**COURSE AND DEPARTMENT CODE**

Division of Student Personnel Services		Division of Learning Resources	
AS	Aerospace Studies—ROTC	LT	Library Technology
GER	Gerontology	MRT	Media, Radio, Television
MS	Military Science	PHO	Photography
PEA-PEJ	Physical Education		
SD	Student Development		

**Attendance**

Students are expected to attend all sessions of each course in which they are enrolled. Failure to do so may result in academic penalty or withdrawal from the class.

Absence in no way relieves the student of the responsibility for completing all work in the course to the satisfaction of the instructor in charge.

When a student receives a faculty-initiated notice on non-attendance, it is the student's responsibility to contact the instructor.

When a student cannot attend class due to illness or other extenuating reasons the class instructor should be notified. This can be done by phoning the departmental office in which the instructor is a member and leaving a message for that instructor.

**Degrees**

Associate Degrees are granted to all who meet graduation requirements. A minimum of 90 credit hours is required for an Associate Degree. A student completing the requirements during the fall or winter term should apply for graduation during the term prior to that in which the work is completed. Those students who maintain a 3.75 grade point average will be graduated Summa Cum Laude; those who maintain a 3.50 grade point average will be graduated Magna Cum Laude; those with a 3.25, Cum Laude. Students must complete 60 credit hours of work at Lansing Community College to qualify for honors.

**Graduation Requirements**

To graduate from Lansing Community College a student must:

1. Complete a two-year course of study adapted to individual needs, interests, and capacities, and conform to a plan acceptable to the College. The course of study should: (a) be suitable for transfer to admit the student to the level of upper-division work in a four-year college of personal choice or (b) form a program of study to be completed at the end of two years at Lansing Community College.
2. Maintain a minimum grade point average of 2.0.
3. Earn toward graduation at least 30 credits in attendance at Lansing Community College.

4. File with the Office of the Registrar a petition for graduation one term preceding the term of graduation.
5. Have completed a three semester hour (or equivalent) course in Political Science, required by Act 106, Public Acts of 1954, State of Michigan. (Social Science 103, Political Science, and 104 American Government will satisfy this requirement.)
6. Satisfy all general and specific requirements of Lansing Community College including the fulfillment of all financial obligations.
7. Have the approval of the administration and the Board of Trustees.

**Weekend and Evening Classes**

In addition to the regular academic curricula for day students, Lansing Community College offers a highly diversified program of Saturday, Sunday and evening courses for those who choose for personal or occupational reasons to attend class outside of regular daytime sessions.

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

Counseling and testing services are available to evening students to assist them in the selection of the best possible educational and vocational program.

Lansing Community College weekend and evening programs provide educational opportunities to many who are now finding the time to improve their academic or vocational background.

**TABLE FOR DETERMINING ACADEMIC STATUS**

The following is the table for determining your academic standing at Lansing Community College. To use this table: 1) locate on your grade report or academic transcript your cumulative grade point average and the total number of credits completed, 2) find your position in the left-hand column of the table, 3) read across the page to your right until you locate the column which includes your current cumulative grade point average. This column heading indicates whether you are in the "Good Standing Range," the "Warning Range," or the "Withdrawal Range." Immediately following the table are the definitions of the various academic ranges at Lansing Community College. Please refer to these definitions for an exact explanation of your academic status. A detailed explanation of the academic appeal process is also printed in the section immediately following the table.

In addition to using the table, students in certain selective admission programs may be placed on program probation or receive academic warning for deficiencies in their clinical performance even though the student's cumulative G.P.A. may be within the overall College's Good Standing Range.

## ACADEMIC STATUS

Credits Completed	Satisfactory Progress		Unsatisfactory Progress
	Good Standing Cumulative G.P.A.	Warning Range Cumulative G.P.A.	Withdrawal Range Cumulative G.P.A. of
1-11	1.88 and above	1.00 — 1.87	.99 - or less
12	1.89 " "	1.00 — 1.88	1.00 "
13	1.89 " "	1.03 — 1.88	1.02 "
14	1.89 " "	1.05 — 1.88	1.04 "
15	1.90 " "	1.06 — 1.89	1.05 "
16	1.90 " "	1.08 — 1.89	1.07 "
17	1.90 " "	1.10 — 1.89	1.09 "
18	1.91 " "	1.11 — 1.90	1.10 "
19	1.91 " "	1.13 — 1.90	1.12 "
20	1.91 " "	1.14 — 1.90	1.13 "
21	1.92 " "	1.16 — 1.91	1.15 "
22	1.92 " "	1.18 — 1.91	1.17 "
23	1.92 " "	1.19 — 1.91	1.18 "
24	1.93 " "	1.21 — 1.92	1.20 "
25	1.93 " "	1.22 — 1.92	1.21 "
26	1.93 " "	1.24 — 1.92	1.23 "
27	1.94 " "	1.26 — 1.93	1.25 "
28	1.94 " "	1.27 — 1.93	1.26 "
29	1.94 " "	1.29 — 1.93	1.28 "
30	1.95 " "	1.30 — 1.94	1.29 "
31	1.95 " "	1.32 — 1.94	1.31 "
32	1.95 " "	1.34 — 1.94	1.33 "
33	1.96 " "	1.35 — 1.95	1.34 "
34	1.96 " "	1.37 — 1.95	1.36 "
35	1.96 " "	1.38 — 1.95	1.37 "
36	1.97 " "	1.40 — 1.96	1.39 "
37	1.97 " "	1.42 — 1.96	1.41 "
38	1.97 " "	1.43 — 1.96	1.42 "
39	1.98 " "	1.45 — 1.97	1.44 "
40	1.98 " "	1.46 — 1.97	1.45 "
41	1.98 " "	1.48 — 1.97	1.47 "
42	1.99 " "	1.50 — 1.98	1.49 "
43	1.99 " "	1.51 — 1.98	1.50 "
44	1.99 " "	1.53 — 1.98	1.52 "
45	2.00 " "	1.54 — 1.99	1.53 "
46	2.00 " "	1.56 — 1.99	1.55 "
47	2.00 " "	1.58 — 1.99	1.57 "
48	2.00 " "	1.59 — 1.99	1.58 "
49	2.00 " "	1.61 — 1.99	1.60 "
50	2.00 " "	1.62 — 1.99	1.61 "
51	2.00 " "	1.64 — 1.99	1.63 "
52	2.00 " "	1.66 — 1.99	1.65 "
53	2.00 " "	1.67 — 1.99	1.66 "
54	2.00 " "	1.69 — 1.99	1.68 "

55	2.00 and above	1.70 — 1.99	1.69 "
56	2.00 " "	1.72 — 1.99	1.71 "
57	2.00 " "	1.74 — 1.99	1.73 "
58	2.00 " "	1.75 — 1.99	1.74 "
59	2.00 " "	1.77 — 1.99	1.76 "
60	2.00 " "	1.78 — 1.99	1.77 "
61	2.00 " "	1.80 — 1.99	1.79 "
62	2.00 " "	1.82 — 1.99	1.81 "
63	2.00 " "	1.83 — 1.99	1.82 "
64	2.00 " "	1.85 — 1.99	1.84 "
65	2.00 " "	1.86 — 1.99	1.85 "
66	2.00 " "	1.88 — 1.99	1.87 "
67	2.00 " "	1.90 — 1.99	1.89 "
68	2.00 " "	1.91 — 1.99	1.90 "
69	2.00 " "	1.93 — 1.99	1.92 "
70	2.00 " "	1.94 — 1.99	1.93 "
71	2.00 " "	1.96 — 1.99	1.95 "
72	2.00 " "	1.97 — 1.99	1.96 "
73	2.00 " "	1.97 — 1.99	1.96 "
74	2.00 " "	1.97 — 1.99	1.96 "
75	2.00 " "	1.97 — 1.99	1.96 "
76	2.00 " "	1.97 — 1.99	1.96 "
77	2.00 " "	1.97 — 1.99	1.96 "
78	2.00 " "	1.97 — 1.99	1.96 "
79	2.00 " "	1.97 — 1.99	1.96 "
80	2.00 " "	1.97 — 1.99	1.96 "
81	2.00 " "	1.97 — 1.99	1.96 "
82	2.00 " "	1.97 — 1.99	1.96 "
83	2.00 " "	1.97 — 1.99	1.96 "
84	2.00 " "	1.97 — 1.99	1.96 "
85	2.00 " "	1.97 — 1.99	1.96 "
86	2.00 " "	1.97 — 1.99	1.96 "
87	2.00 " "	1.97 — 1.99	1.96 "
88	2.00 " "	1.97 — 1.99	1.96 "
89	2.00 " "	1.97 — 1.99	1.96 "
90	2.00 " "	1.97 — 1.99	1.96 "
91	2.00 " "	1.97 — 1.99	1.96 "
92	2.00 " "	1.97 — 1.99	1.96 "
93	2.00 " "	1.97 — 1.99	1.96 "
94	2.00 " "	1.97 — 1.99	1.96 "
95	2.00 " "	1.97 — 1.99	1.96 "
96+	2.00 " "	1.97 — 1.99	1.96 "



## Student Personnel Services

## Division of Arts and Sciences

ANT	Anatomy
AST	Astronomy
BIO	Biology
CD	Child Development
CEM	Chemistry
COM	Communication
CMP	Computer Science
ED	Education
ENG	English
FRN	French
GE	Geology
GEO	Geography
HST	History
HOR	Horticulture
HUM	Humanities
HUS	Human Services
JRN	Journalism
MET	Meteorology
MIC	Microbiology
MTH	Mathematics
NS	Natural Science
OCN	Oceanology
OER	Outdoor Education
PGY	Physiology
PHL	Philosophy
PHY	Physics

## Division of Business

ACC	Accounting
AIB	American Institute of Banking
BUS	Business
CCR	Court Conference
CLU	Certified Life Underwriter
DP	Data Processing
EC	Economics
HMF	Hotel Motel Food
INS	Insurance
LAW	Law
LUT	Life Underwriters Training
LE	Law Enforcement

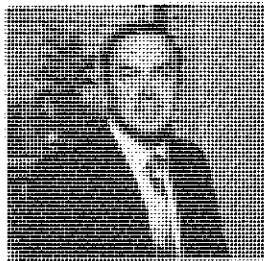
PLS	Political Science
PS	Public Service
PSY	Psychology
RDG	Reading
REL	Religion
SA	Sociology and Anthropology
SC	Science
SPH	Speech
SPN	Spanish
SS	Social Science
SW	Social Work
WRI	Writing

LR	Labor Relations
MDC	Management Development Center
MGT	Management
MKT	Marketing
RE	Real Estate

## Student Personnel Services

## Division of Applied Arts and Sciences

AFT	Aviation Flight Technology	ESA	Emergency Services—Advanced
APA	Aviation Powerplant & Airframe	EST	Emergency Services Technician
ART	Art	ET	Electronics Technology
AT	Architectural Technology	FST	Fire Science
ATG	Applied Technology—General	HAC	Heating and Air Conditioning
ATR	Applied Technology	HC	Health Careers
ATS	Applied Technology—Seminar	HSN	High School Nursing
AUT	Automotive	IM	Industrial Management
BTA	Building Trades Apprentice	IT	Inhalation Therapy
BTJ	Building Trades Journeyman	LS	Labor Studies
BTR	Building Trades Related	MT	Mechanical Technology
CHC	Continuing Health Careers	MUS	Music
CT	Civil Technology	NUR	Nursing
CYT	Cytotechnology	ORT	Operating Room Techniques
DA	Dental Assistant	PN	Practical Nursing
DH	Dental Hygiene	QT	Quality Control
DHA	Dental Hygiene Assistant	RIT	Respiratory Therapist
DNC	Dance	RXT	Radiological Technology
DT	Drafting Technology	SAF	Safety
EM	Electro Mechanical	ST	Systems
EMT	Emergency Medical Technician	TEC	Technology General
		THR	Theatre
		TT	Transportation
		WLD	Welding

*Department of Student Development Services**Chairperson: Dr. John H. Cansfield*

The department develops and maintains programs aimed at assisting students in personal growth. Support is provided through counseling, academic advising, testing, tutorial services, recruitment, liaison with various community organizations, and publications such as curricular guides, four-year college equivalency guides, career information and brochures. Group experiences of many kinds are reflected in the departmental course offerings.

**Academic Advising**

The department coordinates the advisor-advisee system in the College. Faculty advisors help answer students' questions, assist in the selection of appropriate courses and review academic progress.

**Counseling Services**

A staff of professionally trained counselors assists students in educational, vocational, and personal development. Specifically, counselors assist students with curriculum choice, academic problems, and with those social and personal problems which may interfere with academic progress. Both group and individual counseling are offered. A close relationship is maintained between the department and community agencies and referrals are made to such agencies when appropriate.

**College Transfer Articulation**

Close contact is maintained with colleges and universities to which students anticipate transfer. Curricular guides are prepared for students indicating transfer requirements in their chosen curriculums. Representatives of colleges and universities visit the Lansing Community College campus for the purpose of discussing transfer requirements with students. Follow-up of transfer students is also part of the College transfer program.

**Career Planning Information**

A file of educational and occupational source material is available to all students. Directories, career descriptions, job briefs and educational listings are included to assist the student in making appropriate educational and occupational plans, particularly when used in conjunction with career planning courses. Books, pamphlets, brochures and outlines are available in the five Counseling Service areas and in several library locations.

**The CETA Educational Training Unit**

The CETA unit staff provides counseling, advising and other support services for students attending the College under the auspices of the Comprehensive Employment and Training Act. All students participating in the program are referred from appropriate Tri-County agencies.

**Orientation**

Our goal is to help the student become an integral part of the College and to become acquainted with its philosophy, facilities and opportunities. Each new Lansing Community College student may take part in a program providing information and aid in curricula selection at the time of registration.

**Student Development Center**

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

As part of community outreach efforts, the Center works with community agencies to encourage Latinos, Blacks, and Native Americans to pursue educational and training programs at Lansing Community College.

**Testing Services**

A testing program designed to assist students in their educational and vocational development is an integral function of counseling services. Vocational and personality interest tests are frequently used by counselors as part of the counseling service if the student requests this service.

As a community service to adult, non-high school graduates, the Department of Student Development Services also administers the General Educational Development Test (GED) for high school equivalency certificates. This service is provided at a nominal charge.

**Tutorial Services**

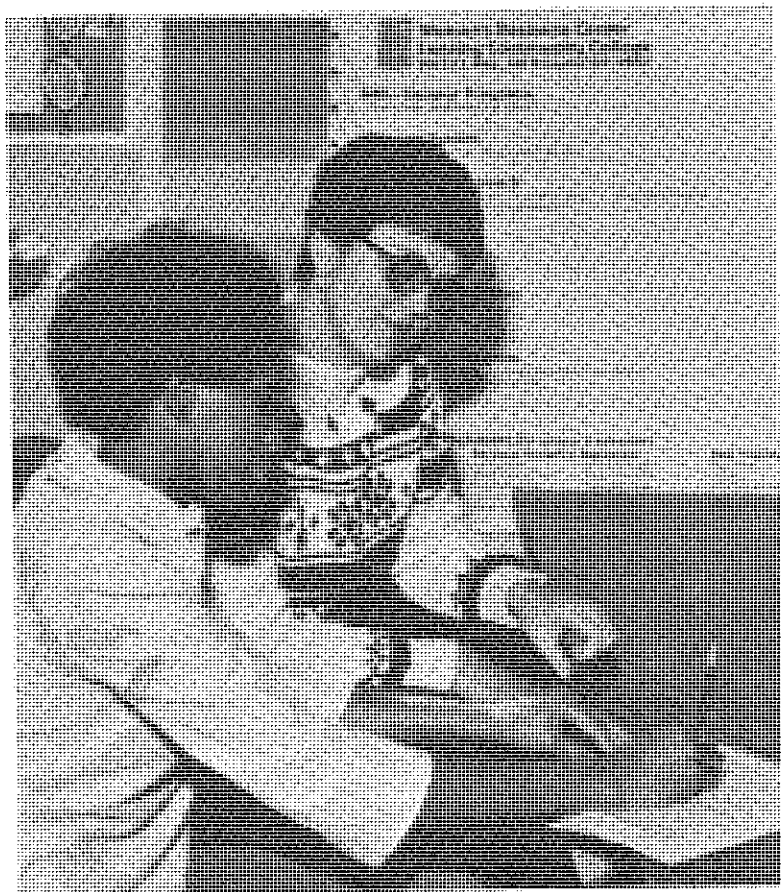
A tutorial program is offered in the Student Development Center to assist students in the realization of their academic goals. Peer tutors provide help outside the classroom in mathematics, science, English, accounting, and other subjects. Students are encouraged to attend tutorials as a way of keeping up with class demands or as a matter of review for quizzes and exams. Tutors are matched to the individual student in order to provide the optimum results. Students who desire assistance should inquire at the Center.

**Women's Resource Center**

The Women's Resource Center is a service center for persons at Lansing Community College and in the community who are exploring career options, considering returning to school following parental obligations, looking for new directions, seeking an understanding of sex-roles, or developing personal or professional growth skills.

The Center offers a variety of classes and seminars for career exploration, personal growth and awareness, skill training, and dealing with changes in our lives.

The Reach-Out Program, the service division of the Women's Resource Center, offers support through the following services: Drop-In Center; library resources; community outreach (including a speakers' bureau); scholarship and child care financial aid programs; support groups; volunteer programs; special workshops and student trips. Feel free to call or stop by to avail yourself of these services.

**COURSES OFFERED BY THE DEPARTMENT OF STUDENT DEVELOPMENT SERVICES (SD)****106 College Survival Skills****Two credits**

An orientation to the services available at Lansing Community College to assist students in identifying personal and academic requirements for success in higher education. 2 (2-0)

**107 Techniques of Study: Science/Math****Two credits**

Designed to aid the beginning undergraduate student in the understanding of science in general and the development of more effective study habits. Includes class discussions and exercises. 2 (2-0)

**108 Speech Anxiety****One credit**

A course intended to provide a means of overcoming the anxiety of the speaking situation through positive learning. Sessions are designed to train the student in methods of counteracting anxiety and to help in gaining a more useful perspective on the emotional and contextual aspects of public speaking. 1 (1-0)

**109 Techniques of Study: Composition and Reading****Two credits**

Designed to improve the student's ability to use the thinking skills necessary for writing college papers. The student will practice the methods taught in choosing, organizing, and discussing a topic in writing. Common grammar and punctuation errors are covered, and some simple "rules of thumb" guides are taught that the student can use on individual papers. 2 (2-0)

**117 Life Planning Workshop****One credit**

Life/Career Planning is a three phase process: self-exploration, career exploration and decision making. The intent of this workshop is to take an in-depth look at oneself. Specifically, interests, values and skills are identified in order to determine the uniqueness of each participant. 1 (1-0)

**118 Alcohol Seminar****Two credits**

The general theme of the course will be directed toward acquainting the student with the positive and negative factors related to the consumption of alcoholic beverages. Particular emphasis will be given to the sociological, physiological, and psychological impact of alcohol on an individual's system. 2 (2-0)

**119 Mid-Career Planning****Two credits**

Designed for persons in middle age who have had several years of work experience and who are: 1) considering a career change or 2) looking for ways to make their present job situations more satisfying. 2 (2-0)

**120 Growth and Discovery Group****One credit**

Provides for participants to meet with professional counselors to discuss their problems of living in a true-to-life situation in which group members can experience the same feelings they have in everyday living. Unlike everyday living, however, the group setting enables the members to express their true feelings and to examine the reasons for these feelings. 1 (2-0)

- 121 Exploration of Human Potential** **Two credits**  
Professional counselors help each member identify past and present achievements which suggest the presence of strengths and potential. The ultimate goal is realization of one's own potential through greater self-determination. 2 (2-0)
- 122 Advanced Exploration of Human Potential** **Two credits**  
Provides an in-depth experiential approach to conflict identification and resolution. Also focuses on successful prevention of conflict; identifying and releasing blocked potential; dealing with failure successfully, and life style appraisal. A knowledge of your values and strengths is presumed. Prerequisite: SD 121. 2 (2-0)
- 124 Techniques of Study** **One credit**  
Helps develop effective study habits by taking a look at behavior that interferes with successful classroom performance. A valuable aid for beginning college level work. Weekly discussions focus on: how to take examinations, note-taking, writing papers, reading improvement, and use of the library. 1 (1-0)
- 125 Career Planning** **Two credits**  
A group counseling process to help students relate their values, life goals, interests, and skills to job areas. Students investigate jobs by research and interviews and make decisions on future courses of action. 2 (2-0)
- 126 Elimination of Self Defeating Behaviors** **Two credits**  
A behavioral change program in self-awareness. Students are shown that self defeating behavior such as nervousness, smoking, and inferiority feelings, is behavior we choose ourselves. Through awareness, we find that positive, constructive choices can be made. 2 (2-0)
- 127 Job Search Readiness** **Two credits**  
Aids students in securing the jobs they seek. Course content covers filling out applications, writing resumes and cover letters, interviews, and other techniques to use in seeking employment. 2 (2-0)
- 129 Interpersonal Skills** **Two credits**  
Designed to teach basic human life skills, including interpersonal skills, (attending, listening and responding), decision-making skills, and program development skills. Participants will be taught the interrelationship of these skills, how effective communication skills can lead to effective decision making, and how effective decision making is the first step to developing effective programs. 2 (2-0)
- 130 Communication with the Handicapped** **One credit**  
Designed to explore, share, and deal with question, problems and relationships of bandicappers with parents, teachers and peers. 1 (1-0)

- 132 Weight Reduction Seminar** **Two credits**  
The format of the course is based on the assumption that poor eating habits are learned and may, therefore, be replaced by more appropriate behavior which is conducive to weight reduction and control. After beginning a structured diet and exercise plan, students will focus their attention on environment factors, inappropriate emotional eating, and cognitive sets which interfere with weight control and will learn self-management techniques intended to help deal with these aspects. 2 (2-0)
- 135 Women and Politics** **Two credits**  
Designed to assist the participants in developing an understanding of the role which women have played in the American political process to date; an understanding of how the process works at the state and local level, and a survey of tools which are helpful to persons seeking to be more effective in their political participation. 2 (2-0)
- 136 Black Sexual Identity** **Two credits**  
Explores the meaning of black sexual identity through readings, class discussion, and small group interaction. Particular attention will be paid to the historical, cultural and typical behaviors that affect the definition of black sexual identity. The social-emotional interactions between black men and women will also be covered. 2 (2-0)
- 137 Basic Financial Skills** **One credit**  
Offers practical tips on managing one's limited financial resources. Opportunity will be given to develop a personal budget, plan for economy-saving meals and discover the best time to buy various consumer products. 1 (1-0)
- 138 Financial Management and Women** **One credit**  
Designed to increase awareness of financial concerns and terminology. Emphasis will be placed on total financial planning with a view toward attaining financial security and independence. Included will be budgeting, saving, taxes, estate planning, Social Security benefits, insurance and investment.
- 139 Focus Latino Women** **Two credits**  
Designed to increase the knowledge and broaden the experiences of Latino women. The course will include self-exploration, identifying personal interests, and development of skills that will help participants function more effectively in their society.
- 140 Marriage Preparation** **Two credits**  
Designed for people anticipating marriage or long-term relationships, and married people who want to become more aware of themselves and each other. Improves listening and communicating skills, and develops skills in resolving conflict and solving problems. Explores and clarifies one's values. Budgeting, sexuality and role expectation also are explored. 2 (2-0)

- 141 New Options and Women** **One credit**  
This series is offered to widen women's horizons in cultural and leisure-time activities, and civic, scholastic and career opportunities. The class format consists of films, discussion, exercises and craft demonstration. The atmosphere is relaxed in hopes of assisting the student in being physically and emotionally comfortable as well as intellectually stimulated. 1 (1-0)
- 142 Assertiveness Training I** **Two credits**  
Assertiveness is "interpersonal behavior in which a person can stand up for legitimate rights, opinions, feelings and beliefs in such a way that the rights of others are not violated." The goals of this class are: 1) to build a personal belief system which will help the student to identify and accept basic interpersonal rights and 2) to develop and practice assertive skills so they are available for use when it seems appropriate. 2 (2-0)
- 143 Assertiveness Training II** **Two credits**  
An expansion of concepts taught in the introductory assertiveness training classes. 2 (2-0)
- 146 Values Clarification** **Two credits**  
Comprised of a non-judgmental series of thought provoking exercises and discussions on values clarification. Discussion will focus on how choices are made and help individuals to clarify their own values. 2 (2-0)
- 147 Men's Awareness** **Two credits**  
This course will focus on exploring feelings, values, beliefs and actions of male/female and male/male relationships in terms of historical, societal, psychological and theological dynamics, and to help individuals to personally assess and explore behavioral changes based on their findings regarding these issues. 2 (2-0)
- 148 Assertiveness Training and Couples** **Two credits**  
Deals with basic principles of assertive behavior as they apply to the intimate relationship. Students will explore ideas and behaviors that help each partner to be assertive while facilitating the other partner's assertiveness as well. It is preferred, but not required, that both partners in the relationship take the course together. 2 (2-0)
- 149 Marriage Enrichment** **One credit**  
Structured to make a good marriage better. It is not set up to deal with marital problems, but instead focuses on the positive attitudes of each marriage partner and strengthens these qualities by increasing communications and sharing. 1 (1-0)
- 150 Divorce Adjustment** **Two credits**  
Designed for women and men who are experiencing or who have recently completed a divorce. The student-centered atmosphere of the class will be supportive and geared toward coping with and finding constructive alternatives to the emotional crisis of divorce. 2 (2-0)

- 151 Single By Choice** **Two credits**  
Choosing to be single is an active process different from the passive acceptance of singleness based on the fact that one has not been chosen by another person. This course is geared toward persons who are in the process of choosing to be single, or who have not been married; however, formerly married persons will be welcome. The course is not intended to be a therapy group. 2 (2-0)
- 152 Basic Parenting I** **One credit**  
Designed to reduce the incidence of child abuse and neglect by helping parents gain insight into their own needs and those of their children through learning problem-solving skills, improving their self concept, and gaining knowledge in areas of family functioning and child rearing. 1 (1-0)
- 153 Basic Parenting II** **One credit**  
A continuation of SD 152. 1 (1-0)
- 154 Domestic Abuse: The Silent Crisis** **Two credits**  
Spouse/partner abuse is an issue that affects psychological development leaving emotional scars on both women and men. This course will provide an opportunity for students to explore and share their feelings about this family crisis. Students will discuss the legal, social, historical, preventive and curative aspects of this problem. 2 (2-0)
- 155 Assertiveness Training and Foreign Students** **Two credits**  
Course format is similar to Assertiveness Training I, with special emphasis on the way foreign students handle assertiveness problems. 2 (2-0)
- 156 I'm OK, You're OK** **Two credits**  
Designed to give the basic concepts related to Transactional Analysis and how they can enrich your life. Within each of us is a child, an adult and a parent reacting to the world around us. An increased awareness about ourselves can help us become more effective. 2 (2-0)
- 157 Single Parent Support Group** **One credit**  
This is an informal setting where people who are raising children alone can come and share concerns. 1 (1-0)
- 159 Home Repairs** **Two credits**  
Offered to enable persons to more efficiently make home repairs and deal with home maintenance problems. The objective is to help students learn to perform various maintenance and repair tasks. Tools, plumbing electrical repairs, painting and home improvement are among the many topics covered. 2 (2-0)
- 160 Women's Health** **Two credits**  
Women's Health is a course designed to help today's woman better understand her health care, health problems and sexuality. Included will be such topics as awareness and acceptance of our own bodies, self-examination, rape and self-defense, myths and realities about menopause, women and alcohol and drugs, and guidelines for improving health. 2 (2-0)

- 161 Assertiveness Training and Women** **Two credits**  
Course format is similar to Assertiveness Training I, with special emphasis on the way women handle assertiveness problems. 2 (2-0)
- 164 Interpersonal Communication** **Two credits**  
Designed to help the student improve interpersonal skills, including observation, listening, disclosure and behavior-change skills, through lecture/discussion, readings and a journal. 2 (2-0)
- 165 Brown Bag Films** **One credit**  
Brown Bag Films is offered for optional credit. A personal enrichment or motivational film or videotape will be shown, with discussion to follow. Bring your own "brown bag." 1 (1-0)
- 167 Management Skills and Women** **Two credits**  
Includes pertinent information and practice exercises related to skills needed for management level jobs. Special emphasis will be on the unique situations common to women who are being promoted or seeking promotion. 2 (2-0)
- 168 Female Sexuality** **One credit**  
A course designed for women to explore what it means to be a fully sexual female. Opportunities will be provided to share questions and feelings about our own sexuality and discover some ways to take care of ourselves. 1 (1-0)
- 169 Women as Winners** **Two credits**  
Designed to offer participants new tools for insight, self-awareness and understanding so that they can learn to set their own goals, emancipate themselves from the boundaries they have set for themselves and therefore, learn to become more authentic and self-actualizing. 2 (2-0)
- 220 Parent Child Communication** **Two credits**  
Open to men and women, and designed to enlighten parents regarding alternatives in communicating with their children. Overall aims include learning to listen to youth, learning to identify the parents' problems, and learning to resolve conflicts, making the family relationship richer and more joyful. 2 (2-0)
- 221 Community Seminar** **One credit**  
Geared to meet the particular needs of a target population of the community. Course content may include such things as skill training, personal growth and awareness, transition education, and career exploration. 1 (1-0)
- 222 Widow(er)hood** **One credit**  
The group will meet in a structural atmosphere, with a different topic introduced each week. Topics include loss of attachment, support systems, and social integration. 1 (1-0)

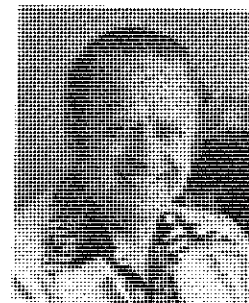
- 223 Male/Female Roles** **Two credits**  
Designed for those who wish to examine the changing roles of women and men in our society, and to explore how that affects them. This will be an opportunity to clarify and share one's own attitudes and beliefs toward male and female relationships. 2 (2-0)
- 224 Small Group Leadership Training** **Two credits**  
Designed to facilitate learning about groups, membership, and leadership functions by the process of experiencing and processing various group activities. Geared to people who have or wish to have leadership roles. 2 (2-0)
- 225 Consciousness Growth** **Two credits**  
Each of us can develop our higher states of consciousness. Higher states are characterized by inner peace and finer perceptions of the world around us. The class will include both meditative techniques and philosophical awareness which will be helpful in pioneering one's consciousness growth. 2 (2-0)
- 226 Career Exploration and Women** **Two credits**  
In a small group setting, this class will emphasize self-exploration and methods of increasing knowledge about career opportunities. Included will be help in identifying skills, and relating these to career options (whether paid or volunteer), planning and goal-setting, decision-making, and job-finding skills. 2 (2-0)
- 227 Transactional Analysis for Single Parents** **Three credits**  
For women and men who are, have been, or might become, single parents. Students will examine the transactions between parent and child, the needs of both parent and child, and ways to resolve conflict using transactional analysis. An emphasis will be on learning to nurture ourselves and our children. 3 (3-0)
- 228 Birthing (Lamaze)** **One credit**  
Designed to meet the needs of the expectant parents for labor and delivery preparation. It is unique because it provides skills which allow the expectant persons to participate actively with full awareness of the delivery process, experienced as only they can. Breathing and relaxation exercises in which they participate will ensure a sense of security, composure and sharing in the birth experience. 1 (1-0)
- 229 Issues and Values in Human Sexuality** **Two credits**  
Explores the meaning of sexuality as a function of total personality. Through class discussions and small group interactions, students will receive information and have an opportunity to examine and clarify their own values and feelings. 2 (2-0)
- 230 Women's Search for Identity and Meaning** **Two credits**  
Many women are asking, "Who am I? What do I want to do with my life?" Through structured exercises, readings and sharing, students will be encouraged to explore, understand and accept themselves; to clarify their interests and identify their life values. 2 (2-0)

- 232 ADC Support Group** **Two credits**  
ADC recipients who face the problems of low income, single parenthood and societal stereotyping are often in need of supportive services. This group is an effort to provide support and help alleviate feelings of loneliness, hopelessness and frustration. Offered for optional credit. 2 (2-0)
- 233 Job Re-entry and Women** **Two credits**  
Designed for the woman making a transition from home to outside employment, and to assist students in translating life experiences into the language of employable skills. 2 (2-0)
- 234 Life Style Exploration** **Two credits**  
A survey exploring various lifestyles within our society, including the traditional family, the homosexual relationship, communal and collective living arrangements, and marriage and sexual relationships of the senior generation. 2 (2-0)
- 235 Women: Making It On Your Own** **Two credits**  
Designed for women who are in transition from dependency on others to being responsible for their own lives. Special attention will be given to the concerns of women moving from a married to a single state through divorce, separation or death. Students will have the opportunity to share concerns, increase self-awareness, and develop skills which will help them function more effectively as independent adults. 2 (2-0)
- 236 Self-Defense and Women** **Two credits**  
The major focus of this class will be the individual's response to the attitudes and myths surrounding rape.  
Included will be such topics as the police and the rape victim and a look at the involvement of the court and the hospital systems. An overview of self-protection skills will be provided. 2 (2-0)
- 237 Black Women's Awareness** **Two credits**  
This class will be an exploration, through readings and class discussion, of concerns and issues confronting the black woman in America today. Students will have an opportunity to share their viewpoints and life experiences in response to such questions as "Who is the black woman?" "What are our needs?" "How can we meet those needs and how can we grow together?" 2 (2-0)
- 238 Life Planning and Women** **One credit**  
Life/career planning is a three phase process: self-exploration, career exploration and decision-making. The intent of this workshop is to take an in-depth look at oneself. Specifically, interests, values and skills are identified in order to determine the uniqueness of each participant. The underlying philosophy of the workshop centers on the belief that if you understand your unique self, then a successful matching of career will follow. 1 (1-0)
- 239 Women and Anger** **Two credits**  
Designed to explore anger and to identify feelings, attitudes and methods of expressing anger. Class content will include readings, exercises, sharing, discussion and a journal. 2 (2-0)

- 240 Empathy Training** **Two credits**  
Teaches the use of empathy as a technique for dealing with emotional problems. The student who is interested in learning to help others can acquire beginning skills for short-term counseling and crisis intervention, as well as the skills for improving the many aspects of daily living that might involve interpersonal relationships between spouses, children and parents, friends, etc. 2 (2-0)
- 241 Math Anxiety** **Two credits**  
Many women find themselves excluded from certain career choices because they are afraid to take math classes. Parents often worry about helping their children with their math homework. This course will explore the origins of "math anxiety," investigate the sex-differences in performance and understanding of mathematics, and give practical help in reducing anxiety and changing attitudes toward math. This class will not substitute for a math class; but, the highly anxious student can profit from the class before taking a math course. 2 (2-0)
- 242 Dealing With Stress** **Three credits**  
This course is designed to facilitate an understanding of stress and how stress affects behavior, and to help the student identify alternate methods of dealing with stress. 3 (3-0)
- 243 Advanced Empathy Training** **Two credits**  
An expansion of concepts taught in the introductory Empathy Training class. Concentration will be on values clarification and decision-making, the last two steps in the helping process. 2 (2-0)

### *Student Financial Aid, Placement and Veterans' Services*

*Director: Neil G. Shriner*



#### **Financial Aid**

The Financial Aid Program at Lansing Community College assists students in meeting some of the college costs that cannot be met by personal or family resources.

Most financial aid is based on need as determined by filing a Financial Aid Form with the College Scholarship Service in Princeton, New Jersey. The Financial Aid Need Analysis Report and a Basic Grant Student Eligibility Report are generated when both reports are properly designated on the Financial Aid Form.

**How and When to Apply:**

Financial Aid Forms are available to students and their parents through high school counselors or at the College Financial Aids Office. When completed, the form should be mailed to Princeton, N. J. at least three months before the term begins. Lansing Community College Code Number is 1414 and should be designated in items 81 and 83 and the E.A.F.

Detach the Student Financial Aid Form that is found on the last page of the LCC booklet, "Making the Grade with Financial Aid." When it is completed bring or mail it to: Lansing Community College, Financial Aids Office, 419 N. Capitol Avenue, P.O. Box 40010, Lansing, MI, 48901, at least two months before the term begins. The booklet and application forms for student employment may be obtained from the Financial Aids Office.

Students transferring from other colleges must file a Financial Aid Transcript from their previous college at least six weeks before the term begins.

Financial Aid funds are limited; therefore, it is to the student's advantage to make advanced application for financial aid. It is recommended that a student apply by the month of April prior to the college year for which attendance is planned. Applications will be accepted after April, but awards will be made only if funds are available.

**Sources of Financial Assistance:**

Financial Aid programs are funded from federal, state, college and private sources. Four major forms of financial aids are scholarships, grants, loans, and jobs. Most students receive a combination of these forms known as a "package."

**Scholarships:** non-repayable money, usually awarded for scholastic ability. May or may not be based upon need.

- Board of Trustee Scholarships are awarded to outstanding area high school graduates.
- Divisional Scholarships are awarded to outstanding students who may apply directly to the department of their interest.
- The Michigan Competitive Scholarship Program is based upon a qualifying examination given during the junior or senior year in high school. Awards may vary with need.

**Grants:** non repayable money usually based upon need.

- The Basic Educational Opportunity Grant eligibility is determined by filing the Financial Aid Form.
- The Supplemental Educational Opportunity Grant eligibility is determined by filing the Financial Aid Form.

**Loans:** money that must be repaid beginning nine to twelve months after graduation or upon leaving school.

- National Direct Student Loan eligibility is determined by completion of the Financial Aid Form.
- Guaranteed Student Loan applications may be obtained through banks, savings and loan associations, or credit unions.
- State Direct Loan applications may be obtained at the College Financial Aids Office if students are unable to obtain a guaranteed student loan at their banks.

**Jobs:** employment opportunities to assist students in earning money to meet part of their educational expenses.

- College Work/Study eligibility is determined by completion of the Financial Aid Form and a Student Employment Application.

Special Situation Funds are available. The College Financial Aids Office has information regarding application procedures for the following programs:

- Social Security Benefits
- Children of Disabled or Deceased Veterans
- Bureau of Indian Affairs (BIA)
- Nursing Loan and Nursing Scholarship
- Clubs, Organizations & Business Scholarships
- Private Donor Scholarships
- Work Incentive Program (WIN)
- Comprehensive Employment Training Act (CETA)
- Veterans' Benefits
- Vocational Rehabilitation
- Michigan Commission of Indian Affairs
- Law Enforcement Loans and Grants (LEEP)
- LCC Emergency Fund
- United Migrants for Opportunity, Inc. (UMOI)

**CAREER PLANNING AND PLACEMENT CENTER****Employment Placement**

Placement services are available to all students for either part-time or full-time positions. Part-time positions at both the College and within the service area of Lansing Community College are publicized on bulletin boards. On-campus and off-campus College Work Study jobs will be posted on the job board. Applications for College Work Study must be processed through the Financial Aids Office. The job board is located outside the Career Planning and Placement Center, Room 221, Vocational-Technical Building.

**Interviews**

Employers may interview on campus. Students in their last term and graduates may sign up for interviews with these organizations. Interviews will be publicized through the campus, listing required qualifications. Qualified persons may sign up for interviews in the Career Planning and Placement Center.

**Information Services**

The Career Planning and Placement Center will aid students in job search techniques, resumes, introduction letters, and aspects of employment needs. The Career Information Center is located next to the Career Planning and Placement Center.



**Career Planning**

For students who need help in choosing a career, the Center offers testing, counseling, and occupational information. Career Planning classes also offer students the chance to participate in group interaction regarding their strengths and goals related to careers.

Audio-visual devices are available at any time to take students through the steps necessary to selecting a career.

Counselors in the Student Personnel Services Building, Old Central, and the Arts & Sciences Building are also available to help with Career Planning.

**Veterans**

Veterans' Services helps the veterans file applications for education, counseling, loans, tutorial assistance and/or any other entitlements allowed through the Veterans' Administration.

Lansing Community College is approved as a school for veterans of military service under provisions of Chapters 31, 32, 34, and 35 of the U.S. Code.

Lansing Community College 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. (ALL TUITION AND FEES MUST BE PAID AT THE TIME OF REGISTRATION). Once the veteran's application is approved and the award processed, monthly checks will be issued if the veteran is prompt in maintaining satisfactory academic progress and following a chosen curriculum.

**Advance Payment**

New student veterans, and students wishing advance payment, should apply at the Veterans' Services Office at least five (5) weeks prior to the beginning of a term.

Monetary allowances provided for by the G.I. Bill vary according to the level at which the veteran is pursuing an academic program as indicated by the following schedule:

LEVEL OF ATTENDANCE	REQUIRED CREDIT HOURS
Full-time	Minimum of 12
Three-quarter time	9, 10, or 11
Half-time	6, 7, or 8

After enrollment, veterans should direct their inquiries concerning eligibility to the Office of Veteran Affairs in the Student Personnel Services Building.

Lansing Community College, in recognition of the special problems of active-duty servicepeople in having access to, and completing college programs, has been designated as a Servicemen's Opportunity College.

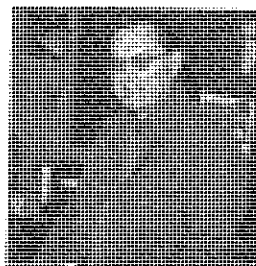
In addition, the college participates in Project AHEAD, Michigan National Guard Co-op, Navy Campus for Achievement, Air Force, and Army ROTC programs.

**Housing**

Lansing Community College maintains no housing units for students, but it does make available a list of suitable living quarters. The College assists students by maintaining this list of non-discriminatory housing opportunities in the community. The housing file is available at the Financial Aids Office.

**STUDENT ACTIVITIES**

*Director:* William Zuhl



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

**Fine Arts Cultural Program**

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

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

A number of trips are sponsored by Student Activities, including theater trips to the Shakespearean Festivals in Stratford, Canada. Trips have been sponsored to New York City on an annual basis, giving students an opportunity to see not only the theater, but many of the other cultural aspects of the big city. Trips to such cities as Chicago, New Orleans, San Francisco, Williamsburg and Plymouth are planned annually from the Student Activities Office. Shorter trips are planned to such points of interest as Frankenmuth, Cedar Point, and Greenfield Village. Over a million student miles were traveled in the last year by students taking advantage of the opportunity to see the many interesting places that are available through the travel program.

**Student Government**

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

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

**Student Organizations**

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

**Campus Newspaper**

The Lookout is the bi-weekly College newspaper. Paid student editors, under the supervision of a professional, provide campus coverage and publish information of general interest to the campus community. Volunteer student reporters are welcomed.

**Campus Radio Stations**

WLCC and WLCR present a variety of music, news, and feature programs in a daily radio service to the campus audience. Students interested in broadcasting staff the stations, and gain practical professional experience in radio station operations.

*Department of Physical Education and Athletics*

Director: Walter B. Lingo

**PHYSICAL EDUCATION**

The physical education program at Lansing Community College offers students an opportunity to develop physical skills. The attainment of a physical skill will enable an individual to pursue and/or maintain a sound state of physical fitness through life.

All physical education courses are transferable and all physical education grades are tabulated in determining a student's grade point average.

Students wishing to transfer with a physical education major should come to the office of Physical Education and Athletics to receive personal counseling.

Physical education courses are offered in the following ten areas:

- |                            |                                     |
|----------------------------|-------------------------------------|
| 1. Professional (PEA)      | 6. Aquatics (PEF)                   |
| 2. Fitness (PEB)           | 7. Combatives/Weight Training (PEG) |
| 3. Individual Sports (PEC) | 8. Gymnastics/Dance (PEH)           |
| 4. Individual/Dual (PED)   | 9. Indoor Activities (PEI)          |
| 5. Team Sports (PEE)       | 10. Outdoor Activities (PEJ)        |

**COURSE DESCRIPTIONS****Professional (PEA)****100 Professional Orientation****One credit**

This overview of the field of physical education is for prospective physical education majors. 1 (1-10)

**101 First Aid****Three credits**

Provides elementary first aid procedures and, upon successful completion, awards Red Cross certification. 3 (3-0)

**102 Athletic Training****Three credits**

A course in athletic injury prevention and care techniques and the duties and responsibilities of an athletic trainer. 3 (3-0)

**103 Health****Three credits**

Surveys selected contemporary health issues, such as human sexuality, drug abuse, weight control, etc. 3 (3-0)

**104 Intramural Athletics****Three credits**

Offers an introduction to IM athletic administration and competitive event supervision. 3 (3-0)

- 105 Camping** **Three credits**  
Develops skills necessary for comfortable living in an out-of-doors area such as a state park or designated camping area. 3 (3-0)
- 106 Community Recreation** **Three credits**  
Provides exposure to the procedures, operations, facilities, and programs of a recreation department. 3 (3-0)
- 107 Psychology of Coaching** **Three credits**  
Covers philosophy, techniques, and methods practiced in coaching team and individual sports. 3 (3-0)
- 108 Officiating Baseball** **Two credits**  
Shows the application of rules and officiating techniques in baseball. 2 (2-0)
- 109 Officiating Basketball** **Two credits**  
Offers instruction and testing which will provide an opportunity for official certification. 2 (2-0)
- 110 Officiating Soccer** **Two credits**  
Shows the application of rules and officiating techniques in soccer playing. 2 (2-0)
- 111 Officiating Wrestling** **Two credits**  
Shows the application of rules and officiating techniques for high school and college wrestling. 2 (2-0)
- 200 Massage Therapy** **Two credits**  
An introductory course covering history, techniques, and theory. 2 (1-2)
- 201 Independent Study** **One credit**  
Designed to provide individual study on a prescribed topic in coordination with an assigned faculty member. 1 (0-2)
- 202 Independent Study** **Two credits**  
See PEA 201 Independent Study. 2 (0-4)
- 203 Independent Study** **Three credits**  
See PEA 201 Independent Study. 3 (0-6)
- 204 Independent Study** **Four credits**  
See PEA 201 Independent Study. 4 (0-8)

**Fitness (PEB)**

- 100 Fundamentals of Physical Education** **Two credits**  
Covers the nature of health, physical education and recreation and its place in general education. 2 (2-0)

- 101 Individual Fitness-A** **Two credits**  
A course designed to acquaint students with the principles of "Aerobics" and to provide individual conditioning programs. 2 (1-2)
- 102 Individual Fitness-B** **Two credits**  
See PEB 101. 2 (1-2)
- 103 Individual Fitness-C** **Two credits**  
See PEB 101. 2 (1-2)
- 104 Individual Fitness-D** **Two credits**  
See PEB 101. 2 (1-2)
- 105 Jogging** **One credit**  
Introduces jogging as physical fitness and covers footcare, equipment, clothing, and safety. 1 (0-2)
- 106 Weight Control** **Two credits**  
A program of weight control will be arranged within the format of this course, with progressive charts maintained to determine individual weight control. 2 (1-2)
- 201 Individual Fitness-E** **Two credits**  
See PEB 101. 2 (1-2)
- 202 Individual Fitness-F** **Two credits**  
See PEB 101. 2 (1-2)
- 203 Individual Fitness-G** **Two credits**  
See PEB 101. 2 (1-2)
- 204 Individual Fitness-H** **Two credits**  
See PEB 101. 2 (1-2)

**Individual Sports (PEC)**

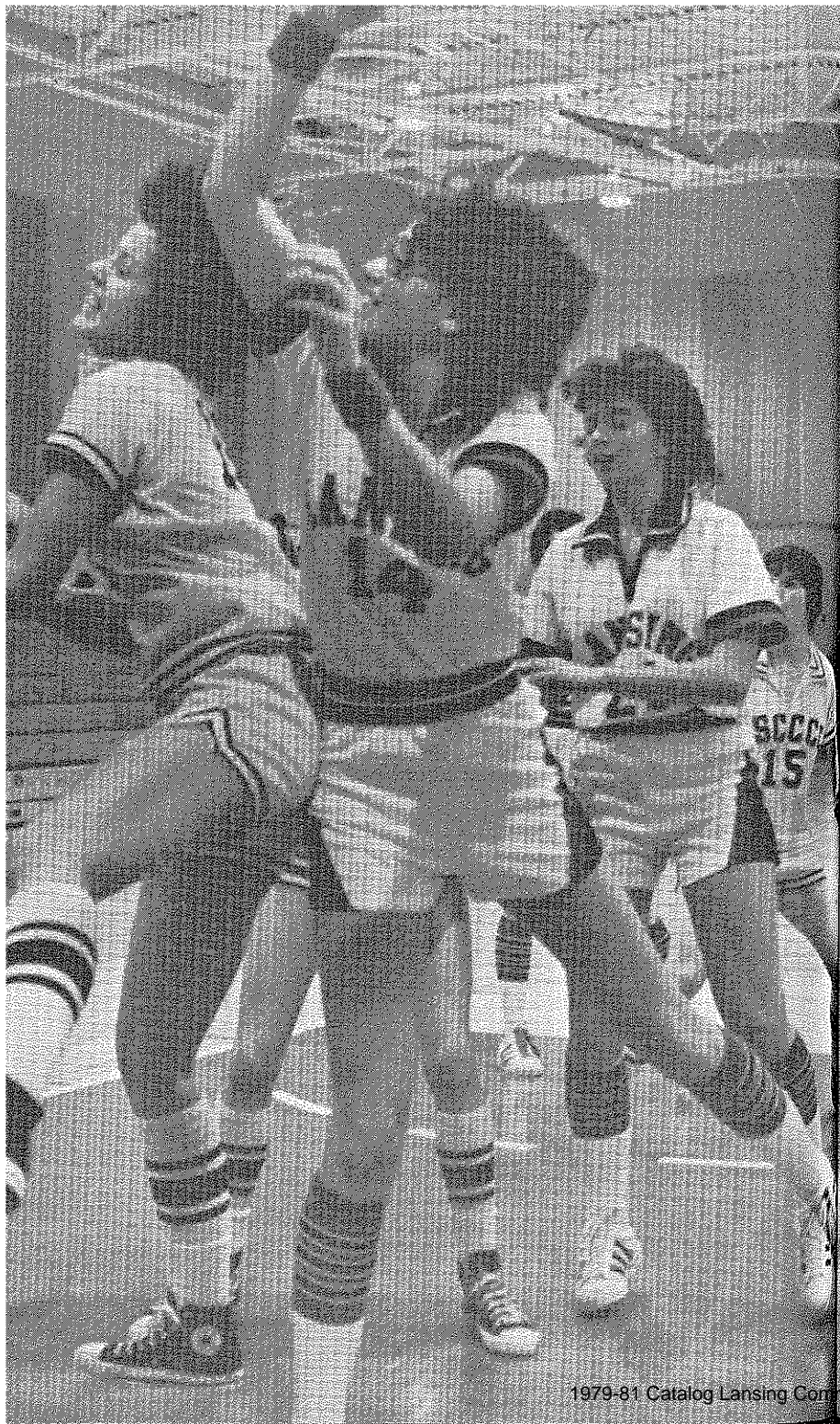
- 100 Badminton-Beginning** **One credit**  
Covers history, rules and etiquette of the game. Students will learn the proper use of the equipment, fundamental skills, and game strategy. 1 (0-2)
- 101 Badminton-Intermediate** **One credit**  
Continuation of PEC 100. 1 (0-2)
- 102 Badminton-Advanced** **Two credits**  
Continuation of PEC 101 (Tournament play involved). 1 (2-0)
- 103 Handball-Beginning** **One credit**  
The history, terminology, rules, and fundamentals will be covered as well as etiquette, strategy, and basic shots. 1 (0-2)

- 104 Handball-Intermediate** **One credit**  
Continuation of PEC 103. 1 (0-2)
- 105 Handball-Advanced** **Two credits**  
Strategy and competition. 2 (2-0)
- 106 Pocket Billiards-Beginning** **One credit**  
Covers history, rules, and fundamentals, with emphasis on practice drill, positioning of cue ball, and variations of the game of pocket billiards. 1 (0-2)
- 107 Pocket Billiards-Intermediate** **One credit**  
Continuation of PEC 106. 1 (0-2)
- 108 Pocket Billiards-Advanced** **Two credits**  
Refinement and improvement of skills presented in PEC 107 Pool/Billiards. 2 (2-0)
- 109 Racquetball-Beginning** **One credit**  
The history, terminology, rules, and fundamentals will be covered as well as etiquette, strategy, and basic shots. 1 (0-2)
- 110 Racquetball-Intermediate** **One credit**  
Refinement and improvement of skills presented in PEC 109. 1 (0-2)
- 111 Racquetball-Advanced** **Two credits**  
Court strategy and tournament play. 2 (2-0)
- 112 Table Tennis-Beginning** **One credit**  
Basic skills, including the serve, forehand and backhand strokes. 1 (0-2)
- 113 Table Tennis-Intermediate** **One credit**  
Continuation of skills presented in PEC 112. 1 (0-2)
- 114 Table Tennis-Advanced** **Two credits**  
Refinement of skills and introduction of game strategy. 2 (2-0)
- 115 Tennis-Beginning** **One credit**  
Covers the basic skills of tennis, including the serve, the forehand, and backhand strokes. Students also will learn the rules and strategy of the game. 1 (0-2)
- 116 Tennis-Intermediate** **One credit**  
Continuation of skills presented in PEC 112 Beginning Tennis. 1 (0-2)
- 117 Tennis-Advanced** **Two credits**  
Refines the skills of service, forehand and backhand strokes, and game strategy. 2 (2-0)
- 127 Bowling-Beginning** **One credit**  
Stresses the basic skills of bowling with progress toward proficiency. Scoring skills are also covered. 1 (0-2)

- 128 Bowling-Intermediate** **One credit**  
Refines the skills learned in PEC 127. 1 (0-2)
- 129 Bowling-Advanced** **Two credits**  
Continuation of PEC 128. Class competition involved. 2 (2-0)
- 130 Skiing-Beginning** **One credit**  
Covers the basic fundamentals and techniques of skiing, with individual instruction, emphasizing personal safety, skiing history, physics, and terminology. 1 (0-2)
- 131 Skiing-Intermediate** **One credit**  
Refinement and improvement of skills presented in PEC 130 Beginning Skiing. 1 (0-2)
- 132 Skiing-Advanced** **Two credits**  
Continuation of PEC 131 and development of more advanced techniques. 2 (2-0)
- Individual/Dual (PED)**
- 100 Archery-Beginning** **One credit**  
Instruction in fundamentals, techniques, rules and care of equipment. Introduces elements of tournament shooting, novelty shooting, and competition. 1 (0-2)
- 101 Archery-Intermediate** **One credit**  
Improvement and refinement of skills presented in PED 100. 1 (0-2)
- 102 Archery-Advanced** **Two credits**  
Improvement and refinement of skills presented in PED 100 with emphasis on competition. 2 (2-0)
- 103 Bicycling-Beginning** **One credit**  
Acquaints students with physical fitness value of bicycling and offers information which will give greater fulfillment to the cyclist. 1 (0-2)
- 104 Bicycling-Intermediate** **One credit**  
Continuation of PED 103 with more emphasis on distance. 1 (0-2)
- 105 Bicycling-Advanced** **Two credits**  
Refinement of techniques on racing and over night trips. 2 (2-0)
- 106 Cross Country-Beginning** **One credit**  
Instruction in jogging or running, dependent upon the physical fitness of the individual student. Emphasizes development of training schedules. 1 (0-2)
- 107 Cross Country-Intermediate** **One credit**  
Continuation of PED 106 with emphasis on distance. 1 (0-2)

- 108 Cross Country-Advanced** **Two credits**  
Emphasis on competition. 2 (2-0)
- 109 Cross Country Skiing-Beginning** **One credit**  
An introduction to the basic skills of cross country skiing, including skiing on the flat, uphill and downhill techniques. Also includes equipment, waxing, touring, and basic safety. 1 (0-2)
- 110 Cross Country Skiing-Intermediate** **One credit**  
Continuation of PED 109. 1 (0-2)
- 111 Cross Country Skiing-Advanced** **Two credits**  
Incorporates skills learned in PED 109 and 110 plus overnight camping trip. 2 (2-0)
- 112 Figure Skating-Beginning** **One credit**  
Basic and intermediate skating skills are presented to enable the student to compose and perform simple routines. 1 (0-2)
- 113 Figure Skating-Intermediate** **One credit**  
Continuation of PED 112 going into further depth on skills. 1 (0-2)
- 114 Figure Skating-Advanced** **Two credits**  
Refinement of competitive skills. 2 (2-0)
- 115 Golf-Beginning** **One credit**  
Golf strokes, rules, and etiquette for beginners. Course work includes experience on the driving range and golf course. 1 (0-2)
- 116 Golf-Intermediate** **One credit**  
Refinement and improvement of the skills presented in PED 115 Beginning Golf with emphasis on correcting the individual's particular problem(s). 1 (0-2)
- 117 Golf-Advanced** **Two credits**  
A thorough study of the U.S.G.A. Rules of Golf. 2 (2-0)
- 118 Ice Skating-Beginning** **One credit**  
Introduction to the healthful, life-long activity of skating. 1 (0-2)
- 119 Ice Skating-Intermediate** **One credit**  
Refinement and improvement of skills presented in PED 118 Ice Skating. 1 (0-2)
- 120 Ice Skating-Advanced** **Two credits**  
Emphasis is placed on teaching and supervising groups of skaters. 2 (2-0)
- 121 Roller Skating-Beginning** **One credit**  
Basic skills of forward and backward skating. 1 (0-2)
- 122 Roller Skating-Intermediate** **One credit**  
Continuation of basic skills with speed skating introduced. 1 (0-2)

- 123 Roller Skating-Advanced** **Two credits**  
Dance routines and more advanced speed skating. 2 (2-0)
- 124 Track/Field-Beginning** **One credit**  
Shows 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)
- 125 Track/Field-Intermediate** **One credit**  
Techniques and training. 1 (0-2)
- 126 Track/Field-Advanced** **Two credits**  
Competition preparation. 2 (2-0)
- 127 Yoga-Beginning** **One credit**  
An introduction to the philosophy and positions of yoga. 1 (0-2)
- 128 Yoga-Intermediate** **One credit**  
A continuation course of PED 127 Yoga. 1 (0-2)
- 129 Yoga-Advanced** **Two credits**  
Refinement and continuation of PED 128. 2 (2-0)
- Team Sports (PEE)**
- 100 Baseball-Beginning** **One credit**  
Emphasis is on the rules, throwing, catching, holding, and batting. 1 (0-2)
- 101 Baseball-Intermediate** **One credit**  
Combines individual concepts with team concepts. 1 (0-2)
- 102 Baseball-Advanced** **Two credits**  
Emphasis on special plays. 2 (2-0)
- 103 Field Hockey-Beginning** **One credit**  
Introduction to the basic skills. 1 (0-2)
- 104 Field Hockey-Intermediate** **One credit**  
Emphasis on team play. 1 (0-2)
- 105 Field Hockey-Advanced** **Two credits**  
Actual competition with an intraclass tournament. 2 (2-0)
- 106 Ice Hockey-Beginning** **One credit**  
The course covers fundamentals and includes game strategy and rules. 1 (0-2)
- 107 Ice Hockey-Intermediate** **One credit**  
Further develops skills and introduces team play. 1 (0-2)



## Student Personnel Services

73

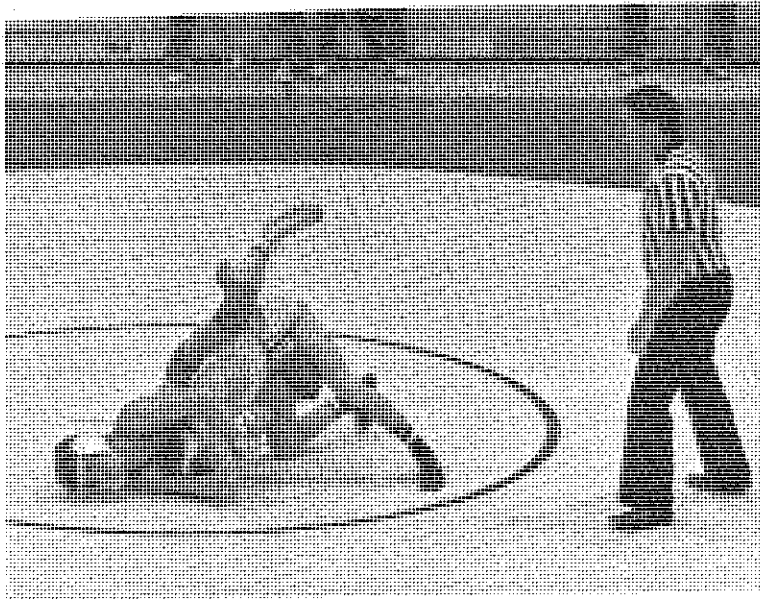
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|--|--|--------------------|
| <b>108 Ice Hockey-Advanced</b>           | Team competition with special plays. 2 (2-0)   | <b>Two credits</b> |
| <b>109 Basketball-Beginning</b>          | Beginning techniques and skill development. 1 (0-2)                                    | <b>One credit</b>  |
| <b>110 Basketball-Intermediate</b>       | Team offenses and team defenses. 1 (0-2)   | <b>One credit</b>  |
| <b>111 Basketball-Advanced</b>           | Team competition preparation. 2 (2-0)  | <b>Two credits</b> |
| <b>112 Olympic Handball-Beginning</b>    | Individual skills, rules, and history. 1 (0-2)   | <b>One credit</b>  |
| <b>113 Olympic Handball-Intermediate</b> | Combines individual concepts with team concepts. 1 (0-2)                               | <b>One credit</b>  |
| <b>114 Olympic Handball-Advanced</b>     | Emphasis on team plays and strategy. 2 (2-0)   | <b>Two credits</b> |
| <b>115 Soccer-Beginning</b>              | Beginning techniques in soccer. Rules, strategy and competitive play included. 1 (0-2) | <b>One credit</b>  |
| <b>116 Soccer-Intermediate</b>           | Team defenses and team offenses. 1 (0-2)   | <b>One credit</b>  |
| <b>117 Soccer-Advanced</b>               | Team playing and advanced strategy in game situations. 2 (2-0)                         | <b>Two credits</b> |
| <b>118 Softball-Beginning</b>            | Fundamental skills. 1 (0-2)  | <b>One credit</b>  |
| <b>119 Softball-Intermediate</b>         | Techniques and rules. 1 (0-2)  | <b>One credit</b>  |
| <b>120 Softball-Advanced</b>             | Team strategy and competitive play. 2 (2-0)  | <b>Two credits</b> |
| <b>121 Touch Football-Beginning</b>      | Beginning techniques and skill development. 1 (0-2)                                    | <b>One credit</b>  |
| <b>122 Touch Football-Intermediate</b>   | Emphasis on types of offenses and defenses. 1 (0-2)                                    | <b>One credit</b>  |
| <b>123 Touch Football-Advanced</b>       | Team strategy and competitive play. 2 (2-0)  | <b>Two credits</b> |
| <b>124 Volleyball-Beginning</b>          | Introduces skills, game strategy, history, rules, and values of volleyball. 1 (0-2)    | <b>One credit</b>  |

- 125 Volleyball-Intermediate** **One credit**  
Refinement and improvement of skills presented in PEE 124. 1 (0-2)
- 126 Volleyball-Advanced** **Two credits**  
Team concepts, strategy and competition. 2 (2-0)
- 127 Water Polo-Beginning** **One credit**  
Introduction of basic skills used in team play. 1 (0-2)
- 128 Water Polo-Intermediate** **One credit**  
Refinement of team concept. 1 (0-2)
- 129 Water Polo-Advanced** **Two credits**  
Team concepts, strategy, and competition. 2 (2-0)

**Aquatics (PEF)**

- 100 Swimming-Beginning** **One credit**  
Instruction in the basic fundamentals and techniques of swimming, with emphasis on water adjustment, basic strokes, breathing, survival, and diving skill. 1 (0-2)
- 101 Swimming-Adv/Beginning** **One credit**  
Continuation of PEF 100. 1 (0-2)
- 102 Swimming-Intermediate** **One credit**  
Instruction in the various strokes and skills required to become a competent swimmer. Emphasis is on review of basic fundamentals, with endurance work. 1 (0-2)
- 103 Advanced Swimming** **Two credits**  
Preparation programs for competitive swimming are presented and practices. 2 (2-0)
- 104 Senior Life Saving** **Two credits**  
Red Cross and YMCA certification is awarded upon successful completion of the course. 2 (2-0)
- 105 Water Safety Instructor** **Three credits**  
Red Cross Certificate program. 3 (2-2)
- 106 Life Guard Training** **Three credits**  
Covers the skills needed to become a life guard with first aid training. 3 (3-0)
- 107 Advanced Swimming/Training** **Three credits**  
Perfecting strokes and techniques. 3 (2-2)
- 108 Skin Diving** **Two credits**  
Introduction to underwater recreation. 2 (1-2)

- 109 SCUBA** **Three credits**  
Those students who successfully fulfill all components of the course will receive national certification. 3 (2-2)
- 110 Synchronized Swimming** **Two credits**  
Encompasses fundamental elementary, intermediate, and advanced strokes. 2 (1-2)
- Combatives/Weight Training (PEG)**
- 100 Boxing-Beginning** **One credit**  
The basic skills of offense, defense, and training practices. 1 (0-2)
- 101 Boxing-Intermediate** **One credit**  
An extension of Boxing 100 with more ring time and training techniques. 1 (0-2)
- 102 Boxing-Advanced** **Two credits**  
Refinement and improvement of the skills of offense, defense, and training methods. 2 (2-0)
- 103 Fencing-Beginning** **One credit**  
Instruction in fundamental techniques. Care of equipment. 1 (0-2)
- 104 Fencing-Intermediate** **One credit**  
Emphasis on rules and competitive preparation. 1 (0-2)
- 105 Fencing-Advanced** **Two credits**  
Individual competition. 2 (2-0)
- 106 Judo-Beginning** **One credit**  
The rules, theory and application of judo both for sport and self-defense. 1 (0-2)
- 107 Judo-Intermediate** **One credit**  
Designed to meet the needs of the individual who has a limited background and wants to improve techniques. 1 (0-2)
- 108 Judo-Advanced** **Two credits**  
Competition on an intra-class level. 2 (2-0)
- 109 Karate-Beginning** **One credit**  
Develops skills in punching with fists and hands, kicking (with feet and knees), and essential body movement in combat. 1 (0-2)
- 110 Karate-Intermediate** **One credit**  
Designed to specifically meet the needs of the individual who has some knowledge and would like to improve that knowledge. 1 (0-2)
- 111 Karate-Advanced** **Two credits**  
Course designed for the highly skilled. 2 (2-0)



- 112 Self Defense-Beginning** **One credit**  
This course is designed to develop confidence and skills in the art of self-defense. 1 (0-2)
- 113 Self Defense-Intermediate** **One credit**  
A refinement of individual skills and techniques. 1 (0-2)
- 114 Self Defense-Advanced** **Two credits**  
Individual skills refinement. 2 (2-0)
- 115 Weight Training-Beginning** **One credit**  
Instruction includes various training methods, principles, and program designs. 1 (0-2)
- 116 Weight Training-Intermediate** **One credit**  
Introduces power lifting and competitive lifts. 1 (0-2)
- 117 Weight Training-Advanced** **Two credits**  
Refinement and improvement of skills. 2 (2-0)
- 118 Wrestling-Beginning** **One credit**  
Fundamental offensive and defensive moves and various combinations. 1 (0-2)
- 119 Wrestling-Intermediate** **Two credits**  
Teaches more advanced degrees of hold and escapes. 1 (0-2)

- 120 Wrestling-Advanced** **Two credits**  
Refinement and improvement of skills with emphasis on scoring and competition. 2 (2-0)
- 121 Wrestling-Greco Roman** **Two credits**  
An introduction to the special techniques, rules, and history. 2 (1-2)
- 122 Wrestling-Free Style** **Two credits**  
An introduction to the special techniques, rules, and history. 2 (1-2)

#### Gymnastics/Dance (PEH)

- 100 Gymnastics-Beginning** **One credit**  
An introduction to the fundamentals of stunts, apparatus, and tumbling. 1 (0-2)
- 101 Gymnastics-Intermediate** **One credit**  
Introduces intermediate techniques. 1 (0-2)
- 102 Gymnastics-Advanced** **Two credits**  
Event specialization. 2 (2-0)
- 103 Social/Square Dance** **One credit**  
A beginning dance class presenting disco, foxtrot, waltz, tango, cha cha, samba, swing, and the basic skills and patterns used in square dancing. 1 (0-2)
- 104 Creative Dance** **One credit**  
Introduction to movement technique, methods of abstraction, and the elements of composition. 1 (0-2)

#### Indoor Activities (PEI)

- 100 Backgammon-Beginning** **Two credits**  
Introduction to the game of backgammon including rules and strategy. 2 (2-0)
- 101 Backgammon-Intermediate** **Two credits**  
Emphasis on strategy, both offensive and defensive. 2 (2-0)
- 102 Backgammon-Advanced** **Two credits**  
Playing the game in a competitive nature. 2 (2-0)
- 103 Bridge-Beginning** **Two credits**  
An introduction to the rules and strategy which will permit active participation throughout the course. 2 (2-0)
- 104 Bridge-Intermediate** **Two credits**  
Further study of bidding and playing the dummy hand. 2 (2-0)
- 105 Bridge-Advanced** **Two credits**  
Emphasis on bidding and participation in tournament play. 2 (2-0)



- 106 Chess-Beginning** **Two credits**  
An introduction to the game of chess including history, rules, recording of game, and play. 2 (2-0)
- 107 Chess-Intermediate** **Two credits**  
Emphasis on strategy. 2 (2-0)
- 108 Chess-Advanced** **Two credits**  
Refinement and improvement of offensive and defensive skills. 2 (2-0)
- Outdoor Activities (PEJ)**
- 100 Angling-Beginning** **Two credits**  
Covers fish structure, habits and habitats, tackle and techniques for fly, bait, spin, and ice fishing. 2 (1-2)
- 101 Angling-Intermediate** **Two credits**  
A lab class with an emphasis on different types of baiting procedures. 2 (0-4)
- 102 Angling-Advanced** **Three credits**  
Fishing trips with emphasis on special castings and recognizing different fishing habits. 3 (0-6)
- 103 Backpacking-Beginning** **Two credits**  
Designed to acquaint students with backpacking, emphasizing the safety and techniques involved. 2 (2-0)
- 104 Backpacking-Intermediate** **Two credits**  
Practical application of PEJ 103 skills. 2 (0-4)
- 105 Backpacking-Advanced** **Three credits**  
Incorporates overnight trip(s). 3 (0-6)
- 106 Bow Hunting-Beginning** **Two credits**  
Basic fundamentals. 2 (1-2)
- 107 Bow Hunting-Intermediate** **Two credits**  
Target shooting. 2 (1-2)
- 108 Bow Hunting-Advanced** **Three credits**  
Designed for the hunter with an emphasis placed on game habits. 3 (0-6)
- 109 Canoeing-Beginning** **Two credits**  
Basic fundamentals of recreational canoeing and handling, with emphasis on general care of equipment, safety factors, canoeing strokes and canoe tripping. Students must know how to swim before enrolling in this course. 2 (0-4)
- 110 Canoeing-Intermediate** **Two credits**  
Extension of PEJ 109. 2 (0-4)

- 111 Canoeing-Advanced** **Three credits**  
Class trips will be planned and taken. 3 (0-6)
- 112 Horsemanship-Beginning** **Two credits**  
Horse care and riding skills are introduced. 2 (1-2)
- 113 Horsemanship-Intermediate** **Two credits**  
Refinement and improvement of skills. 2 (1-2)
- 114 Horsemanship-Advanced** **Three credits**  
Techniques and skills used in training horses for show. 3 (1-4)
- 115 Hunting-Beginning** **One credit**  
Emphasis on gun safety and hunting laws. 1 (0-2)
- 116 Hunting-Intermediate** **One credit**  
A study of the habits of the game to be hunted. 1 (0-2)
- 117 Hunting-Advanced** **Two credits**  
Actual hunting of the game. 2 (1-2)
- 118 Basic Mountaineering-Beginning** **Two credits**  
Covers climbing technique, equipment, food, survival, rescue and medicine. 2 (0-4)
- 119 Mountaineering-Intermediate** **Two credits**  
Emphasis on survival and rescue. 2 (0-4)
- 120 Mountaineering-Advanced** **Three credits**  
Continuation of PEJ 119 including a planned trip. 3 (1-4)
- 121 Orienteering-Beginning** **Two credits**  
This course will introduce basic compass, map reading, and land navigation skills. 2 (2-0)
- 122 Orienteering-Intermediate** **Two credits**  
Extensive map reading with a smattering of land navigation skills. 2 (2-0)
- 123 Orienteering-Advanced** **Three credits**  
Actual use of the skills. 3 (3-0)
- 124 Sailing-Beginning** **Two credits**  
Introduction of basics required to learn how to sail. 2 (1-2)
- 125 Sailing-Intermediate** **Two credits**  
Refinement of basic sailing skills. 2 (1-2)
- 126 Sailing-Advanced** **Three credits**  
Continuation of PEJ 125 including a planned outing. 3 (1-4)

**127 Trap/Skeet-Beginning****Two credits**

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

**128 Trap-Skeet-Intermediate****Two credits**

Actual participation in shooting. 2 (1-2)

**129 Trap/Skeet-Advanced****Three credits**

Competitive shooting within the framework of the class. 3 (1-4)

**130 Recreation Leadership****Three credits**

An introduction to innovative and creative alternatives to traditional activities. Will give students experience teaching games to elementary and junior high youth in Lansing. 3 (1-4)

**131 Summer Camp Leadership****Three credits**

Develops the skills and attitudes that are necessary for camp counselors. 3 (2-2)

**132 Wilderness Survival****Three credits**

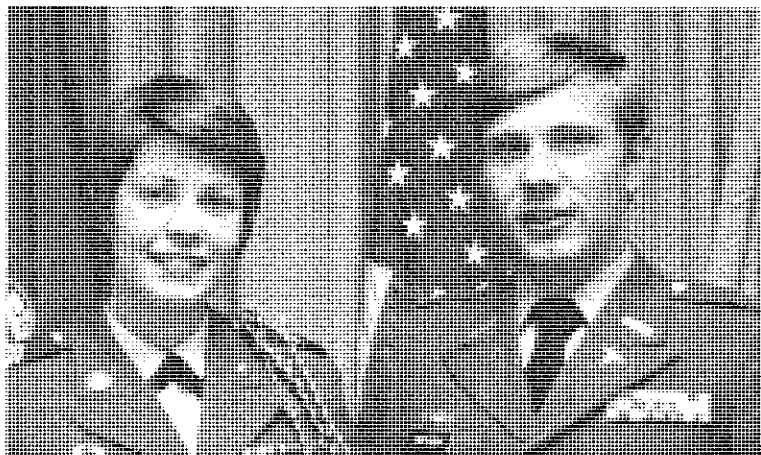
Emphasis on preparing students to cope with a variety of emergency outdoor situations. 3 (1-4)

**133 Small Boat Safety and Seamanship****Three credits**

Conducted entirely in the classroom, this course will help students learn basic safety and seamanship skills for small crafts. 3 (3-0)

**134 Sailboat Cruising****Three credits**

Seminar aboard a 26 ft. sloop. Includes basic sailing and seamanship skill, including a two-day cruise. 3 (0-6)

**ARMY-ROTC****Military Science**

Military Science (Army ROTC) is a four-year program of instruction in military leadership and management enabling college graduates to earn commissions as Second Lieutenants in the United States Army, Army Reserve, or National Guard. The first two years of this program of instruction (the Basic Course) may be completed at Lansing Community College and credits then transferred to any of the more than 270 colleges and universities that offer Army ROTC. Students successfully completing the prescribed courses are eligible to apply for admission to the ROTC Advanced Course (last two years) at any of these colleges and universities.

Military Science is neither a major nor a minor and fits into the elective credit of most academic programs. Students register for required courses through LCC, but most ROTC instruction is normally presented on the campus of Michigan State University. Compression of the required two-year program of instruction into one year is possible, if necessary, with departmental approval. While participating in military science at LCC, students incur no military obligation.

Scholarships covering full tuition, books and fees, plus \$100 per month are available on a competitive basis for students participating in the program. Scholarship cadets subsequently incur a four-year active duty obligation upon graduation.

Students enrolling in the Advanced Course without scholarship also receive \$100 per month during the normal academic year. If desired, they may serve for as little time as three months on active duty, and then serve as Second Lieutenants in the Army Reserves or National Guard; or they may complete for active duty and serve a three-year tour in the U.S. Army.

Military Science courses are open to all students; however, students desiring to earn a commission through Army ROTC must meet the following criteria:

1. U.S. citizen
2. At least 17 years of age at time of initial enrollment and under 28 years of age at time of commissioning.
3. Medically qualified for military service.
4. Enrolled in an academic program leading to a Bachelor's degree. Consult the Military Science advisor or your counselor for additional information.

**REQUIRED COURSES**

	<b>FALL</b>	<b>WINTER</b>	<b>SPRING</b>
<b>Freshman</b>	MS 121	PLS 271	MS 142
	Preview of Military Science 1 credit	International Relations 3 credits	Lab 1 credit
		MS 141, Lab 1 credit	
<b>Sophomore</b>	MS 143 Lab 1 credit	MS 223 Terrain Analysis and Land Navigation 3 credits	MS 122 Marksmanship and Hunter Safety 1 credit
	*HST 235 Military History of U.S. 3 credits		

\*Participating students must register for this course at Michigan State University as guest students.

**COURSE DESCRIPTIONS ARMY ROTC****Military Science (MS)**

**121 Preview of Military Science**      **Fall and Winter Terms**      **One credit**  
 Role of the ROTC officer in the Army. Assists the student in planning a curriculum to satisfy requirements for a commission. Prerequisite: Departmental approval. 1 (1-0)

**122 Marksmanship and Hunter Safety**      **Spring Term**      **One credit**  
 Small arms marksmanship and safety. Practical exercises on local firing ranges. Individual basic marksmanship and the skills necessary to participate in a competitive or recreational shooting program. Prerequisite: Departmental approval. 1 (0-3)

**223 Terrain Analysis and Land Navigation**      **Winter Term**      **Three credits**  
 Military maps, map construction, specifications and uses. Includes both a study of aerial photographs and an introduction to remote energy sensors employed by defense agencies as they relate to tactical operations. Prerequisite: Departmental approval. 3 (3-0)

**141 Military Science Lab**      **Winter Term**      **One credit**  
 Introduction to practical aspects of the Army through lectures, discussions, practical exercises and films. It includes customs and courtesies of the service, drill, leadership techniques and tactics. Prerequisite: Departmental approval. 1 (1-0)

**142 Military Science Lab**      **Spring Term**      **One credit**  
 Development of leadership at the squad level. Basic introduction to tactics. Practical exercises in drill and command. Prerequisite: Departmental approval. 1 (1-0)

**143 Military Science Lab**      **Fall Term**      **One credit**  
 Taken in conjunction with Military History of the U.S. Introduction to basic fundamentals of tactics. This course examines the principles of war and their application to modern land warfare. Prerequisite: Departmental approval. 1 (0-1)

**235 (History) Military History of the U.S.**      **Fall Term**      **Three credits**  
 Evolution of United States military policy with emphasis on the causes and conduct of wars, the democratization of war, the implications of the industrial, managerial, and scientific revolutions and the quest for peace. Prerequisite: Departmental Approval. 3 (0-3) **STUDENTS MUST REGISTER AS GUEST STUDENTS FOR THIS COURSE AT MICHIGAN STATE UNIVERSITY**

**Air Force ROTC Program****Aerospace Studies**

The Air Force ROTC program is divided into a basic course (General Military Course or "GMC") of two years and an advanced course (Professional Officers Course or "POC"), also two years. Successful completion of the POC and a four-year Baccalaureate Degree leads to a commission and active duty as an

officer in the U.S. Air Force. A student may complete the GMC portion of the AFROTC program while enrolled at Lansing Community College. The Aerospace Studies credits earned here may then be transferred to any of approximately 140 four-year colleges and universities offering AFROTC, including Michigan State University, to meet prerequisites for enrollment in the POC.

Students enrolling in LCC's Aerospace Studies courses incur no military obligation; so men and women may earn academic credit, learn about Air Force career opportunities, and then decide if they wish to apply for the POC. Selection for the POC at a four-year institution is open to any student who meets officer candidate qualification standards. There are openings for those who qualify for flight training after graduation, and there are openings for students in non-flying specialties with prior military training, all or part of the GMC may be waived at the time they apply for the POC. Students who wish to take only the POC at a four-year institution should inquire about the "AFROTC two-year program" at the college or university of their choice. All applicants for the POC should contact the AFROTC office at Michigan State University in January prior to their expected fall term enrollment.

**Scholarships**

The AFROTC program offers to qualified students four-year, three-year, and two-year scholarships. These scholarships pay tuition and fees, required textbooks, and a subsistence allowance of \$100 for each month of the academic year. Students must apply for a four-year scholarship by December 15 of their senior year in high school. Three-year and two-year scholarship applications should be made by the end of the winter term preceding the school year the scholarship will become effective.

**General Military Course (GMC)**

The General Military Course in Aerospace Studies examines the role of U.S. Military forces in the contemporary world with particular attention to the U.S. Air Force, its organization and mission. Functions of strategic and defensive forces, general purpose forces, and aerospace support forces are reviewed. The roles of these forces are related to national defense policy. The courses are described under Aerospace Studies in the Descriptions of Courses section of this catalog.

**Uniforms and Textbooks**

Air Force blue uniforms and necessary texts are furnished on loan basis by Department of the Air Force. A \$10.00 uniform deposit is required. The deposit is returnable.

**Aerospace Studies Courses**

Following are the courses required to complete the Air Force ROTC General Military Course. Satisfactory completion of these courses is a prerequisite for entry into the Professional Officers Course, the final two years of the Air Force ROTC program. Students enroll for all courses at Lansing Community College and attend classes on the Michigan State University Campus.

**COURSE DESCRIPTIONS AIR FORCE ROTC****Aerospace Studies (AS)**

**110 Organization of the U.S. Air Force** **Fall Term One credit**

The doctrine and mission of the U.S. Air Force; includes its history, organization, and how it is structured for mission accomplishment. Comparison of armed services mission relationships.

**111 U.S. Strategic Offensive and Defense Forces** **Winter Term One credit**

Comparison of the missions and functions of specific Air Force commands, including employment of contemporary aerospace equipment and systems.

**112 U.S. General Purposes Forces** **Spring Term One credit**

Tactical air forces. The mission, organization and function of the Air Force support commands and separate operating agencies as well as forces of other military services.

**210 Development and Employment of Aerospace Forces I** **Fall Term One credit**

Development of flight from man's first efforts to the present. Employment of aerospace forces in war and peace.

**211 Development and Employment of Aerospace Forces II** **Winter Term One credit**

Continuation of AS 210.

**212 Development and Employment of Aerospace Forces III** **Spring Term One credit**

Continuation of AS 211.

**141 Leadership Laboratory** **Fall, Winter, Spring Terms One credit**

Basic concepts of leadership and the role of the Air Force officer; leadership development through practical experience. Prerequisite: Concurrent enrollment in an AS 100- or AS 200-level course.

*Gerontology Program***Center for Aging Education**

*Program Director:* Ellen Newmyer Sullivan

Established in September 1975, the Center for Aging Education (CAE) is a coordinating center and clearinghouse in education for aging. Programs are designed for the following:

1. persons preparing for careers in gerontology, who wish to gain entry-level competencies in such gerontological fields as nursing home administration, senior adult program direction, older adult outreach services and senior adult advocacy;
2. persons already employed in gerontological services, who want to improve their professional competencies;
3. older adults seeking opportunities to examine new roles, explore career options, develop personal skills or plan for retirement careers; and
4. general audiences who wish to explore aging as a personal process or as a social/biological/psychological experience.

Three financial awards programs are administered by the Center in cooperation with the Financial Aids Office. The Lansing Area Senior Adult Opportunity Fund and the Lansing Community College Senior Adult Student Award are available to finance up to six (6) credits per term for qualified adults sixty years of age or older. The Older Driver Refresher Fund pays tuition costs for qualified adults sixty or older who enroll in Older Driver Training (GER 109). All of the regular financial aid programs administered by the Financial Aids Office also are available to students enrolling for six or more credits.

In addition to the courses listed here, the Center for Aging Education offers workshops, seminars and other training programs in response to identified community needs and interests. Consultation is available to area employers in the development and implementation of retirement planning programs for their employees.

Gerontology certificate courses are being formulated as of the printing date of this catalog. For information about the Certificate, related Associate Degree programs or transferability of gerontology courses, contact the Center for Aging Education.

**COURSE DESCRIPTIONS****Gerontology (GER)**

**100 Introduction to Human Aging** **Three credits**

Surveys the field of gerontology, with emphasis on social aspects. Topical areas include demography, physiology, psychology, sociology and economics of aging, and community and government programs. 3 (3-0)

**101 Programs/Services for the Aging****Three Credits**

Presents basic information necessary to deal with issues of practice in working with older adults through the service system. Focus is on the organization and functions of the aging system, its relationship to the broader human services system, and how the paraprofessional worker can use or develop community resources for the benefit of older adults. 3 (3-0)

**102 Mental Health and Aging****Three credits**

A general survey of the mental health aspects of aging with emphasis on psychological and social adaptation to the aging process. Content includes influences of physical health, social and family aspects, depression and losses, institutions, positive approaches to mental health and a life-cycle perspective. 3 (3-0)

**103 Recreation Programs—Aging****Three credits**

An exploration of the potential and effects of therapeutic recreation in the treatment setting. Orientation is toward total staff involvement in coordination and delivery of a recreational program meeting human needs of the resident. Topics include activity analysis, creating a livable environment, development of in-service training, review of State and Federal guidelines, medical background for charting and care plans, and effective communication with physically and mentally impaired. 3 (3-0)

**105 Planning for Retirement****One credit**

Explores issues in retirement planning, including financial matters, legal affairs, physical and mental health, housing choices, employment and volunteer opportunities, community resources and meaningful use of time. 1 (1-0)

**109 Older Driver Training****One credit**

A review of current Michigan driving laws, procedures and methods, especially as they apply to the older driver. Topics include signs, signals and pavement markings; open road driving; other kinds of road users (bicyclists, pedestrians); intersections; adverse conditions and local problem areas; and license renewal and restricted driving. 1 (1-0)

**110 Self-Renewal****One credit**

Students will work toward increased self-understanding, self-acceptance and self-appreciation through acknowledging and sharing strengths, values, interests and concerns and practicing interpersonal communication skills. Included is the identification of myths and fears about aging. 1 (1-0)

**111 Senior Adult Issues****One credit**

An opportunity to share life's experiences, knowledge and desires in the later years. Topics will include sources and use of assistance as related to housing, physical health, spiritual and mental health and finances. Students will look at changes resulting from legislation, the influence of organizations, and alterations in life styles. 1 (1-0)

**121 Senior Group Program Planning****One credit**

An opportunity for persons who may serve as leaders of senior groups to review their group activities, their roles as leaders and to plan to improve their ongoing programs. Methods for motivating group members, techniques of leadership, publicity skills, methods for arranging trips, and innovative program ideas are explored and discussed. 1 (1-0)

**122 Working with Older Adults:  
Using Community Resources****Two credits**

A brief overview of work skills and a summary of issues to be considered when working with older adults in a service capacity. The demography of the aging population, myths of aging, age-related sensory loss, effects of stress on the mental health of older adults and special communication skills are explored, practiced and discussed. Included are an outline of Federal and State programs that serve older adults and information about local community resources. 2 (2-0)

**123 Counseling Outreach Skills: Aging Populations****One credit**

Overview of interpersonal and outreach skills for service providers who work with older adults. Basic counseling skills and techniques are presented and practiced, including special considerations in dealing with older adults. Topics include obligations of counselor and client, perception, interview techniques, dealing with grief, and issues of mental health. 1 (1-0)

**125 Awareness of Aging Process****One credit**

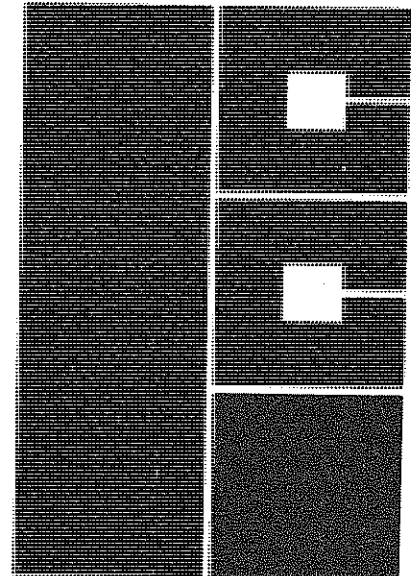
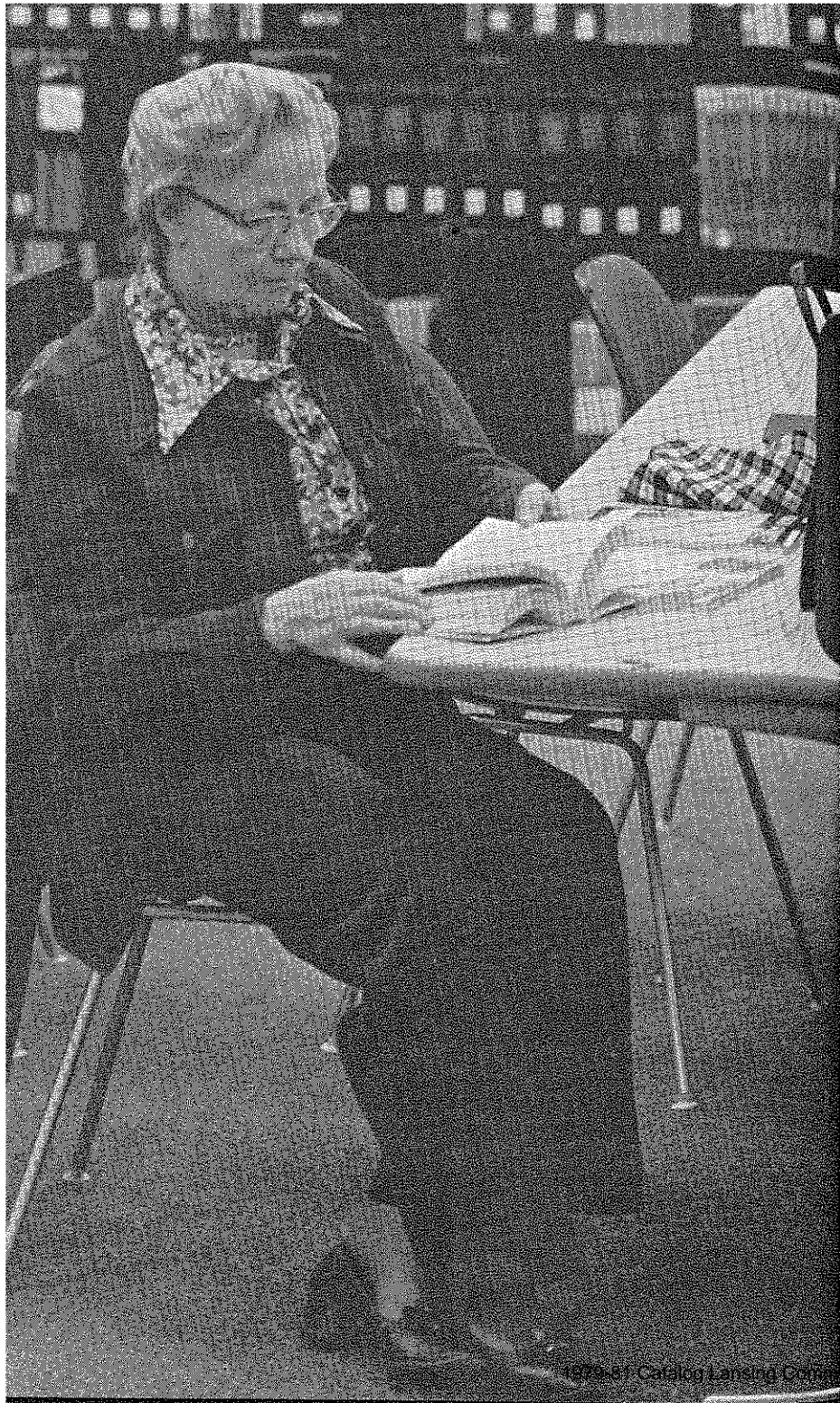
An examination through group discussion of the myths and realities of aging from both personal and societal perspectives. Older persons in the family setting, the influence of media, and economic, social and psychological issues of aging are considered. The position of older persons in other cultures is included. 1 (1-0)

**150 Senior Adult Leadership Training****One credit**

Training program focusing on techniques for taking a more active role in leading and developing local programs. Teaches student skills for serving on advisory boards, committees and task forces. Communication skills, decision-making, parliamentary procedure and interpersonal skills are presented and practiced. 1 (1-0)

# DIVISION OF LEARNING RESOURCES

Department of  
Library Services  
Department of  
Instructional Media



# DIVISION OF LEARNING RESOURCES



*Dean James Platte*

The services of the Division of Learning Resources are designed to meet the information and communication needs of students, faculty, and staff. The resources for these services are provided by the professional and technical staff of the libraries, the media production and distribution centers, the planetarium/multi-media center, the professional development laboratory, the archives and professional resource center. The departments also offer curricula related to library and media services.

## Library Services

The program and service 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 those instructional techniques which require the learner's use of resources.
4. To support the on-the-job needs of faculty and staff by coordinating college-wide professional development, and by meeting professional information needs through the college archives, professional development literature and administrative reference services.
5. To provide technical training in Certificate and/or Associate Degree programs in Library Media Technology, Media-Radio-Television, and Photography/Film Making.

### *Department of Library Services*

*Chairperson: Ellen Person*



The Department of Library Services has three service centers: the main Learning Resource Center in the Division of Arts and Sciences Building (A&S), the Dwight Rich Learning Resource Center in Old Central (OC) and a third Learning Resource Center in the new Vocational-Technical Building (VT). These centers offer students and faculty opportunities to use a book collection of nearly 75,000 items as well as 675 magazine subscriptions and backfiles. Students have access to library collections of tape and disc recordings, filmstrips, slides, and microfilm.

Through the library, students may use Instructional Media Department audio, video, and 16mm film collections. Special interest collections include a study group of children's literature (OC); the Chicano and Native American Collection (AS); the Career Information Center of college catalogs, books, pamphlets and microfiche (VT); annual reports of corporations (OC); and an extensive Magazine Reference Center in the Arts and Sciences Learning Resource Center.

Most print and non-print resources are arranged in Library of Congress and Dewey Decimal Classification order on open shelves in each library. A reclassification project is underway and students will find the newest material in LC classification. The three-way divided card catalogs in each center index material by authors, by titles, and by subjects. Periodical, 16mm film, instructional audio-tape, and video-tape lists and catalogs must be consulted separately.

The Library Services staff of librarians, library technicians, and student assistants organize and maintain the collections and circulation services, provide reference service, and give individual and group instruction in library use. A two-credit course in using your library is offered each term. Other services and facilities include equipment and stations for studying, listening and viewing; AVT stations for course lab assignments; a typing room and special equipment for handicapped students. Microfilm reader-printers and photocopiers provide low-cost copies. Interlibrary loan service is maintained through the State of Michigan Library with the Michigan State University and the University of Michigan Libraries.

Technical Services, the ordering and processing unit, is adjacent to the Old Central Library. The technical services librarian and staff order, index and process all material for the libraries. Central records of the total collection of the Library Services Department are maintained here. The library joined OCLC, Inc. (Ohio College Library Center), a computer cataloging network, in 1975 and uses a computer terminal to catalog library materials and produce catalog cards. An OCLC terminal for public use, in the Arts and Sciences Building, lists books owned by more than 1,000 libraries nationally.

## COURSE DESCRIPTIONS

### Library Media Technology (LMT)

- 101 Introduction to Library Media Technology** **Two credits**  
An overview (through lectures, discussions and field trips) of library career opportunities, and of the role of the LMT in the changing library scene. Includes ten assigned hours of observation and practice in libraries. Required.
- 103 Public Services** **Four credits**  
Provides students with an introduction to library public services, including circulation procedures, reference materials, and public relations. Includes ten assigned hours of observation and practice in libraries. Required. Prerequisite: LMT 101 & 150.
- 150 Using Your College Library** **Two credits**  
An introduction to the effective use of the LCC libraries with emphasis on information that will facilitate using any library in the community. Open to all students. Required.

- 201 Technical Services I** **Four credits**  
Study of the principles of descriptive cataloging and application of the Dewey Decimal and the Library of Congress classification schemes. The student will deal with unit card preparation, computer cataloging, assigning subject headings, cutting, filing, and the maintenance of the card catalog. Includes ten assigned hours of observation and practice in libraries. Required. Prerequisite: LMT 103 or departmental approval.
- 242 Storytelling** **Two credits**  
Students will study, discuss, observe, and demonstrate the techniques of telling a story to children as a method of sharing and communicating ideas, introducing books, and encouraging and stimulating reading. Elective.
- 246 Library Practice** **Three credits**  
Opportunity to observe and participate in an area library media center operation. The student will work for 80 hours applying the information gained in the Library Media Technology program. Students must apply for practice placement in the term preceding the term they intend to register for this course. Required.
- 250 Special Services Seminar** **One—Three credits**  
Alternating seminar topics cover methods and materials for supporting special library services such as medical, childrens, and government. Elective.
- 260 Specialized Information Services** **Two credits**  
Exploration of various approaches to providing information service to special clientele. Principles of organization, acquisition, retrieval, and dissemination of information are identified and applied in practical situations. Elective. Prerequisite: LMT 150 or departmental approval.
- 202 Technical Services II** **Three credits**  
Mechanical preparation, physical arrangement and maintenance of library materials, as well as the study of methods and of bibliographic tools for ordering and of the organization of a technical services department. Required. Prerequisite: LMT 201 or departmental approval.
- 203 Media Services** **Four credits**  
Students learn and practice the operation and simple maintenance of common audio-visual and electronic equipment and design and produce graphics and audio materials applicable to library and media centers. Open to all students. Required.
- 204 Media Services II** **Three credits**  
Examination of non-print media and its use in all types of libraries. Students visit nearby centers and become acquainted with the activities and procedures that take place in multi-media libraries and discuss and study methods of selecting, cataloging, processing, organizing and circulating audio-visual media. Required. Prerequisite: LMT 202 and 203.



**210 Introduction to OCLC****Two credits**

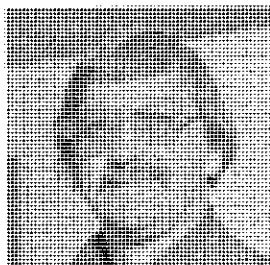
Acquaints the student with the use of the OCLC, Inc. computer network for bibliographic searching and cataloging. Required. Prerequisite: LMT 201 or departmental approval.

**240 Books for Young People****Three credits**

Familiarizes students with K-12 fiction focusing on developments in the field since 1965. Students will read both "pre" and "post" 1965 books and express opinions verbally and in written form. Develops critical thinking and evaluation skills. Elective.

*Department of Instructional Media*

Chairperson: Dale Dunham

**Services**

The Instructional Media Department offers many services to help faculty with classroom media, and to help College departments prepare and present media materials.

Audio-visual equipment check-out in Old Central, Arts and Sciences, and Vocational Technical buildings provide projectors and tape recorders for instructors' use. These centers, along with the main departmental offices in the North Ramp, provide AV materials such as blank recording tapes, special marking pens, and replacement lamps, and services such as preparation of overhead transparencies and film check-out from our own library. An IMD equipment maintenance service takes care of all repairs.

Audio Services staff provide studio recording facilities and assistance to faculty and staff in preparing instructional tapes. Public address systems and location recording services are also available. From our master tapes, we make cassette and open reel duplicate tapes for classroom use. Students and faculty may also listen to tapes by visiting the Arts & Sciences and Old Central libraries.

Television Services include production assistance for instructors who wish to prepare their own instructional television programs. Television Services staff also provide closed circuit television channels for classroom programming. Instructors may schedule videotapes from the College collection, view programs during commercial broadcasts, or play back their own tapes.

The LCC Planetarium provides a unique facility for planetarium programs and multi-media presentations. Faculty members may arrange use of the facility or assistance in preparing media programs through the IMD office.

Photographic Services include all forms of still and motion picture photography, color and black-and-white prints, enlargements, slides, copywork, and location photography.

**Facilities****Television Studio**

A complete color television studio supported by full ¾ inch editing facilities provides the opportunity for instructional based and public affairs programming, to be aired on Lansing Cable Channel 33 or the LCC closed circuit distribution network. Students may gain practical experience by enrolling in television production classes and by participating in all aspects of program production.

**Photography Center**

The Photography Center offers the student a variety of facilities and equipment. Black and white printing labs with a total of thirty-eight enlargers are available during open lab hours as well as scheduled class times. Black and white roll and sheet film processing rooms are open during operating hours. Six separate color printing rooms and automatic print processor offer the color printing student an opportunity for serious, controlled work. Processing of color reversal and negative films is available at low cost. Two studios and a variety of electronic flash and continuous lighting equipment give students practice in portrait and product photography. Densitometers, matt cutters, dry mount presses, retouching machines, and equipment normally owned by professional studios and labs are available for instruction and practice. A variety of cameras, light meters, and lighting equipment may be checked out for student projects.

**Motion Pictures**

Film classes at LCC are small, and students have access to the best modern production facilities and equipment. Nearly all production is done in 16mm film. Studio and location film equipment, editing labs, sound mixing facilities, animation and processing equipment are all available to students.

**Radio Station**

Media, Radio and Television students participate in the broadcasting operations of the campus radio stations, serving as disc jockeys, newscasters, producers, and technicians. The studios are fully equipped professional radio facilities that provide excellent operational experience at every level of program production.

**Planetarium**

The planetarium multi-media center supports interdisciplinary education through media. In addition to showing the wonder of the stars, the planetarium offers a unique setting of wrap-around visuals and stereo sound for special programs in history, art, science, social science, communications and drama. As curricular needs permit, special request programs are offered to all age groups of the community.

### Curriculum

Two curricular programs, Photography and Media-Radio-Television, provide students with knowledge and skills in the production of Communications Media, including Photography, Motion Pictures, Graphic Arts, Radio Broadcasting, Television, Sound Recording and various combinations of these media.

The master of these fields is both an artist and a technician. The artist understands how to captivate the audience and weighs the impact of media on society. The technician knows the capabilities and limitations of all the available tools.

The interdisciplinary approach of these departmental programs cuts across traditional occupational areas and provides greater flexibility for career placement in the challenging job market of today. A capable and skillful generalist will be much better able to obtain and hold employment than the narrow specialist.

Curricular guides for each program offered by the department are available in the counseling offices and the departmental chairperson's office. These guides are frequently modified by the department to accommodate an individual student's background, goals, and abilities. Students should discuss unique situations with an academic advisor within the Department of Instructional Media.

### Media Technology

Associate Degree Program Curriculum Code: 995

This program provides a broad-based media education of technical, and production nature and provides the student the option of transfer at the junior level to a four-year institution. The program also provides the opportunity to join the job market with an employable skill at the end of two years. These opportunities include, but are not limited to, the following: Cable TV Technician, Time Salesman, Graphics Technician, Educational/Industrial Media Production Technician, Video Production Technician, Announcer, Disc Jockey, Recording Technician, Office Personnel, and Newscaster. Most of the career openings will be in the area of radio, television (both broadcast and cable), and in secondary school systems, or in Intermediate K-12 Career Centers, government or private industry.

## COURSE DESCRIPTIONS

### Media Technology (MRT)

- 112 Media Materials Production I** **Four credits**  
An introduction to Media Production. Design and layout of visuals and copy resulting in an eye-catching format. Letterpress, silk screening, lamination, dry mounting, matting. Prerequisite: None.
- 114 Media Materials II** **Four credits**  
A continuation of MRT 112. Advanced controls of the processes taught there. Participation in a model business situation as it might exist in the graphic arts industry. Prerequisite: MRT 112.

- 116 Multi-Media Workshop** **Four credits**  
Teaches the integrated usage of film, photography, television, radio, graphics, and other audio-visual arts. Selection of the best media for a given communication problem or design. Prerequisite: None.
- 120 Audio Production** **Four credits**  
Basic recording technique, mixing, editing, and microphone practices applicable to slide/tape programs, film production, and television. Also sound reinforcement for theatrical and musical performances. Prerequisite: None.
- 130 Introduction to Broadcasting** **Three credits**  
Analyzes the nature, origin, function and development of television and radio in today's society. Prerequisite: None.
- 131 Third-Class License** **Three credits**  
Designed to teach basics required to pass the FCC third-class radio-telephone operators license, endorsed for broadcast operations. Prerequisite: None.
- 132 Introduction to Radio** **Four credits**  
An introduction and orientation to the principles and techniques of radio station operation. Designed to develop skills in broadcasting operations, performing and programming techniques, and basic production work. Prerequisite: MRT 130.
- 134 Radio Production I** **Four credits**  
Techniques of producing radio programs in their component elements for broadcasting purposes. Basic and advanced production procedures for contemporary radio program materials in script, recorded and live broadcast forms. Prerequisite: MRT 132.
- 140 Cable Television Operations** **Four credits**  
A course to orient the student to the diverse operations of cable TV systems. Study of management, cable subscriptions sales, programming, system models, distribution and legal considerations. Prerequisite: None.
- 150 Fundamentals of Television** **Four credits**  
Principles of television studio practice and successful television programming. Critical viewing of films and videotapes provides understanding of how visuals function as language. Some access to video tape equipment will be provided. Prerequisite: None.
- 152 Television Production I** **Four credits**  
Application of visual theory to actual production situations. Basic composition, shot-sequence construction, basic camera and equipment operations in an actual hands-on production setting. Prerequisite: MRT 150.
- 155 Television Production II** **Four credits**  
Builds upon the skills learned in MRT 152. Students select scripts, crews, actors, and rehearse and produce programs with the guidance and evaluation of an instructor. Prerequisite: MRT 152.

- 160 Radio-Television Writing** **Four credits**  
Planning, preparing, and writing various types of radio and television scripts. Feature programs, commercials, news, interview, and information programs. Prerequisite: COM 121 or Dept. Approval.
- 180 Media and/or the Future** **Three credits**  
Study of the effects of media on society and of society on media. Prerequisite: None.
- 200 TV Film Graphics** **Three credits**  
Production of graphic materials for TV and motion pictures; the use of graphics in titling, electronic keying, and achieving artistic effect. Includes aspect ratios, color relationships, and electronic videofont. Prerequisite: None.
- 204 Film for TV News** **Four credits**  
Single system 16mm sound film recording and portable video, for integration into the television news program. Related skills in composition, film editing and interviewing technique will be stressed. Prerequisite: MRT 152
- 210 Broadcast Sales** **Three credits**  
Methods and specialized skills employed in selling radio and television advertising. Concentrated instruction on how to sell air time for broadcasting stations and participation in a variety of sales situation exercises. Prerequisite: None.
- 220 Audio Production II** **Four credits**  
Advanced recording and production. Television audio and music recording. Prerequisite: MRT 120
- 222 Radio Announcing Technique** **Four credits**  
Principles and advanced techniques of voice announcing for radio and television broadcasting. Class instruction, lab exercises, and individual assignments in all basic categories of on-the-air announcing work. Prerequisite: None.
- 230 Radio Production II** **Four credits**  
Continuation of MRT 134. Includes training and practice in preparing, producing and directing dramatic, documentary, and special events programming for radio. Prerequisite: MRT 134.
- 234 Radio Workshop** **Five credits**  
Advanced operations in production and management of the student radio station at LCC. Instructor-supervised course which gives the student additional responsibilities beyond those in MRT 136. Preparation for actual jobs in the radio industry. Prerequisite: Departmental approval or MRT 132.
- 240 Radio Music Programming** **Four credits**  
A course in theory, planning, preparation and presentation of contemporary music broadcasting formats. Study of various structures and styles of programming including top forty, easy listening, country. Prerequisite: MRT 132.

- 242 Radio Practicum** **Two credits**  
Practical experience in radio studio operations. Students work in staff positions at campus radio stations, WLCC and WLCR. Varied assignments, including disc jockey, newscaster, production specialist, scriptwriter, shift manager, and related jobs. Prerequisite: MRT 132.
- 252 TV Producer-Director** **Four credits**  
A refinement of the two fundamental jobs of producer and director, as experienced in MRT 155. More advanced assignments in preparing budget, scripts, casting, rehearsal and production. Prerequisite: MRT 155.
- 255 Television Lighting I** **Three credits**  
Theory and practice of television lighting for both studio and remote operations. Prerequisite: MRT 152.
- 280 Media in Education** **Four credits**  
Basic production of slides, tapes and audiovisual materials to supplement or re-enforce classroom teaching. Prerequisite: None.
- 290 Independent Study** **Two credits**  
**291 Independent Study** **Three credits**  
**292 Independent Study** **Four credits**  
In these three courses, students have an opportunity to pursue advanced study in areas not formerly taught within the curriculum. Students must submit written applications detailing their project for departmental approval.
- 296 Internship in Media Production** **Twelve credits**  
Students in Media-Radio-Television production work up to 30 hours per week as technical assistants on MRT assignments; students become familiar with the daily operation of a production company from contact with clients in both technical and creative aspects.
- 299 Seminar in Cable TV Workshop** **Four credits**  
A project, under faculty supervision, which is taken on by a group of students, rather than an individual. Regularly scheduled meetings of students with faculty advisor. Prerequisite: Departmental approval.
- Photography Associate Degree Program** **Curriculum Code: 996**  
Photography is becoming more complex in both technology and application. In realizing the potential of the medium, more and more people are finding it difficult to teach themselves this art, and are seeking professional guidance in developing their skills and expanding their photographic vision.  
Because of growing specialization, career fields are becoming more demanding. A person desiring to enter the field of photography needs a comprehensive background. Many employers are reluctant to spend time and money in basic on-the-job training programs.  
The Community College's open door admissions policy encourages free access to College programs without restricting entrance requirements. However, to promote excellence in the second-year program, the department expects students to pass a proficiency exam after completing the Introduction to Photography sequence and before enrolling in advanced courses.

## COURSE DESCRIPTIONS

## Photography (PHO)

- 106 Survey of Photography and Cinema** **Three credits**  
Study film making and photography through historic development, social events, and history as recorded on film. Visit photography studios, TV studios film producers and exhibitors and talk with professional people in these fields. Prerequisite: None.
- 108 History of Photography I** **Three credits**  
Survey of the development of photography through study of the people and processes involved. Prerequisite: None.
- 109 Basic Photo Oil Painting** **Two credits**  
Workshop designed to build a working knowledge of hand coloring photographs using transparent oil paints. Prerequisite: None.
- 110 Basic Camera Operation** **Two credits**  
Practical application of camera controls and pictorial composition utilizing commercial processing for class projects. Prerequisite: None.
- 116 Film History** **Three credits**  
Focus on the major historical, technical, social, and artistic developments from the beginning of motion pictures to the present. Each week examine a major theme and view films related to that theme. Prerequisite: None.
- 117 Law Enforcement Photography** **Three credits**  
Camera skills required for on-the-spot documentation for use as evidence by enforcement officers. Prerequisite: PHO 110 and Department Approval.
- 118 History of Photography II** **Three credits**  
Survey of contemporary photographers and processes. Prerequisite: None.
- 120 Introduction to Photographic Process I** **Four credits**  
The student will become familiar with camera types, camera controls, exposure and selection of sensitized materials. Camera handling and exposure techniques will be emphasized. Students will process, proof, and print their own work. Print spotting, mounting and presentation will be covered in the later stages of the course. Adjustable camera required. Students supply film and paper. Prerequisite: None.
- 126 Basic Motion Picture Production** **Four credits**  
Introduction to all aspects of film making, leading to the production of individual projects. Write, direct, and photograph a short film. Create a sound track and edit the picture. Lectures, demonstrations, and exercises teach introductory procedures and provide an overview of how films are made. Prerequisite: None.
- 128 Photographic Design** **Three credits**  
Explore, through photographic medium, the elements and principles of design. Prerequisite: PHO 110 or PHO 120.

- 136 Fundamentals of Cinematography** **Three credits**  
Use the motion picture camera effectively. Principles of composition, lighting, and continuity, mood and dramatic impact. Operation of professional cameras, film and exposure, sync sound, coverage and camera angles. Practical projects will be coordinated with Fundamentals of Motion Picture Sound. Prerequisite: PHO 126.
- 140 Introduction to Photographic Process II** **Four credits**  
Continuation of PHO 120 with refinement of exposure, processing, printing controls, and print finishing. Prerequisite: PHO 120.
- 146 Fundamentals of Lighting** **Three credits**  
Use light for effect and dramatic impact in film, television, or still photography. Emphasize shape, texture, depth, and shadows. Balance light ratios and color temperatures. Shoot in the studio and on location. Prerequisite: PHO 120 or 126 or MRT 150.
- 150 Basic Photo-Chemistry** **Three credits**  
Introduction to the black-and-white photo-chemical process including chemical compounding and testing. Prerequisite: PHO 120.
- 155 Black and White Printing Lab** **Two credits**  
Guided practice in black and white printing geared to each student's need or problem. Prerequisite: Departmental approval.
- 156 Fundamentals of Motion Picture Sound** **Three credits**  
Record effective and dramatic sound for motion pictures. Select suitable sound elements for mood and impact. Operate professional recording equipment. Recording, re-recording, and mixing procedures. Basic acoustics and recording theory. Practical recording projects will be coordinated with Fundamentals of Cinematography. Prerequisite: PHO 126 and MRT 120.
- 158 Print Finishing and Presentation** **Two credits**  
Development of expertise in print finishing and presentation. Prerequisite: PHO 120.
- 160 Introduction to Photographic Process III** **Four credits**  
Continuation of PHO 140 with emphasis placed on visual perception, introduction to medium and large formats, survey of 200 level specializations, and preparation for 200 level review. Prerequisite: PHO 140.
- 161 Camera Maintenance** **Two credits**  
Fundamentals of caring for photographic equipment, including routine maintenance, preventive maintenance, simple servicing and cleaning, as well as basic adjustments on how to make equipment work when it doesn't want to and the photographer is unable to secure professional repair. Prerequisite: PHO 120.

- 165 Manipulative Black and White Printing** **Four credits**  
Imagery achieved through manipulative camera and darkroom techniques. An introduction to various special films and papers and their use. Prerequisite: PHO 160.
- 166 Fundamentals of Film Editing** **Three credits**  
Assemble picture and sound elements for effective and dramatic impact. Edit action and dialogue sequences. Build sound tracks with music, dialogue, and sound effects. Exercise and practical editing projects. Prerequisite: PHO 126
- 170 Basic Color Processing and Printing** **Four credits**  
A basic course in color processing and printing, using readily available equipment. This course is designed primarily for the photographer who has no requirement for production color printing. Emphasis will be on correct exposure of both positive and negative color film, small tank processing of those films, printing both positive and negative films, and drum and tube processing of the prints. Prerequisite: PHO 140.
- 175 Photographic Theory Laboratory** **Two credits**  
Students will work under the guidance of a photographic instructor to improve their skills in the theory of photographic practice. Course is open to any student in the photographic program and required of students who fail the theory examination at the end of Intro to Photo III. Evaluation of the student's current theory level will be made and a study plan provided. The final objective will be to provide the student with the necessary theory of photography skills to pass the exam required to enter the photo program beyond the Intro III level. Prerequisite: PHO 160.
- 176 Fundamentals of Film Directing** **Three credits**  
Direct effective and dramatic motion pictures. Understand principles of story development and production planning. Work with actors. Direct scenes with creative staging, adequate coverage, and proper continuity. Direct sequences for theatrical or documentary films. Prerequisite: PHO 126.
- 187 Photographic Sensitometry** **Three credits**  
The study of the application of sensitometry to the photographic process. The uses of the densitometer and scientific testing methods are applied in this course. Prerequisite: PHO 160.
- 190 The Business of Photography** **Three credits**  
Study of the unique problems and opportunities involved in the business of photography. Prerequisite: PHO 160.
- 200 Introduction to Color** **Three credits**  
An introduction to color theory, materials and their practical applications. Prerequisite: PHO 160.

- 201 Photo-Journalism I** **Three credits**  
Designed to familiarize the student with the techniques involved in photography for publication, including event, story-telling and photography of the decisive moment. Prerequisite: PHO 160.
- 202 Posing and Lighting the Portrait I** **Four credits**  
Familiarization with various lighting techniques and lighting systems in a variety of modes. Performance of posing and lighting exercises on single persons, couples and small groups. Prerequisite: PHO 160.
- 203 Environmental Photography I** **Four credits**  
Introduction to the technique and equipment utilized in nature and environmental photography. Prerequisite: PHO 160, 200, 214.
- 204 Large Format Photography I** **Four credits**  
Camera technique, perspective and sharpness controls, optics, processing and printing of large format negatives. 4 x 5 cameras provided. Prerequisite: PHO 160.
- 205 Non-Silver Processes I** **Four credits**  
An introduction to the various non-silver processes which preceded the silver print. Prerequisite: PHO 160.
- 206 Motion Picture Production Workshop I** **Four credits**  
Students who have completed at least three fundamental level film classes may produce their own films, under supervision, to gain increased technical and practical experience in film production. Prerequisite: Any three of PHO 136, 146, 156, 166, 176.
- 207 Close-up Photography I** **Three credits**  
Study of the specialized equipment and lighting techniques unique to this area of photography. Prerequisite: PHO 160.
- 208 Archival Processing and Testing** **Two credits**  
Study of the problems and procedures for long-term preservation and storage of photographic materials. Prerequisite: PHO 160.
- 209 Professional Black and White Printing** **Four credits**  
Introduction to production printing, including processing, proofing, finishing, and presentation of commercial black-and-white prints. Prerequisite: PHO 160.
- 210 Color Processing** **Two credits**  
Study of reversal and negative color film and paper processing procedures. Emphasizes process monitoring for quality control. Prerequisite: PHO 200.
- 214 The Zone System** **Four credits**  
Comprehensive testing and evaluation of the zone system as it applies to exposure/development control. 4 x 5 view cameras and light measurement are stressed. Prerequisite: PHO 204.

- 216 Motion Picture Production Workshop II** **Four credits**  
Students who have completed PHO 206 may produce their own films, under supervision, to increase their technical and practical experience. Prerequisites: PHO 206.
- 217 Forensic Photography** **Three credits**  
A study of the application and technique of photography for legal investigative purposes. Prerequisite: PHO 200, 207.
- 220 Color Printing I** **Three credits**  
Introduction to the materials and processes of color printing. Prerequisite: PHO 200.
- 221 Photo-Journalism II** **Four credits**  
Continuation of PHO 201. Prerequisite: PHO 201.
- 222 Portrait Photography II** **Four credits**  
A continuation of PHO 202 with primary emphasis on color portraiture in the studio. Students study professional style, techniques and business methods as currently practiced in the field. Prerequisite: PHO 202, 204, 220.
- 223 Environmental Photography II** **Four credits**  
Continuation of PHO 203. Prerequisite: PHO 203, 204, 207.
- 224 Large Format Photography II** **Four credits**  
Continuation of PHO 204. Emphasis on studio product lighting, architectural photography, and use of color films. Prerequisite: PHO 203, 204, and 207.
- 225 Non-Silver Processes II** **Four credits**  
Continuation of PHO 205 providing in-depth experience in several non-silver processes. Prerequisite: PHO 205 or departmental approval.
- 226 Motion Picture Production Workshop III** **Four credits**  
Students who have completed PHO 216 may produce their own films, under supervision, to increase their experience and build their personal film portfolios. Prerequisite: PHO 216.
- 227 Close-up Photography II** **Four credits**  
Continuation of PHO 207. Prerequisite: PHO 200, 207.
- 231 Photo Cropping & Editing** **Four credits**  
Fundamentals of composing, cropping and editing photographs. This is essential for photojournalism students and valuable for all students in the vocational photography program. Prerequisite: PHO 201.
- 232 Bridal & Wedding Photography** **Three credits**  
Designed to familiarize the student with the problems and opportunities inherent in bridal wedding coverage. Prerequisite: PHO 200, 202.
- 240 Color Printing II** **Four credits**  
Continuation of PHO 220. Prerequisite: PHO 220.

- 242 Photographic Illustration** **Four credits**  
Combines the techniques of portrait photography and large format photography to produce photographs for advertising, catalog illustration, instruction manuals and the like. Students will work primarily in color, and will put people and products together to produce effective photographs suitable for reproduction in various media. Prerequisite: PHO 202, 220, 224 and departmental approval.
- 243 Environmental Photography III** **Four credits**  
Continuation of PHO 223. Prerequisite: PHO 223 or departmental approval.
- 244 Large Format Photography III** **Four credits**  
Continuation of PHO 224. Prerequisite: PHO 224 or departmental approval.
- 245 Non-Silver Process III** **Four credits**  
Continuation of PHO 225. Prerequisite: PHO 225 or departmental approval.
- 246 Lighting II** **Three credits**  
Advanced practice in lighting with emphasis on studio and location problems. Prerequisite: PHO 146.
- 250 Color Printing III** **Four credits**  
Advanced color processing and printing. Emphasis will be placed on the mastery of techniques of color image construction. Students will practice various forms of color print manipulation, reversal processes, duplicating methods, and proper use of color analyzers. Prerequisite: PHO 240.
- 260 Professional Photography Workshop** **Variable**  
Various courses offered under the Professional Photography workshop program. Course offerings include field expeditions for specific study areas, professional guest lectures and workshops, and specialized courses conducted at the request of industry or other academic departments in the College. Specific descriptions are published in advance. May be repeated for credit. Prerequisite: Departmental approval.
- 270 Workstudy or Cooperative Studies** **Four credits**  
Work experience in actual photographic situations for practical application of curriculum based skills. Prerequisite: Departmental approval and 32 PHO credits.
- 280 Independent Study** **Two credits**
- 290 Independent Study** **Three credits**  
Students have an opportunity to pursue advanced study in areas not formerly taught within the curriculum. Students must submit written application detailing their projects for departmental approval.
- 296 Internship in Photography** **Twelve credits**  
Students in photo production work up to 30 hours per week as technical assistants on photo assignments; students become familiar with the daily operation of a production company from contact with clients in both technical and creative aspects.

**297 Portfolio**

Preparation and presentation of final portfolio. Successful completion required for all Associate Degree candidates. Prerequisite: Departmental approval.

**Four credits****298 Directed Independent Study—Photo**

Students have an opportunity to pursue advanced study in areas not formerly taught within the curriculum. Students must submit written application detailing their projects for departmental approval.

**Four credits**

# DIVISION OF ARTS AND SCIENCES

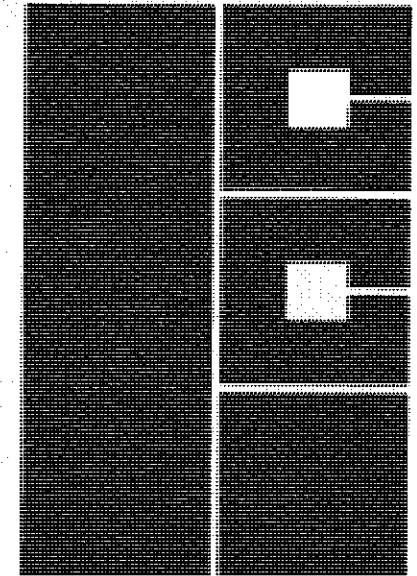
Department of  
Communication

Department of  
Humanities

Department of  
Mathematics

Department of  
Science

Department of  
Social Science

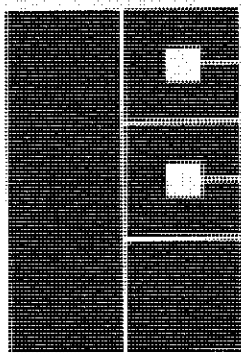


# DIVISION OF ARTS AND SCIENCES



*Dean Sam Kintzer*

## *Division of Arts and Sciences*



The Division of Arts of Sciences offers liberal arts education to students. Originally, the meaning of liberal arts was that they "liberated" students from the chains of superstition and ignorance. Today, the purpose of a liberal arts education is to present knowledge and ideas about the world around us from the perspectives of the behavioral and natural sciences and the humanities. Through this program of study the student can develop the abilities of analytical reasoning and informed judgment which are the hallmarks of a broadly educated individual. Such a person will be more versatile in dealing with the complexities of modern technological society and be better prepared for positions of leadership and responsibility.

The Division of Arts and Sciences is established:

1. To provide general education for all students.
2. To offer freshman and sophomore liberal arts courses paralleling the first two years of university training.
3. To award Associate Degrees in Arts and Associate Degrees in Science to students who earn 90 credits of study and who also meet the academic requirements for graduation as stated by the college.
4. To offer pre-professional curricula enabling students to transfer after two years of study to advanced training at four-year colleges and universities.
5. To provide a program of study through which the student is assisted to develop an awareness of self and to build a foundation for the election of a value system.
6. To encourage the student to search for truth in the heritages of our civilization and of other cultures so that the dignity of man may be comprehended.

To facilitate the attainment of these goals, the Division of Arts and Sciences:

- Provides students with an array of instructional environments: independent study, off-campus courses in the field and community, individualized self-paced learning courses, audio-visual-tutorial studies, lecture-discussion, laboratory, 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. Those individuals fully employed during the daytime, whether at a job or in the home, may begin their college education by enrolling in evening courses.
- Recognizes that thoughtful understanding of the issues of concern of the closing decades of the twentieth century requires of each individual the ability to read, write, and speak with clarity and sophistication. To accomplish this, the Division provides for all students courses that will assist them to read with comprehension and to write and speak effectively.
- Establishes honors courses, invites guest speakers, holds special workshops and seminars for the academically able student with a wider range of interest.

## **Dual Enrollment**

High school students who have demonstrated academic ability may, upon recommendation of the high school principal, be admitted during their junior year in high school to the dual enrollment 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 Degree while they complete their high school program. Students usually attend afternoon or evening classes. They enroll in regular sections of the courses for which they are registered and their credits are fully transferable to other colleges and universities.



**Honors Program**

The Division of Arts and Sciences offers an Honors Program for students of outstanding academic ability. This program offers the advantages of independent study as well as regularly scheduled honors courses, and provides these students with the opportunity to explore their academic interests in depth.

Twenty-one awards covering full tuition and fees are offered each year to new students of superior academic ability who intend to study in this Division. These awards are competitive and are based solely on academic excellence. Application forms are available on request from the Honors Program Coordinator, Division of Arts and Sciences.

**Seminar Series**

Each term the Division of Arts and Sciences offers a continuing education program for those who enjoy learning for its own sake or for other self-determined goals. Classes and seminars provide an opportunity for cultural enrichment, for acquisition of new knowledge, or for a rewarding use of leisure hours. Seminar Series is designed to assure that no interested person is left without access to a varied and flexible program of learning experiences beyond the years of formal schooling. Classes usually meet once each week during evening hours. Courses in this program can be applied to partial fulfillment of requirements for the Associate Degree General only. Grades are given on a P-Pass or N-No Credit basis.

**ASSOCIATE DEGREE PROGRAMS****Criteria for the Associate Degrees in Arts and Science****I. Requirements**

1. 90 Credits
2. GPA of 2.0 or better
3. 30 Credits in Attendance at LCC
4. Completion of SS 103, or 104, or 105
5. The student is required to take a core of at least 12 credits in each of the following areas: Composition/English, Humanities, Science, and Social Science.
  - a. It is recommended that the requirement of 12 credits in Humanities be fulfilled by the sequence in Western Civilization, HUM 201, 202, 203. (World Civilizations, HUM 222, may be substituted for HUM 202 and World Civilizations, HUM 223, may be substituted for HUM 203.)  
Students may substitute other courses in the curriculum of the Humanities Department provided that these are distributed in at least two of the following four areas:
    - A. *Art and Music History* (HUM 101, 150, 151, 152)
    - B. *History* (HST 104-296)
    - C. *Literature* (ENG 201-296 and HUM 102)

D. *Philosophy and Religion* (PHL 101-296; REL 150-296 and HUM 104)

Please note that Western and World Civilization courses (HUM 201, 202, 203, 222, 223) are counted as History courses when only one or two of them are taken to fulfill general education requirements.

- b. The Composition/English requirement can be fulfilled by courses in writing and freshman English. The following are possible alternatives (A.-D.) a student may take in fulfilling the Composition/English requirements for the Associate Degree:

A	B	C	D
WRI 121	WRI 121	WRI 121	WRI 121
ENG 122	WRI 122	ENG 122	WRI 122
ENG 123	ENG 123	WRI 123	WRI 123

Those students permitted to waive WRI 121 may elect a third course from 200-level offerings in Communication, Writing, and English.

- c. The 12 required credits in Social Science include either SS 103, or 104, or 105. The remaining eight credits may be selected from any of the following: SS 101, 102 sociology, anthropology, psychology, political science, or geography.
  - d. It is required that 12 credits in Science be fulfilled by courses that grant laboratory credit. Students must select at least four credits in a biological science and at least four in a physical science.
6. Students intending to transfer to four-year colleges and universities should follow curriculum guides of suggested courses developed for transfer to the institution of their choice. Consultation with faculty and/or counselor is recommended.
  7. In choosing electives, no more than eight credit hours may be submitted from the Arts and Sciences Seminar Series courses numbering 190-199 offered by any of the departments in the Arts and Sciences Division. These courses may not be used to fill core course requirements.
  8. All courses listed on any single Arts and Sciences curriculum guide are acceptable towards either an Arts or Science Degree, whichever is appropriate when such guide is submitted with a degree application. In addition, traditional liberal arts courses offered in other divisions such as Studio Art, Music, Economic History, Economics, may be accepted towards the degree up to a maximum of eight credits.
  9. Courses coded beginning with "O" will not be included in the 90-credit total.
- II. A student may appeal a decision not to grant an Associate Degree in Arts or Sciences for lack of fulfillment of the above criteria. Students may appeal such decision to the Open Council of the Arts and Sciences Division which shall serve as a review committee and recommend to the Dean of Arts and Sciences appropriate action. Voting members shall be department chairpersons, faculty representatives, and student representative.

## III. Effective Date of Implementation: Academic Year 1978-1979

## Curriculum Code List

101	Non-Preference, Associate in Arts Degree
104	Foreign Language, Associate in Arts Degree
105	English, Associate in Arts Degree
106	Journalism, Associate Degree General
107	Advertising, Communication, Journalism, Radio/TV, Associate in Arts Degree
107	Communication, with emphasis in Journalism, Associate in Arts Degree
108	American Studies Major, Associate in Arts Degree
109	History, Associate in Arts Degree
110	Philosophy/Religion, Associate in Arts Degree
111	Black History, Associate in Arts Degree
112	Teacher Aide, Certificate of Achievement
113	Teacher Assistant, Certificate of Achievement
114	Teacher Associate, Associate in Arts Degree
115	Social Science, Associate in Arts Degree
116	Sociology, Associate in Arts Degree
117	Psychology, Associate in Arts Degree
118	Geography Major, Associate in Arts Degree
119	Political Science, Associate in Arts Degree
120	Communication with Speech emphasis
124	Human Services, Associate in Arts Degree
125	Public Service, Certificate of Achievement
126	Public Service, Associate in Arts Degree
130	Social Work, Certificate of Achievement
131	Social Work, Associate in Arts Degree
132	Social Work, Associate Degree General
133	Child Development, Certificate of Achievement
134	Child Development, Associate in Arts Degree
151	General Science, Associate in Science Degree
155	Biology Major, Associate in Science Degree
156	Horticulture, Associate in Science Degree
160	Chemistry Major, Associate in Science Degree
165	Mathematic Major/Computer Science, Associate in Science Degree
170	Physics Major, Associate in Science Degree
175	Natural Resources, Associate in Science Degree
176	Earth Science, Associate in Science Degree
180	Geology, Associate in Science Degree
185	Engineering, Associate in Science Degree
205	Architecture, Associate in Science Degree
207	Chiropractic, Associate in Science Degree
209	Dental Hygiene, Transfer
210	Dental, Associate in Science Degree
211	Home Economics Teaching, Associate in Arts Degree
213	Landscape Architecture and Urban Planning
215	Law, Associate in Arts Degree
220	Medical, Associate in Science Degree

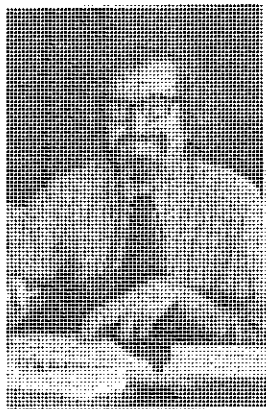
221	Medical Technology, Associate in Science Degree
225	Mortuary Science, Associate in Science Degree
226	Nursing, Transfer
227	Registered Nurse, Associate in Science Transfer
232	Occupational Therapy, Associate in Science Degree
235	Optometry, Associate in Science Degree
237	Packaging, Associate in Science Degree
240	Pharmacy, Associate in Science Degree
242	Agriculture, Building Construction, Associate in Science Degree
245	Physical Therapy, Associate in Science Degree
255	Elementary Teaching, Associate in Arts Degree
258	Outdoor Education, Associate in Science Degree
259	Physical Education, Associate Degree General
260	Secondary Teaching, Associate in Arts Degree
261	Recreation Youth Leadership
262	Occupational Education, Associate in Arts Degree
265	Theological, Associate in Arts Degree
270	Veterinary Science, Associate in Arts Degree
326	Lifetime Studies
355	High School Honors
360	Dual Enrollment—Arts and Sciences

USE OF "N" GRADE IN THE  
DIVISION OF ARTS AND SCIENCES

1. Any student in this Division who finds it necessary to withdraw from a given course after the first six weeks because of serious personal illness or comparable reasons must petition the instructor involved either in person or in writing for permission to withdraw. The instructor will render a decision after consultation with the departmental chairperson. Where permission to withdraw is granted, the grade of "N" will be recorded by the instructor in accordance with official College policy.
2. Copies of all drop forms issued in this Division will be kept in the respective department offices and checked against grade lists at the end of each term. No "N" grade can be given to a student for whom the official drop card has not been issued.
3. Any student who fails to complete the requirements of a given course and who has not withdrawn officially from the course, nor arranged with the instructor to receive an "Incomplete," will be given an automatic "F" for that course.

## Department of Communication

Chairperson: Dr. George R. Bramer



The Department of Communication offers courses in the following areas, under the course codes indicated: Communication (COM), Writing (WRI), Reading (RDG), Speech (SPH), Journalism (JRN), Broadcasting (BRD), French (FRN), and Spanish (SPN). The department also offers testing services to help you select appropriate courses in composition and/or reading. You are urged to inquire in the Communication Department Laboratory about a composition placement test. A reading test is administered during regular registration before each term and additional reading testing and advising can be arranged in the department laboratory. Students planning to register for JRN 151 should ask for a typing test in the department laboratory.

Prerequisites indicated in Department of Communication course descriptions can be waived for qualified students. Inquiries should be made in the department office.

## COURSE DESCRIPTIONS

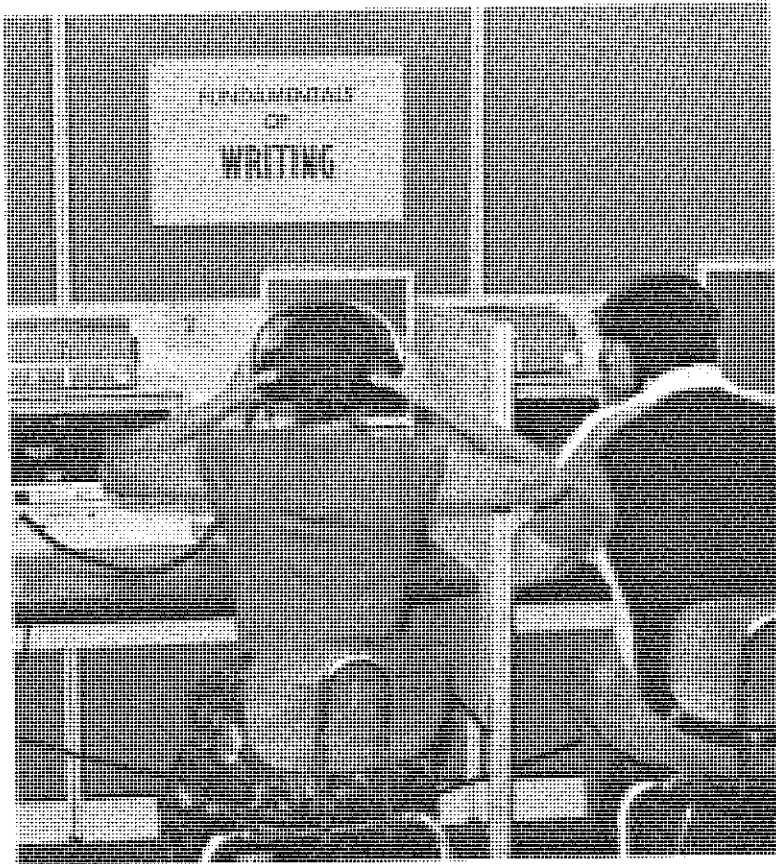
## Communication (COM)

- 015 English as a Second Language** **Four credits**  
Offered to non-native speakers to increase their mastery of English. Develops skills in reading and writing, as well as speaking and listening. 4 (5-0)
- 031 Vocabulary Improvement I** **Two credits**  
Explains the precise meanings of words, evolution of words into contemporary English, and word choices appropriate for varying situations. Helps students develop greater fluency in speaking and writing. 2 (2-0)
- 032 Vocabulary Improvement II** **Two credits**  
Builds on the work of Vocabulary Improvement I, examining the various approaches to verbal proficiency, and offering activities for expanding the student's ability to recognize and use words. 2 (2-0)
- 035 Spelling Improvement** **Two credits**  
Examines, in context, words that are frequently misused, mispronounced, and misspelled. Emphasizes basic phonic patterns, complicated consonant and vowel combinations, and word families. Includes study of syllabification and commonly misspelled words. One class hour of each session will be spent using individualized materials. 2 (2-0)

- 061 Introduction to Sign Language** **Three credits**  
Designed to provide the student with a basic knowledge of sign language. The student will become familiar with 500 signs and the manual alphabet. Lectures cover areas of interest to persons wishing to work with deaf adults and children, parents of deaf children, or persons curious about deafness and its effects. 3 (3-0)
- 062 Intermediate Sign Language** **Three credits**  
Designed to instruct students in the art of manual communication at the intermediate level. The development of expressive and receptive skills in sign language and finger spelling, as well as the appropriate use of body language and facial expression, will be emphasized. 3 (3-0)
- 091, 092, 093, 094 Seminar in Special Subjects** **Credits variable, one to four.**  
Offered in any area of the department's programs: communication, writing, reading, speech, journalism, broadcasting, French, or Spanish. May be repeated under various descriptive subtitles. Credit applies only to the Associate Degree General.
- 150 The Press in a Free Society** **Three Credits**  
An examination of the role and impact of journalism, print and electronic, in a democratic society. Major focus is on an understanding of the concepts of "freedom" and "responsibility" and on development of the student's ability to evaluate press performance intelligently. 3 (3-0)
- 191, 192, 193, 194 Seminar in Special Subjects** **Credits variable, one to four.**  
Offered in any area of the department's programs: communication, writing, reading, speech, journalism, broadcasting, French, or Spanish. May be repeated under various descriptive subtitles.
- 209 Mass Communication** **Four credits**  
Provides an understanding of the impact of mass communication on the knowledge and attitudes of U.S. audiences. Explores operational aspects of newspapers, magazines, radio, television and film in the light of communication theory and evidence from research. Covers such specific topics as news, advertising, violence in the media, and stereotyping. 4 (4-0)
- 230 Introduction to English Linguistics** **Four credits**  
Examines the English language from the perspective of contemporary American linguistics: generative syntax, phonology, regional and social variation. Considers implications for teachers. (Required for most students in pre-elementary teaching.) 4 (4-0)
- 291, 292, 293, 294 Seminar in Special Subjects** **Credits variable, one to four**  
Offered in any area of the department's programs: communication, writing, reading, speech, journalism, broadcasting, French, or Spanish. May be repeated under various descriptive subtitles.

**295, 296, 297, 298 Independent Study  
in Communication****Credits variable, one to four**

Individual projects in communication, writing, reading, speech, journalism, broadcasting, French, or Spanish. Students will spend at least two hours a week for each credit in Independent Study. Prerequisites: Minimum of 3.0 grade-point average in related Department of Communication courses, and departmental approval.

**Writing (WRI)**

Placement testing is conducted during the first week of each term for all students in WRI 101, WRI 102, and WRI 121. Some students are advised to drop the course for which they have registered and to add a more appropriate course, either more basic or more advanced. The Composition/English requirement for the Associate Degree in Arts or Science (A.A. or A.S.) can be fulfilled in various ways. The first required course, WRI 121, can be waived for a limited number of qualified students, passed by comprehensive examination, or taken as a term-length course. Inquire about these possibilities in the Admissions Office or the Department of Communication. The second required course can be either WRI 122 or ENG 122, and the third can be either WRI 123 or ENG 123. The Departments of Communication and Humanities have various options for students who waive WRI 121.

**101 Fundamentals of Writing****Four credits**

An individualized course designed to help prepare the student for freshman writing. Builds confidence and increases fluency. Develops skill in choosing words and writing sentences, paragraphs, and brief essays. Instruction includes learning laboratory activities and group work in weekly class meetings, as well as flexible scheduling, self-pacing, and professional tutorial assistance. 4 (1-6)

**102 Grammar and Mechanics in Writing****Four credits**

Designed for students who can demonstrate confidence and fluency as writers, but have not mastered the traditional grammatical and mechanical skills and basic essay forms found in Edited American English. Study areas include verb tense, punctuation, spelling, subject-verb agreement, and basic organization of an essay. Instruction includes audio-tape materials in a learning laboratory, group work in class meetings, and professional tutorial assistance. 4 (1-6)

**121 Composition I****Four credits**

Designed to help the student develop writing ability. Emphasizes the organization and development of prose. Includes units in use of the dictionary and college reading skills. 4 (4-0)

**122 Composition II****Four credits**

Continuation of WRI 121 and an alternative to ENG 122. Writing and reading skills are further developed with special attention to sentence style and word choice. Deals with problems in communication between readers and writers, especially those involving fact, opinion, logic, and persuasion. Includes introduction to library resources. Prerequisite: WRI 121. 4 (4-0)

**123 Composition III****Four credits**

Continuation of the basic composition program, and an alternative to ENG 123. Emphasizes investigative techniques, and writing the research paper with full documentation by footnotes and bibliography. Prerequisite: WRI 122 or ENG 122. 4 (4-0)

**131 Honors Composition I****Four credits**

Designed for superior writers, as identified by tests or by high school grades in English; an alternative to WRI 121. Includes an introduction to the principles of effective writing and critical thinking; writing practice in various modes, but especially in expository prose; and components in reading and dictionary skills. Prerequisite: Departmental approval. 4 (4-0)

**132 Honors Composition II****Four credits**

Designed for superior writers; meets second-term requirement of the Composition/English program; an alternative to WRI 122 or ENG 122. Deals with writing problems involving fact, opinion, logic, and persuasion. The student will have a chance to experiment with variations in purpose, audience, and style. A project on language will also be required. Prerequisite: Departmental approval. 4 (4-0)

**133 Honors Composition III****Four credits**

Designed for superior writers; meets third-term requirement of the Composition/English program; an alternative to WRI 123 or Eng 123. Major writing assignment is the fully documented research paper, with attention to personal style and patterns of argument. Prerequisite: Departmental approval. 4 (4-0)

**261 Prose Writing Workshop****Four credits**

Focuses on prose style. Encourages students to develop their individual styles and to examine the effects of motive, audience, and occasion on styles in various nonfictional prose types. 4 (4-0)

**272 Short Story Writing****Four credits**

A practical course in how to write the short story. The students write at least six stories on subjects of their choosing, using narration, dialogue, description, exposition, structure and style. Includes individual conferences with the instructor. 4 (4-0)

**273 Poetry Writing****Four credits**

A practical course in how to write effective poetry. The students write seven to ten poems of approximately fifteen lines each on a variety of subjects, using various poetic meters, free verse techniques, structures and styles. Includes individual conferences with the instructor. 4 (4-0)

**281 Writing for Publication****Three credits**

Students review a variety of effective writing techniques; study marketing information in their particular fields, such as manuscript preparation, query letters, and potential publishers; and discuss their writing in a workshop setting. 3 (3-0)

**282 Forum for Authors****Three credits**

An advanced course for writers working on manuscripts. Students meet to discuss their writing and to solve problems in a workshop setting. The study of effective writing techniques and market information is continued from WRI 281, Writing for Publication. 3 (3-0)

**Reading (RDG)****016, 017, 018 Reading Clinic I, II, III****Four credits each**

This series of Clinical Reading Courses is designed to provide skill appraisal, advice, and instruction for students whose special problems in reading are more fundamental than those provided for in RDG 019. Through private consultation, each student will receive a prescriptive plan and will be guided into an individualized program supervised by the professional clinical faculty and tutorial staff. 4 (0-8)

**019 Reading Comprehension I****Four credits**

Deals with strategies for understanding the printed word. Special attention is given to comprehension, vocabulary building, and study techniques as preparation for college level reading assignments. 4 (4-0)

**020 Reading Comprehension II****Four credits**

Improves the student's ability to analyze written words critically. Enables the student to perceive reading not merely as a mechanical process but as one of absorbing and interpreting ideas. Emphasis is placed on analyzing the message and its implications. Formerly offered as RDG 022. 4 (4-0)

**021 Speed Reading****Four credits**

Designed for the student of average or better-than-average reading ability. Increases reading rate and comprehension for greater efficiency in studying and in general reading. Special attention is given to vocabulary improvement, the multiple purposes of reading, the importance of flexibility in reading, and increased concentration. 4 (4-0)

**023 College Reading Survival Skills****Two credits**

Instruction in reading skills which are instrumental in effective academic performance at the college level. Emphasis in such areas as reading rate and comprehension, textbook study techniques, note-taking, library resources, essay tests, and objective tests. 2 (2-0)

**287 Methods of Teaching Reading Skills****Four credits**

Designed for students who intend to become elementary teachers or to be involved in education where knowledge of the teaching of reading skills is necessary. Provides background for organizing a reading program and teaching reading skills, primarily at the elementary level. 4 (4-0)

**288 Children's Books****Four credits**

Develops the ability of future teachers, teachers' aides, and parents in evaluating and appropriately using non-text reading materials written for elementary and middle school children. 4 (4-0)

**Speech (SPH)****101 Human Communication** **Four credits**

An investigative course in which the students study and apply theories of human communication. The students evolve their own models of communicating with others, verbally and nonverbally, in interpersonal, small-group, organizational, and cross-cultural situations. Formerly offered as SPH 204. 4 (4-0)

**102 Interpersonal Communication** **Four credits**

Explores the verbal and nonverbal dimensions of face to face communication. Emphasizes the recognition and elimination of communication barriers. 4 (4-0)

**103 Small Group Communication** **Four credits**

Theoretical study and guided practice in small group discussion (formal and informal, vocational and avocational). Emphasizes learning about the group: structure, purposes, leadership styles, and roles. Formerly offered as SPH 205. 4 (4-0)

**104 Fundamentals of Public Speaking** **Four credits**

Introductory course. Study and application of the basic principles of effective public speaking. Student makes seven speeches during the term. 4 (4-0)

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

Theory and practice of effective voice production and precise diction. Emphasis on understanding the speech organs and their operation and on applying successful techniques to make the best use of the instruments of speech. 3 (3-0)

**201 Oral Interpretation** **Three credits**

Introduces students to techniques of presenting literature and communication orally, focusing on specific skills of voice and gesture. Emphasizes selection, preparation, and delivery of literary material. Recommended for speech majors. 3 (3-0)

**203 Advanced Public Speaking (Persuasion)** **Three credits**

Designed to acquaint the student with classical rhetoric theory as well as modern communication models related to persuasion. Critical analysis is developed through the study of speech models while performance techniques are refined through a series of 10-minute speeches. Prerequisite: SPH 104. 3 (3-0)

**206 Nonverbal Communication** **Four credits**

Introductory course providing the student with an understanding of the many ways people communicate without words. The student will learn what messages the face, the body, personal appearance, touch, time and space convey in American culture. The student's skills as a nonverbal communicator will be increased through in-class activities. 4 (4-0)

**Journalism (JRN)**

Two journalism programs are offered, one leading to an Associate of Arts Degree and the other leading to the Associate Degree General. Curriculum guides for both programs are available from College counselors or from the

Department of Communication. The Associate of Arts program prepares the student for transfer to a four-year institution for work toward a Bachelor's Degree with a major in journalism. However, students should inquire in the Department of Communication about the transferability of the journalism courses. Both degree programs are designed to prepare students for entry into journalism careers. Acceptance in the journalism internship is dependent on evaluation of the student's total performance in the journalism program.

**151 Newswriting** **Four credits**

Considers what is of news interest and how to turn news facts into a publishable news story. The students learn news terminology, the importance of news style, objectivity, attribution, accuracy, grammar and spelling. 4 (4-0)

**152 Reporting I** **Four credits**

Shows how, when and where to go after facts, how to conduct interviews, and how to cover speeches, meetings and news conferences. Students develop a sense for digging out information and using facts for a clear, readable, balanced news story. Prerequisite: JRN 151. 4 (4-0)

**153 Reporting II** **Four credits**

Shows students how to apply writing and reporting techniques to sophisticated styles of follow-up reporting. Students learn how to produce roundup stories, background stories, feature and human interest stories, and interpretive-analysis stories, and how to follow a story to its natural conclusion. Prerequisite: JRN 152. 4 (4-0)

**167 Journalism Practicum** **Two credits**

Provides students with practical newspaper experience while they contribute to the College publication. Students primarily write news stories, but also take part in such activities as editing and headline writing. The ethical responsibility of the press is explored. Prerequisite: JRN 151. 2 (0-4)

**251 Editing and Layout** **Four credits**

A practical course in editing copy, writing headlines, and laying out newspaper pages. Student learns the skills and use of the tools of the city desk. Prerequisite: JRN 151. 4 (4-0)

**254 Editorial Writing** **Four credits**

A course in how to write effective editorials and concentrated study of editorial concept, structure, and style. Student analyzes editorial models, learns methods of research, and writes at least six editorials on local issues. Prerequisite: JRN 151. 4 (4-0)

**256 Newsletter Writing and Production** **Four credits**

Provides the student with an understanding of the communication process, a working knowledge of writing and editing in journalistic style, and the techniques necessary for producing a newsletter or house organ. 4 (4-0)

**259 Newspaper Management and Production****Four credits**

Examination of the various departments which work together to produce a newspaper. Students are familiarized with problems in such areas as staff organization, personnel, and responsibilities of a newspaper to its community, readers, advertisers, owners and staff. Methods of production, laws regarding publishing, and ethics of newspapering will be covered. Prerequisite: JRN 151. 4 (4-0)

**267, 268, 269 Journalism Internship****Credits variable, two to six**

Practical journalism experience provided in cooperation with local industries, business organizations, government agencies, newspapers, and radio/television stations. Students will spend more than three hours a week for each internship credit. Prerequisites: Successful completion of at least sixteen term hours of journalism course work with a 3.0 grade point average, or equivalent background, and departmental approval.

**Foreign Languages**

Advanced placement in foreign language study may be arranged for students who have satisfactorily completed two or more years of a language in high school, and those who have established language proficiency by other means. Tests will be given when there is a question concerning the student's proficiency level.

**French (FRN)****097 French for Dancers****Two credits**

Develops reading and conversational uses of French, emphasizing the etymology and pronunciation of terms used in ballet and modern dance. Provides students with understanding of both the literal and the idiomatic translations of the terms. Study includes listening to tapes of native speakers. 2 (2-0)

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

Three-term sequence of elementary French designed to teach pronunciation, vocabulary, conversation, and reading from graded texts and writing. Practice in mastery of the sound system, linguistic patterns, and grammatical structure of the language is afforded by a coordinated schedule of laboratory sessions (using tapes of native speakers) and class recitations. Prerequisites: For FRN 101, none; for FRN 102, FRN 101; for FRN 103, FRN 102; or the equivalent of these prerequisites. 4 (5-0)

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

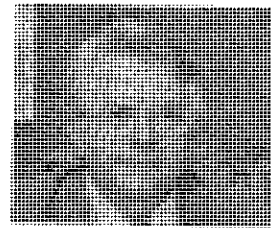
Three-term sequence of intermediate French involving systematic review of syntactic patterns, conversation, and extensive reading of modern texts. Increasing emphasis is placed on the oral and written use of the language, as well as the cultural background of the French people. Prerequisites: For FRN 201, FRN 103; for FRN 202, FRN 201; for FRN 203, FRN 202. 4 (5-0)

**Spanish (SPN)****101, 102, 103 Elementary Spanish****Four credits each**

The three-term sequence of elementary Spanish emphasizes using the language for practical communication. Classwork features intensive small-group conversation practice, and an introduction to Hispanic people and their culture. Classes meet one hour daily, and students can increase their pronunciation and comprehension of spoken Spanish by listening to cassette tapes available in the Communication Department Laboratory. Prerequisites: For SPN 101, none; for SPN 102, SPN 101; for SPN 103, SPN 102, or the equivalent of these prerequisites. 4 (5-0)

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

This three-term sequence of intermediate Spanish includes a thorough review of basic Spanish grammar, intensive vocabulary building, extensive small-group discussion on assigned reading topics, guided composition writing, and student presentations of special projects pertinent to Hispanic people and their cultures. Cassette tape recordings are available to help students improve their pronunciation and comprehension of spoken Spanish. Prerequisites: For SPN 201, SPN 103; for SPN 202, SPN 201; for SPN 203, SPN 202; or the equivalent of these prerequisites. 4 (5-0)

*Department of Humanities**Chairperson:* Dr. Joseph L. Anderson

The Department of Humanities offers courses under the following course codes:

HUM: Humanities  
 ENG: English  
 HST: History  
 PHL: Philosophy  
 REL: Religion

All of the courses offered by this Department require college level reading and writing skills. Analytical and critical papers and examinations are considered normal requirements for most courses.

The Composition/English requirement for the Associate Degree in Arts or Science can be fulfilled in a number of ways. A student who has completed or has been permitted to waive WRI 121 may elect ENG 122 and ENG 123 as alternatives to WRI 122 and WRI 123.

The Humanities requirement for the Associate Degree in Arts of Science can also be fulfilled in a number of ways. HUM 201, 202, 203: Western Civilization I, II, III is the recommended sequence of courses. (World Civilizations II, HUM 222 may be substituted for HUM 202 and World Civilizations III, HUM 223 may be substituted for HUM 203.) Students may substitute other courses in the curriculum of the Humanities Department for any of the above, provided that these are distributed in at least two of the following four areas:

- A. *Art and Music History* (HUM 101, 150, 151, 152)
- B. *History* (HST 104-296)
- C. *Literature* (ENG 201-296 and HUM 102)
- D. *Philosophy and Religion* (PHL 101-296; REL 150-296 and HUM 104)

Please note that Western and World Civilization courses (HUM 201, 202, 203, 222, 223) are counted as History courses when only one or two of them are taken to fulfill general education requirements.

## COURSE DESCRIPTIONS

### Humanities (HUM)

- 101 Art and Music History in Western Civilization** **Four credits**  
An introduction to the masterpieces of art and music history from prehistoric times to the present, and their importance in Western Civilization. Extensive use made of multi-media. 4 (4-0)
- 102 Mythology** **Four credits**  
An introduction to mythic thinking and its importance in literature and culture as a way of self-understanding. Classical myths and their contemporary functioning will be emphasized. 4 (4-0)
- 104 Introduction to Humanities** **Four credits**  
An interdisciplinary approach to people as users of language and makers of meaning. Emphasis will be placed on the creation of symbolic universes and human self-interpretation through the arts and sciences. 4 (4-0)
- 150 History of Art I** **Four credits**  
Study of architecture, painting and sculpture in Egypt, the Middle East, Byzantium, and Europe from prehistoric times to the early Middle Ages. Slide lectures and museum excursions. 4 (4-0)
- 151 History of Art II** **Four credits**  
Study of architecture, painting and sculpture in Italy, the Low Countries, France, Germany, Spain and England from the high Middle Ages through the Renaissance, Baroque and Rococo periods. Slide lectures and museum excursions. 4 (4-0)
- 152 History of Art III** **Four credits**  
Study of architecture, painting and sculpture in Italy, France, Germany, England, and the United States, from the late Baroque through the present. Slide lectures and museum excursions. 4 (4-0)
- 201 Western Civilization I** **Four credits**  
First of a series of three courses in the cultural foundations of Western man. Traces the social, intellectual, religious, philosophic, legal and artistic patterns of Ancient Near Eastern, Greek, and Roman Civilizations. Emphasizes the relationship of man's creative works to his beliefs and values, showing how others have understood themselves and how this understanding has shaped our views and condition today. Prerequisite: WRI 121 recommended. 4 (4-0)

- 202 Western Civilization II** **Four credits**  
Europe from the ninth century to 1715 A.D. Concerned primarily with the development of ideas, new social forms, and the reflection of man's beliefs and values in philosophy, religion, literature, and the arts. Prerequisite: HUM 201 recommended. 4 (4-0)
- 203 Western Civilization III** **Four credits**  
The French Revolution and its impact in the nineteenth and twentieth centuries: democracy, nationalism, industrialism, imperialism, the two World Wars, and the fusing of Western and World Civilization. Development of contemporary culture as reflected in philosophy, religion, literature, and the arts. Prerequisite: HUM 202 or 222 recommended. 4 (4-0)
- 222 World Civilizations II** **Four credits**  
Europe, Africa, Asia C. 800-1750 A.D. Concentrates on cultural patterns and achievements; economic, political and social organization. Includes study of (a) Byzantine Empire: its character, contributions, and relations with East and West; (b) Western Europe: its decline, church leadership, Reformation, Renaissance; (c) African civilizations: Zimbabwe, Mali, Ghana, etc.; (d) India: Hinduism, Buddhism. Prerequisite: HUM 201 recommended. 4 (4-0)
- 223 World Civilizations III** **Four credits**  
Europe, Africa, Asia C. 1750—Present. Concentrates on cultural patterns and achievements; economic, social, and political organization. Includes study of the French Revolution; Industrial Revolutions, slavery and slave trade; European Expansionism and Imperialism in Africa and Asia; the growth and power of multinational corporations; WWI, WWII; the revolutions of the Third World. Prerequisite: HUM 222 or 202 recommended. 4 (4-0)
- English (ENG)**
- 122 Freshman English** **Four credits**  
A continuation of WRI 121, ENG 122 is an alternate to WRI 122, Emphasis is on the reading of short stories. Writing skills are also emphasized, plus a further development of library and research skills. Prerequisite: WRI 121. 4 (4-0)
- 123 Freshman English** **Four credits**  
A continuation of ENG 122 or WRI 122, ENG 123 is an alternate to WRI 123. An introduction to the various literary forms, plus the development of analytical and writing skills and research techniques. Prerequisite: ENG 122 or WRI 122. 4 (4-0)
- 132 Honors Section of Freshman English** **Four credits**  
Same as ENG 122 but taught on an advanced level. Prerequisite: Departmental approval. 4 (4-0)
- 133 Honors Section of Freshman English** **Four credits**  
Same as ENG 123 but taught on an advanced level. Prerequisite: Departmental approval. 4 (4-0)



**201 The Poetic Imagination****Four credits**

Designed to help students understand and appreciate various forms of the poetic imagination. Emphasizes the nature of poetic language and meaning, as well as literary techniques and conventions. Required for English majors and minors. 4 (4-0)

**202 Introduction to Drama****Three credits**

Introduces drama and its literary techniques and conventions. Attention given to principles and theory, but understanding of the plays emphasized. Representative plays from Greek, European, English, and American dramatists. Prerequisite: WRI 121. 3 (3-0)

**203 Introduction to Prose****Three credits**

Designed to introduce students to the epic in prose translation, the romance, the novel, and satire. Students will read representative selections ranging from Homer's *The Odyssey* to Sinclair Lewis' *Babbitt*. Prerequisite: WRI 121. 3 (3-0)

**210 The 19th Century American Novel****Three credits**

Study of the major 19th century American novels ranging from James Fenimore Cooper to Jack London. Emphasis on historical development of the novel form in America and the novelist's interpretation of the American scene. Prerequisite: ENG 122 or WRI 122 3 (3-0)

**211 The 20th Century American Novel****Three credits**

Intensive study of some of the influential American novels of this century. Students will read such authors as Faulkner, Hemingway, and Steinbeck. Prerequisite: Eng 122 or WRI 122. 3 (3-0)

**220 Science Fiction****Three credits**

Designed to acquaint students with this popular and modern literary form. Some history and definitions of science fiction, but emphasis on short stories and novels and their unique view of the future. Also included are movies and audio-tapes. Prerequisite: WRI 121 3 (3-0)

**240 The Film as Art****Four credits**

An introduction to film as an art form capable of making a meaningful and perceptive comment on our civilization. Viewing and analysis of six to eight films, both foreign and American, of recognized merit. Prerequisite: WRI 121 4 (2-3)

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

Designed to acquaint the student with some of the masterpieces of great American Writers. Emphasis on such works as the essays of Emerson and Thoreau, poetry of Whitman and Frost, prose of Hawthorne, Melville, and Hemingway, and plays of O'Neill. Required for most students in pre-elementary teaching. Prerequisite: WRI 121. 3 (3-0)

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

A survey of Afro-American literature from the 17th century to the 20th century. Designed to introduce the student to the various genres in the literature of Black Americans. Prerequisite: WRI 121. 3 (3-0)

**290 Shakespeare****Four credits**

Introductory course in the dramatic works of William Shakespeare. Students will read six to nine plays representative of the author's comedies, histories, and tragedies. Prerequisite: ENG 122 or WRI 122. 4 (4-0)

**History (HST)****104 World Affairs Since 1945****Four credits**

A study of contemporary world affairs since 1945, emphasizing the most recent political, economic, military, and diplomatic developments of significance. 4 (4-0)

**111 American History I****Four credits**

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

**112 American History II****Four credits**

The United States from the Reconstruction to the present. 4 (4-0)

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

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

**160 Modern Mexico****Four credits**

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

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

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

**215 Herstory: Women in American History****Four credits**

A survey of American history from colonial times to the present which examines women's roles in the family, production and social and political life. 4 (4-0)

**220 Michigan History****Four credits**

A survey of the political, economic and social development of the State of Michigan from pre-colonial times to the present. 4 (4-0)

**255 African History: An Introduction****Four credits**

A general survey of the African continent with emphasis on special selected topics (and regions) as follows: Precolonial Africa, the scramble for Africa, the rise of African Nationalism and Independence, Africa's internal and external relations. 4 (4-0)

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

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

**275 Modern East Asia****Four credits**

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

**Philosophy (PHL)****101 Principles of Reasoning****Four credits**

An introduction to the elements of reasoning with special attention given to problems of the adequacy of definitions, the validity of arguments, and the empirical support of assertions. Emphasis will be placed on the practical application of logical methods. 4 (4-0)

**211 Who Am I?****Four credits**

An introduction to philosophy as the art of wondering in a quest for self-understanding and truth. 4(4-0)

**212 Self and Society****Four credits**

An exploration of the relationship between individual and culture, and their mutual molding process. No prerequisites, but PHL 211 useful. 4 (4-0)

**213 Life, Cosmos, and Ultimate Meaning****Four credits**

An inquiry into life, nature, and the search for ultimate meaning in our existence. No prerequisites, but PHL 211 or 212 useful. 4 (4-0)

**260 Contemporary Social Philosophy****Four credits**

Survey of current trends in social philosophy with emphasis on prevalent assumptions about "human nature" and how they influence our thought. Authors to be discussed include Sartre, Dewey, Skinner, Fromm, and Marcuse. 4 (4-0)

**270 Philosophy of Science****Four credits**

A critical examination of some of the basic concepts and problems of the natural and social sciences. Particular consideration is given to the concept of "confirmation" and related problems of scientific concept formation. Theory construction and explanation are also considered. 4 (4-0)

**Religion (REL)****150 World Religions****Four credits**

Survey of the thought and practice of five major religions: Hinduism, Buddhism, Judaism, Christianity, and Islam. Emphasis is upon deepening our understanding of ourselves and others through a new appreciation of the role of religion in the development of human culture and values. 4 (4-0)

**201 Religions of East Asia****Four credits**

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

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

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

**211 Hebrew Origins****Four credits**

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

**212 Christian Origins****Four credits**

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

**Special Courses (HUM, ENG, HST, PHL, REL)****093, 094, 095, 096 Seminar: Special Subjects Credits variable, one to four**

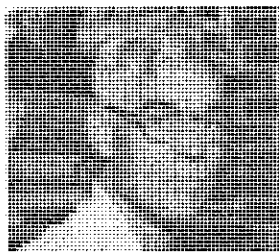
There will be a descriptive sub-title each time the course is offered. Credit given for these courses will only apply toward the Associate Degree General.

**191, 192, 193, 194, 291, 292, 293, 294****Seminar: Special Subjects****Credits variable, one to four**

Special seminars drawn from any area within the disciplines of history, literature, philosophy, or religion. There will be a descriptive sub-title each time the course is offered. The course may be repeated for additional credit for each new sub-title. Credits are variable from one to four. Prerequisite: As individually listed for each offering.

**296, 297, 298, 299 Independent Study****Credits variable, one to four**

Special research project and/or individual readings in Humanities, English, History, Philosophy, or Religion. Credits variable from one to four. Prerequisite: Arrangement with an instructor and approval by the departmental chairperson before registration. Enrollment usually restricted to students who have grade-point average of at least 3.0 in courses offered by this department. Students will invest no less than 20 hours for each credit earned.

*Department of Mathematics**Chairperson: Clarence A. Powers*

The Mathematics Department offers a series of college mathematics courses which parallel the freshman and sophomore levels of university work in mathematics. Credits are applicable to all Associate Degrees and are transferable to other colleges and universities throughout the country. The department also offers a comprehensive program in nontransferable developmental courses for those who need work in this area.

Placement in your first mathematics course should be based upon your readiness and not just upon the requirements of your program of study or the indicated course prerequisites. The Math Laboratory, Room 150, Arts & Sciences Bldg., provides placement testing to assist you in selecting the proper course. It is advised that you make use of this service prior to or during registration.

The Mathematics Department offers two different methods of instruction that will affect your selection of MTH 009, MTH 012, and MTH 102 section numbers. Courses taken in our Math Laboratory are self-paced individualized programs with no scheduled lectures. The section numbers for these courses all start with 139. The traditional lecture class section numbers start with 131 or 132.

**COURSE DESCRIPTIONS****Mathematics (MTH)****095 Mathematics Laboratory****No credits**

MTH 095 is our notation for arranged time in the Math Lab. It is not a course. Specify the time at registration by selecting an MTH 095 section for each math course listed as "arranged" in the term schedule. The arranged courses available in the Math Lab are MTH 008, 009, 010, 012, 013, 030, 090, and 102. MTH 009, 012 and 102 are also available in lecture sections which meet at a specific time in a standard classroom. Since the Math Lab operates quite differently than regular classes, a Study Plan Unit and Exercise are required for all Math Lab Students.

**Developmental Courses****008 Calculator Arithmetic****Four credits**

Available as a combination of scheduled class hours and arranged time in the Math Lab. This course is primarily for pre-arithmetic students. Approval for enrollment is determined by placement testing. Emphasis is placed on reducing math anxiety and understanding math vocabulary. Concentrates on how to add,

subtract, multiply and divide whole numbers, decimals, and fractions on a hand-held calculator. The calculator must have an = key. Memory keys are desirable; but algebraic and trig key are to be avoided. An introduction to percents, ratio and proportion is included. Prerequisite: Departmental approval. 4 (4-0)

**009 Basic Arithmetic****Five credits**

Review of fundamental processes with whole numbers, common fractions, decimal fractions, percentages, ratios, and proportions. Includes work with word problems designed to promote good reasoning. 5 (5-0)

**010 Metric System****Two credits**

Available only in the Math Lab. This course introduces the metric system as a better way to measure. A textbook, chapter packet, and audio-visual materials are used. Covers only the commonly used metric units of measurement for length, area, volume, weight, and temperature. Prerequisite: MTH 009 or proficiency in basic arithmetic. 2 (2-0)

**012 Beginning Algebra****Five credits**

A course in introductory algebra covering the real number system, linear equations, polynomials, factoring, fractions, radicals, system of equations, graphing, and inequalities. Prerequisite: MTH 009 or proficiency in basic arithmetic. 5 (5-0)

**013 Geometry****Four credits**

Available only in the Math Lab. A course in plane geometry with emphasis on points, lines, planes, space, angles, triangles, congruence, similarity, perpendiculars, parallels, polygons, areas, and circles. Prerequisite: MTH 012 or proficiency in beginning algebra. 4 (4-0)

**030 Trigonometry****Two credits**

Available only in the Mathematics Laboratory. An introductory course about the principles and techniques involved in solving mathematical problems which require the use of trigonometry. Includes the primary and reciprocal functions, cofunctions, and use of tables of Natural Trigonometric Functions. Application of vectors needed for Physics 201 is included. Prerequisite: MTH 012 or proficiency in beginning algebra. 2 (2-0)

**090 Introduction to Word Problem Solving****Three credits**

Examines the stages and strategies for solving problems and applies these concepts to selected cases. Includes application of specific algebraic methods needed for problems involving distance, work, finance, mixtures, levers, geometry, coins, digits, numbers and age. Prerequisite: MTH 012 or proficiency in beginning algebra. 3 (3-0)

**102 Intermediate Algebra****Five credits**

Extends beginning algebra into more difficult problems. Emphasis is on graphing, functions, inequalities, polynomials, systems of equations, fractions, story problems, radicals, quadratic equations and their application. Prerequisite: MTH 012 or proficiency in beginning algebra. 5 (5-0)

**164 College Algebra and Trigonometry I****Five credits**

Topics include the real number system, absolute values, the function concept with logarithmic and algebraic functions, each considered in detail. Other topics are polynomials, the complex numbers, matrices and determinants. Prerequisite: MTH 102 or equivalent. 5 (5-0)

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

Continuation of MTH 164 with emphasis on trigonometry. Prerequisite: MTH 164. 5 (5-0)

**166 Finite Mathematics with Applications****Five credits**

An alternative to MTH 165 for students whose program will not include the study of trigonometry. Topics include elementary combinatorial analysis, binomial theorem, vectors and matrices, linear programming, graph theory, and game theory. Prerequisite: MTH 164 or departmental approval. 5 (5-0)

**209 An Introduction to the History of Mathematics****Two credits**

The development of the science of number and form can be traced to the earliest days of the human race. Primitive origins of mathematics in the time period 3500 BC to 500 AD are covered briefly. Emphasis is placed upon the lives and contributions of mathematicians from Euclid (300 BC) to the present. Prerequisite: MTH 164 or departmental approval. 2 (2-0)

**210 The Real Number System—An Introduction****Two credits**

The course begins by defining the real number system as "a complete ordered field" and proceeds by explaining the words "fields," "ordered field," and finally, "complete ordered field." The field axioms and order axioms are considered in some detail, as is the axiom of completeness. Some cardinal number theory is considered in the latter part of the course. Prerequisite: MTH 164 or departmental approval. 2 (2-0)

**211 Graphs and Mathematical Models****Two credits**

Numberous "real world" situations and problems are analyzed by constructing a representation (a so-called mathematical model) of the situation or problem by means of a graph or digraph. These graph-theoretic models are used to analyze these basic problem areas: transportation problems, communication and critical path problems, party problems, and coloring-planarity problems. Prerequisite: MTH 164 or departmental approval. 2 (2-0)

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

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

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

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

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

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

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

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

**234 Theory of Matrices****Five credits**

Algebra of Matrices, rank, inverses, determinants, vector spaces, linear transformations, characteristic values and functions of a matrix. Prerequisite: MTH 215. 5 (5-0)

**236, 237, 238, 239, 240 Honors Seminar in Mathematics****Two credits**

The student will maintain an individualized program in problem solving at a level higher than usually encountered in an introductory course. Such work may be done in conjunction with MTH 165, 213, 214, 215, or 216. For example, the student who demonstrates excellence in MTH 164 may take MTH 236 concurrently with enrollment in MTH 165. Similar individualized programs exist for concurrent enrollment in MTH 237 and 213, MTH 238 and 214, MTH 239 and 215, or MTH 240 and 216. Meetings with instructor are arranged. Prerequisite: A or B in prerequisite course, concurrent enrollment in corresponding course and approval of department. 2 (2-0)

**Mathematics Foundations Courses for Teachers****200 Arithmetical Foundations****Five credits**

Required of all elementary pre-teachers. The real number system is developed with emphasis on the teaching of addition, subtraction, multiplication and division. The use of teaching aids such as Geo-Boards, Cuisenaire Rods and Games is a central feature of the course. Prerequisite: MTH 102 or equivalent. 5 (5-0)

**Statistics Courses****170 Introduction to Statistics****Five credits**

For those who need just one course dealing with many concepts and uses of statistics. Theory and computation are minimized with emphasis on concept comprehension. Topics include probability, binomial and normal distributions, estimation, tests of hypotheses, Chi-square tests, and comparison of parametric and nonparametric statistics. Prerequisite: MTH 164 or departmental approval. 5 (5-0)

**205 Statistics I****Five credits**

This course covers probability theory, frequency distribution, random variables; Bernoulli, normal, Poisson, and exponential distributions; sampling distribution, and estimation techniques. Prerequisite: MTH 166 or MTH 165. 5 (5-0)

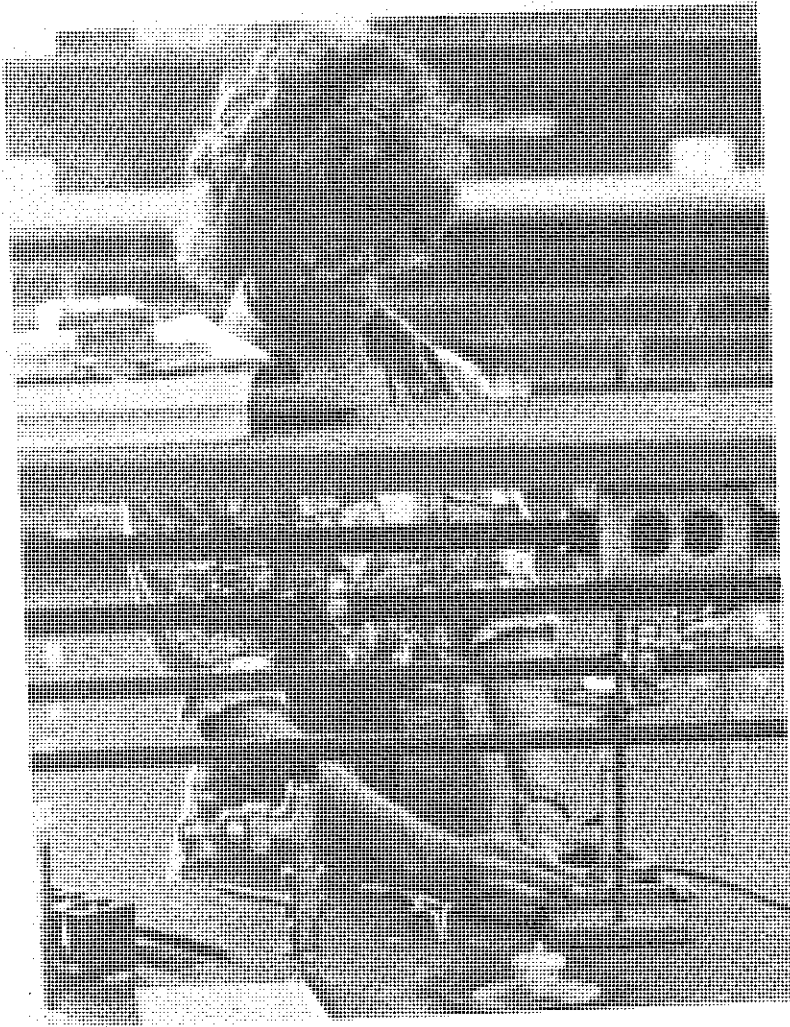
**206 Statistics II****Five credits**

Continuation of MTH 205. This course covers decision making concerning population means and proportions, Chi-Square testing, analysis of variance, Bayesian decision making, regression and correlation. Prerequisite: MTH 205 5 (5-0)

**Special Courses**

**083, 084, 085, 086 Seminars in Special Subjects** **Variable credit**  
Seminars in Special Subjects are offered in many subjects related to the various areas of mathematics to meet the interest of students. Each section has its own title and credit value.

**193, 194, 195, 196 Seminars in Special Subjects** **Variable credit**  
Seminars in Special Subjects are offered with credit which applies toward all Associate Degrees and may transfer to other colleges as general credits. There is a descriptive subtitle for each seminar. Prerequisites and credit values vary.



*Department of Science**Chairperson: Dr. David L. Shull*

The Science Department offers courses in a variety of disciplines, including Biology, Physics, Chemistry and Earth Science. Among the innovative educational methods employed for several courses are the Audio-Visual-Tutorial System, computer-assisted instruction, and self-pacing.

The instructional program of the Science Department is designed to serve three basic purposes. These are (1) to provide a full range of courses that fulfill general education science requirements for an Associate Degree, (2) to develop and offer specialized courses in support of programs offered by other departments within the College and, (3) to provide an opportunity for qualified students to select independent study, Honors options or seminars on science subjects.

Students who wish to acquaint themselves with a science subject, but have no need for a grade or credit in that course may register to audit. The Science Department welcomes the opportunity to provide this option to interested students.

**COURSE DESCRIPTIONS****Biology (BIO) Microbiology (MIC)****100 Human Nutrition****Two credits**

An introductory course in human nutrition. Topics include an explanation of the Recommended Dietary Allowance (RDA), a discussion of the nutritional status of the U.S. population, the misuse of vitamins, misconceptions about organic foods, the relation of diet to heart disease, the interest in fad diets, and other current topics in nutrition. 2 (2-0)

**101 Biology****Four credits**

A course in selected biological, physical and chemical concepts which are foundations to the understanding of human physiology. Cell structure and function, cell chemistry (including chemical bonds, electrolytes, pH, carbohydrates, lipids, proteins, nucleic acids, and chemical energy transformations), diffusion, osmosis, dialysis filtration, mitosis, meiosis and genetics are included. This course is especially designed as a prerequisite for certain Human Anatomy and Physiology courses and is a requirement for students enrolled in many health career programs. 4 (3-2)

**102 Michigan Birds****Two credits**

An introduction to ornithology. A field study of Avian Biology, including the identification of birds by sight, song, habits, and migration patterns. The course includes the study of open, wooded and wetland habitats, as well as the ecological and economic importance of birds. The outdoor field investigations will usually be scheduled on weekends. 2 (1-2)

**103 Michigan Reptiles and Amphibians****Two credits**

A course in Herpetology and Amphibia. Students examine the evolution, life history, and habits of reptiles and amphibians in the local area and learn to identify common species of turtles, snakes, frogs and others belonging to these groups. Field studies provide an opportunity to observe local species fulfilling their various ecological roles in the natural habitats. 2 (2-0)

**107 Cellular Biology****Four credits**

Deals with the nature of science and its processes, cell structure and cell processes. It includes cell division and heredity. Forms and functions of cells are related in the study of tissues. Applications of statistics and probability to genetics and the theory of evolution are also considered. 4 (3-3)

**108 Life Processes****Four credits**

A molecular approach to life functions. The course opens with an introduction to chemistry sufficient to understand its biological applications that follow. The structure and functions of body systems such as digestive, nervous, circulatory, excretory, respiratory, and reproductive are studied. Processes such as photosynthesis, respiration, and hormonal control are included. 4 (3-3)

**109 Principles of Ecology****Four credits**

This course is oriented to field investigations and laboratory study of organisms and their relation to natural environment. Taxonomy is studied where it is relevant to ecology. 4 (3-3)

**201 Zoology I****Four credits**

First of two courses designed to survey the field of zoology and serve as a foundation for advanced courses. Deals with the characteristics of life, cellular structures and their functions, cellular divisions, histology, anatomy and physiology. Emphasis is on the organ systems of the vertebrates, principally the mammals. 4 (2-4)

**202 Zoology II****Four credits**

Continuation of Biology 201. Begins with an introduction to heredity, population genetics and the theory of evolution. Deals principally with the taxonomy and comparative anatomy of members found within the major animal phyla. A phylogenetic approach is used to study the various animal phyla from Protozoa through Chordata. Prerequisite: BIO 201 or departmental approval. 4 (2-4)

**207 Cell Biology****Four credits**

An introductory course which parallels Cellular Biology 107 except for greater emphasis on cell ultrastructure and chemistry, and omission of the study of plant cells. This course satisfies the prerequisites for Anatomy 212 or Histology 280 and is a preferred alternative to Cellular Biology 107 for health-oriented career fields. 4 (3-3)

**211 Foundations of Biological Science (Formerly FBS 212)****Four credits**

Primarily for students seeking an elementary education certificate. Emphasis is on modern biology. Topics include photosynthesis, energy transfer, nutrition, metabolism, and heredity. Laboratory activities involve the students directly with natural phenomena, their relationships and application of principles studied. Methodology of biological science teaching is included. Prerequisite: NS 123 or equivalent college biology course. Foundations of Physical Science recommended. 4 (2-4)

**250 General Entomology****Four credits**

An introduction to the study of insects that emphasizes their classification, evolution, life cycles, behavior, and their external and internal structures and function. The biology and control of economically and medically significant species is discussed, with emphasis on the various ecological roles of insects. Laboratory and field work stresses recognition, observation, and collection of major insect groups found in Michigan. Prerequisite: One term of general biology recommended. 4 (3-3)

**260 Botany (Plant Morphology) (Formerly BIO 203)****Four credits**

A morphological study of plants. The course deals with plant structures and life cycles, and consideration of ontological and evolutionary development. Prerequisite: One term of biology recommended. 4 (2-4)

**261 Plant Physiology****Four credits**

An introductory course dealing with the functional aspects of plant structures and with plant processes and their mechanisms. Includes photosynthesis, respiration, hormonal regulation, functional relation to physical environmental factors, and the processes of flowering and seed germination. In the laboratory, students employ such techniques as chromatography, radiography, manometry, electrophoresis and various forms of assays. 4 (3-3)

**262 Systematic Botany****Four credits**

This course deals with the classification and relationships of vascular plants. The study includes the adaptive value of morphological features. Evolutionary trends and mechanisms are emphasized. In the laboratory, the student will practice methods common to plant systematics in the study of important families and genera. Fluency in the use of dichotomous keys will be stressed. 4 (3-3)

**270 Human Heredity****Four credits**

An introduction to principles of heredity with emphasis on the human, including discussions of inheritance of physiological and psychological traits as well as the hereditary implications to evolution. Topics include mitosis, meiosis, mechanisms



of chromosome movement, aberrations in chromosome number, structure, and their significance. Human genetics as it relates to social and medical problems is discussed. Prerequisite: NS 123 or one term of biology. 4 (4-0)

**271 Genetics Laboratory****One credit**

The course includes human and animal genetics exercises. Topics include blood testing, breedings experiments, and cellular preparations. Prerequisite: BIO 270 or concurrent. 1 (0-2)

**272 Genetics****Three credits**

The traditional concepts of genetics are examined through discussions of the principles of heredity in animals, plants, and microorganisms. A study of quantitative inheritance, linkage, chromosomal aberrations and recent developments in the field will also be included. Prerequisite: BIO 270 and 271. 3 (3-0)

**203 Microbiology****Four credits**

An introductory study of the history of microbiology and of classification rickettsia, mycoplasmas, yeasts, molds, and protozoa. Emphasis is given to bacteria, viruses, immunology, genetics, selected diseases, culture media, isolation of pure culture, identification of unknown bacteria, staining methods, practical sterilization, and the collecting and handling of specimens. Lecture and laboratory format. Prerequisite: BIO 101 or equivalent. 4 (2-4)

**280 Histology****Five credits**

Deals with cells and their arrangement in tissues. Composition, appearance, function and interrelation of tissues are studied. While non-human tissues may be used occasionally for illustration, the emphasis is on non-pathological human tissue. Techniques of photomicrography, microtomy and staining of frozen and embedded tissues are included. Prerequisites: BIO 207 or equivalent and PGY 212 are desirable. 5 (2-6)

**290 Principles of Embryology****Three credits**

Emphasis is on processes and mechanisms of development beginning at the molecular level and extending to the cellular and tissue levels. Cellular and tissue differentiation and interaction are examined in detail. Prerequisite: PGY 212 recommended. 3 (3-0)

**291 Embryology Laboratory****Two credits**

This course is the laboratory experience for BIO 290. It emphasizes observational experiences with live and preserved embryos and prepared slides of embryos, whole and sectioned. The student becomes familiar with developmental stages of chick and pig embryos with some comparison made to human embryos. Prerequisite: BIO 290 or concurrent. 2 (0-6)

**Anatomy (ANT)****150 Anatomy and Physiology****Five credits**

A one-term introductory course in the structure and function of the human body. Skeletal, muscular, nervous, sensory, circulatory, respiratory, digestive, urinary, reproductive and endocrine systems are included. This course is designed for students in the Dental Hygiene curriculum. Prerequisite: BIO 101 or equivalent. 5 (4-2)

**151 Anatomy and Physiology I****Four credits**

Emphasizes the function of all systems in the human body. Study of the cell, tissues, skeletal system, muscular system, nervous system and special sense organs is included. The first of two-term sequence in Human Anatomy and Physiology, designed for students pursuing certain vocational programs, including medical secretaries, psychology majors, and other programs requiring a basic understanding of human systems. 4 (3-2)

**152 Anatomy and Physiology II****Four credits**

A continuation of Anatomy and Physiology I. The course covers the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. The second of a two-term sequence in Human Anatomy and Physiology, designed for students pursuing certain vocational programs, including medical secretaries, psychology majors, and other programs requiring a basic understanding of human systems. Prerequisite: ANT 151 4 (3-2)

**211 Human Anatomy****Five credits**

A study of the anatomy of the human body designed to meet the needs of students in biology or related applied fields, such as nursing, radiologic technician, respiratory therapy, and physical education. The anatomies of the skeletal, muscular, nervous, sensory, circulatory, respiratory, digestive, excretory, endocrine and reproductive systems are studied. Prerequisite: BIO 101 or equivalent. 5 (3.5-3)

**Physiology (PGY)****212 Human Physiology (Formerly ANT 212)****Five credits**

The physiology of the skeletal, muscular, nervous, sensory, circulatory, respiratory, digestive, urinary, endocrine and reproductive systems is studied. Other topics include metabolism, water and electrolyte balance, acid-base balance, and stress. Prerequisite: ANT 211 and BIO 101 or departmental approval. 5 (5-0)

**221 Physiology I****Four credits**

The first of a two-term course in human physiology designed for students who intend to pursue a medical program for which an intensive study of physiology is necessary. Topics include the nervous system, muscles, the endocrine system, and gastrointestinal physiology. Prerequisites: BIO 101 and ANT 211; CEM 165 or equivalent recommended. 4 (4-0)

**222 Physiology II****Four credits**

Continuation of PGY 221. Topics include the physiology of the respiratory, renal, cardiovascular, and reproductive systems. Prerequisite: PGY 221 4 (4-0)

**Chemistry (CEM)****110 Fundamentals of Chemistry****Five credits**

This course is designed for those students who need an introduction to chemistry before proceeding to more advanced courses and for those who are interested in chemistry as part of their liberal arts studies. Emphasis is on basic chemical concepts and their relationships to the chemical world in which we live. The course is not intended as a substitute for any course in the freshman college sequences in chemistry. 5 (5-0)

**131 Introduction to Chemistry Lecture I****Three credits**

First of three lecture courses designed to meet the needs of students requiring one year of chemistry and an introduction to basic inorganic and organic chemistry. The student should take the lecture courses (CEM 131, 132, 133) and the laboratory courses (CEM 141, 142, 143) concurrently. CEM 131 (inorganic) introduces the principles of measurement, properties, and structure of matter (atomic and electronic structure); chemical bonding; nomenclature; chemical equations; stoichiometry; and properties of gases, liquids, solids, and changes of state. Prerequisite: High school algebra. 3 (3-0)

**132 Introduction to Chemistry Lecture II****Three credits**

Continuation of CEM 131. CEM 132 (inorganic) introduces basic principles of solution chemistry, acid-base chemistry, oxidation-reduction, kinetics and equilibrium, and nuclear chemistry. The student should take CEM 142 concurrently. Prerequisite: CEM 131 3 (3-0)

**133 Introduction to Chemistry Lecture III****Three credits**

A survey of the principles of organic chemistry. The course introduces the student to the structure, nomenclature, chemical and physical properties, and selected characteristic preparations and reactions of the most common classes of organic compounds. Topics include polymers, optical isomerism, and selected reaction mechanism. Students enrolled in this course should take CEM 143 concurrently. Prerequisite: CEM 132 or equivalent. 3 (3-0)

**41 Introduction to Chemistry Laboratory I****One credit**

First in a series of three laboratory courses which are designed to be taken concurrently with the CEM 131, 132, 133 lecture courses. Students are introduced to laboratory procedures, measurement, preparation or oxygen, types of chemical reactions, composition of compounds, heat of reactions, and gas laws. Prerequisite: Credit or concurrent enrollment in CEM 131 1 (0-3)

**42 Introduction to Chemistry Laboratory II****One credit**

A course designed to provide laboratory experience related to topics covered in CEM 132, including solutions, acids and bases, oxidation-reduction reactions, and chemical equilibrium. Prerequisite: CEM 141 and CEM 132 or concurrent enrollment in CEM 132. 1 (0-3)

**143 Introduction to Chemistry Laboratory III****One credit**

An organic chemistry course designed to parallel the lecture course, CEM 133. The purpose of the laboratory is to complement the student's grasp of organic principles through practical experiences which directly relate to the material presented in CEM 133. Students should enroll in this course only if they also enroll in CEM 133. Prerequisite: CEM 132 and 142 or equivalent. 1 (0-3)

**165 Concepts in Biochemistry (Formerly CEM 100)****Five credits**

Required for students pursuing nursing and several other Health Career programs, and designed to provide an understanding of the chemistry of life processes. This course emphasizes enzymes, amino acids, nucleic acids, blood and urine chemistry, and includes physiological and pathological applications. Prerequisites: high school chemistry within past two years or CEM 110, BIO 101, or equivalent recommended. 5 (4-2)

**171 General Chemistry Lecture I****Four credits**

CEM 171 is the first of three lecture courses which form an introduction to general chemistry for students in the physical sciences, life sciences, and engineering. CEM 171 covers atomic and molecular structure, chemical bonding, nomenclature, stoichiometry, gas laws, solutions, phase rule, the liquid and solid states, colloids, and the descriptive chemistry of the noble gases, Group IA and VIIA. Prerequisites: high school chemistry and algebra or departmental approval. Students should enroll in CEM 181 concurrently. 4 (4-0)

**172 General Chemistry Lecture II****Three credits**

CEM 172 is a continuation of CEM 171. Topics include acid-base theory, a brief introduction to ionic equilibria, oxidation-reduction, electrochemistry, chemical kinetics, chemical equilibrium, basic thermodynamics and descriptive chemistry of Groups IIA, IVA, VA and VIA. Prerequisites: CEM 171 or departmental approval. Students should enroll in CEM 182 concurrently 3 (3-0)

**173 General Chemistry Lecture III****Three credits**

CEM 173 is the third lecture course in the 170 series. Topics include ionic equilibria, solubility product constants, an introduction to coordination chemistry, organic chemistry, biochemistry, nuclear chemistry and fundamental particles. Prerequisites: CEM 172 or department approval. Students should enroll in CEM 183 concurrently. 3 (3-0)

**181 General Chemistry Laboratory I****One credit**

CEM 181 is the first in a series of three general chemistry laboratory courses which are designed to accompany lecture courses CEM 171, 172 and 173. CEM 181 stresses laboratory techniques and includes a treatment of density determination, synthesis, gas laws freezing point depression, and acid-base titrations. Prerequisites: Credit or enrollment in CEM 171. 1 (3-0)

**182 General Chemistry Laboratory II****Three credits**

CEM 182 is the second term general chemistry laboratory with emphasis on quantitative analysis. CEM 182 includes acid-base titrations, oxidation-reduction titrations, complexation titrations, spectrophotometric analysis and chemical kinetics. Prerequisites: Credit or enrollment in CEM 172 and credit in CEM 181. 3 (1-6)

**183 General Chemistry Laboratory III** **Two credits**

CEM 183 is the third term general chemistry laboratory which is a self-paced systematic qualitative analysis lab which uses semi-micro techniques to determine the presence of common cations and anions. Prerequisites: Credit or enrollment in CEM 173 and credit in CEM 182. 2 (0-6)

**241 Principles of Organic Chemistry I** **Five credits**

CEM 241 is the first course of a sequence designed primarily to introduce the field of organic chemistry to those requiring only one year in this subject. Topics include the chemical and physical properties of aliphatic and aromatic hydrocarbons with an emphasis on nomenclature, preparation, reactions, mechanisms and spectroscopy. Laboratory exercises are selected to give the student experience with the chemicals, techniques and equipment commonly employed in organic laboratories with particular attention given to compounds studied in the lecture. Prerequisites: CEM 172 and 182 or equivalent. 5 (4-3)

**242 Principles of Organic Chemistry II** **Five credits**

CEM 242 is a continuation of Chemistry 241. Topics include carboxylic acids and their derivatives, carbonyl compounds, lipids, amines, carbohydrates, amino acids and proteins. Nomenclature, preparations and reactions are stressed with increased emphasis on synthetic and analytical applications of the reactions studied. Prerequisites: Satisfactory completion of CEM 241. 5 (4-3)

**243 Principles of Organic Chemistry III** **Three credits**

CEM 243 is a continuation of Chemistry 242. Topics include enzymes, nucleic acids, high-energy compounds and carbohydrate and lipid metabolism. 3 (3-0)

**251 Organic Chemistry I** **Five credits**

CEM 251 is the first course of a three-term sequence in Organic Chemistry designed primarily for chemistry majors and for those students wishing a rigorous treatment of the subject. The topics parallel those covered in CEM 241, but with greater emphasis on reaction mechanisms, theory, and problem solving. Laboratory exercises are selected to give the student experience with the chemicals, techniques and equipment commonly employed in organic laboratories with particular attention given to compounds studied in the lecture. Prerequisite: CEM 172 and 182 or equivalent. 5 (3-6)

**52 Organic Chemistry II** **Five credits**

Continuation of CEM 251. Topics parallel those covered in CEM 242 but in greater detail, particularly with regard to mechanisms, theory, problem solving and applications of spectroscopy. Organic qualitative analysis is emphasized in the laboratory. Prerequisite: Satisfactory completion of CEM 251. 5 (3-6)

**53 Organic Chemistry III** **Five credits**

Continuation of CEM 252. Topics parallel those covered in CEM 243 but in greater detail in the areas of molecular rearrangements and the chemistry of polyfunctional organic compounds. The laboratory introduces the student to the use of the chemical literature. Prerequisite: Satisfactory completion of CEM 252. (3-6)

**Astronomy (AST)****201 Introduction to Astronomy** **Four credits**

A non-mathematical survey of astronomy, with emphasis on recent discoveries. Topics include the solar system, stellar evolution, quasars, black holes, cosmology, and the expanding universe. Laboratory work includes astronomical observation, planetarium demonstrations, and class projects on astronomical topics. 4 (4-1)

**Meteorology (MET)****112 Basic Meteorology** **Two credits**

Provides a basic background in the principles and terminology of meteorology. Includes weather phenomena, instrumentation, weather maps, and simple weather prediction. This course should be taken by journalism students. Science majors should select MET 212. 2 (2-0)

**212 Introduction to Meteorology** **Four credits**

Introductory study and observations of the atmosphere designed to acquaint the student with the elements of weather, their interrelationships, meteorological instruments and weather maps. General and specific weather phenomena and the climatology of the United States will be considered. Prerequisite: NS 121 4 (2-4)

**Geology (GE)****101 Western National Parks** **Two credits**  
**(Geology of the Western United States)**

This course emphasizes the geological features found in the national parks and national monuments. Most of the Western parks were established specifically because of their geologic characteristics and provide excellent examples of the significant geological features of the Western United States. 2 (2-0)

**201, 202, 203, Geology Field Studies** **One to Three credits**

Field studies in geology for students concurrently enrolled in one of the traditional geology courses for which extensive outdoor field work is essential. Students should consult the class schedule before enrolling in a field study course. Prerequisites: Concurrent enrollment in GE 221, 222, 223, or 224; or previous completion of an equivalent course.

**221 Geology I** **Four credits**

Minerals and rocks of the earth's crust; constructive and destructive forces, including volcanism, erosion by water, ice, gravity, wind and waves; mountain building; rock deformation; concepts of the earth's structure, origin and age; history of geology and geologic history. Laboratory consists of either field investigations to nearby areas and a one-weekend extended field trip, or on-campus laboratory activities. 4 (3-3)

**222 Geology II****Four credits**

Applies the principles of physical geology to the study of the historical development of the earth from its inception to present time. Topics included are uniformitarianism, fossils and their interpretation, chemical evolution, environments of deposition of rock units, and geologic time. The course includes a laboratory and an extended weekend field investigation. 4 (3-3)

**223 Geology III****Four credits**

Traces the historical development of the earth with special emphasis on the North American continent. Topics include the Precambrian, Paleozoic, Mesozoic, and Cenozoic Eras; geologic maps and their interpretation; geotectonics; fossil fuels and mineral resources. 4 (3-3)

**224 Michigan Geology****Four credits**

A general survey of the geology of Michigan and its immediate environs. Discussion of the Canadian Shield areas of the northern peninsula along with the development and nature of the Michigan Basin and the Pleistocene Epoch. Emphasis is placed on economic, environmental and special interest aspects of Michigan geology. 4 (3-3)

**Oceanology (OCN)****225 Basic Oceanology and Limnology****Four credits**

An introduction to the physical and chemical properties of natural waters, wave action, currents, geological structure and formation of ocean and lake basins, marine and fresh water biology, and man's interactions with the natural waters. Two full-day field trips are usually included in the course: one to Lake Michigan and one to a small inland lake. 3 (3-2)

**Natural Science (NS)**

A three-course sequence in Natural Science designed to give the student a basic understanding of some of the important scientific principles related to the animate and inanimate world. The audio-visual-tutorial presentation employs a variety of media as an aid to understanding both the empirical and conceptual aspects of science. It will be a better experience for students if the courses are taken in numerical sequence.

**121 The Physical World****Four credits**

Introduces the fundamental laws, theories, and principles of chemistry and physics. Includes such topics as kinetic, atomic and molecular theory and problems of the physical environment. One year of high school algebra of MTH 012 is recommended. 4 (2-4)

**122 Rocks and Stars****Four credits**

Topics include an introduction to astronomy and the Solar System; minerals and rocks, geological processes, and environmental geology. 4 (2-4)

**123 Living World****Four credits**

Explores the biology of both external and internal environments. Topics include energy flow in ecosystems, ecological cycles, population growth and regulation, cell structure and function, cell division, and genetics. The lectures emphasize current biological topics such as encephalitis, toxic substances, cancer, and recombinant DNA. 4 (2-4)

**Horticulture (HOR)**

Courses in the Horticulture program are designed for those with a professional or general interest in plant life.

**101 Yard and Garden Culture****Two credits**

Basic principles of horticultural science related to fruits, flowers, vegetables, lawns and landscape plants. Emphasis is on the selection of plant varieties, planting, soil management, fertilization, pruning, spraying and grafting. Field trips. 2 (2-0)

**102 Native American Flora****Two credits**

An introduction to the study of botany and a survey of various Native American plant families. Examples include bromelads, cacti, succulents, nightshades, lilies, and carnivorous plants. 2 (2-0)

**103 Indoor Plants****Two credits**

This course is designed for students interested in floral shop art and other career opportunities in horticulture. Topics include terrariums, hanging baskets, dish gardens, unusual house plants, fluorescent light gardening, dried flower arrangements, and seasonal floral decorations. 2 (2-0)

**104 Plants for Profit and Pleasure****Two credits**

This course provides information for operators of small plant businesses, fund raising groups and plant hobbyists. Topics include propagation and culture techniques and the gathering and preservation of plant materials to make decorative items. This course is recommended for those who wish to use these skills in therapy and rehabilitation. 2 (2-0)

**105 Organic Gardening****Two credits**

This course is an introduction to the philosophies, practices and special techniques of organic, closed-system gardening and agriculture with special emphasis on their application in Michigan's lower peninsula. 2 (2-0)

**106 Bonsai Plant Culture**

Bonsai is the ancient art of miniaturizing trees and other plants. The course presents the necessary skills of potting, wiring, pruning, and proper maintenance that are required to produce bonsai plants for the marketplace or private collection. 2 (2-0)

**107 Floral Arranging****Two credits**

Principles of floral design are taught with the students creating corsages and various arrangements under the guidance of the instructor. There is a nominal cost for those materials not supplied by the student. 2 (2-0)

**Outdoor Education (OER)**

Courses in the Outdoor Education program are designed to provide a background of outdoor information and skills for teachers, camp or youth group leaders, or others interested in outdoor living.

**101 Living with Nature****Two credits**

This course is designed specifically to provide a basic understanding of the ecology of the wilderness. Man's relationship to wilderness is examined through history, literature and the writing of naturalists. 2 (2-0)

**102 Wilderness Survival****Two credits**

Designed to provide survival skills to those responsible for the safety and welfare of themselves and others. Topics include shelter, fire, water, signalling, and orienteering. 2 (2-0)

**103 Wild Food Plants****Two credits**

This course presents approximately 100 species of the common edible wild plants of Michigan and the Northeast United States. Topics include a discussion of economically important wild herbs and food plants, use of wild plants in survival situations, and toxic plant recognition. Recommended for youth group leaders, teachers, backpackers, and sportsmen. 2 (2-0)

**104 Field Naturalist****Two credits**

Designed to provide a broad introductory experience in the identification of Michigan flora and fauna. Includes a study of the habits and habitats of local birds, mammals, reptiles, and amphibians. The wild, edible plants in the local area are also studied. 2 (2-0)

**210 Foundations of Conservation (formerly FC 210)****Four credits**

Study of natural resources and the principles of utilization through management and conservation. Topics include history of conservation, ecology, soils, minerals, water, forests, wild life, human populations and man's effect on the natural resources of the earth. The laboratory consists of field investigations and guidance for conservation majors or others according to specific interest or declared vocations. 4 (2-4)

**Computer Science (CMP)****210 Computers, BASIC and Science****Three credits**

Students learn to program and to operate the IBM 5100 and the Hewlett Packard 9830 portable machines. The computer language employed in the programming is BASIC, a widely used language similar to FORTRAN. A broad range of computer applications, is discussed, with particular emphasis on problem-solving in science. 3 (3-0)

**Physics (PHY)****191 Physics for the Life Sciences****Five credits**

A one-term course in general physics designed to fulfill the physics requirement for certain Life Science and Health Career programs such as Respiratory Therapy and X-Ray Technology. Topics include force, motion, and energy; conservation theorems, fluid pressure and flow; wave phenomena; atomic structure and radioactive decay. This course may not be taken in place of a full year of physics; nor may it satisfy any other general physics requirement unless prior approval is obtained. Prerequisites: Intermediate algebra or departmental approval. 5 (5-0)

**201 Physics (Mechanics and Heat)****Four credit**

First of a series of three courses designed to give the student an understanding of the fundamental principles of physics. Considers the principles of mechanics (the laws of motion and equilibrium and their relation to work, energy and power), as they are applied to solids and fluids. Also includes the principles of heat and thermodynamics and their relationship to the operation of engines. Prerequisite: Trigonometry or approval of department. 4 (4-2)

**202 Physics (Electricity, Magnetism and Wave Motion)****Four credits**

Designed to explain the electrical nature of matter and to investigate its electrostatic and electromagnetic properties. Considers also the properties of waves and their application to sound. Engineering applications are emphasized. Prerequisite: PHY 201 or approval of department. 4 (4-2)

**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: PHY 202 or approval of department. 4 (4-2)

**209 Foundations of Physical Science (formerly FPS 211)****Four credits**

Primarily for students seeking an elementary education certificate. Surveys the theoretical as well as the practical aspects of physics, inorganic and organic chemistry. Methodology of teaching physical science will be included. Prerequisite: NS 121 or equivalent. 4 (2-4)

**211 Physics (Mechanics and Heat)****Four credits**

Designed to teach the static and dynamic behavior of solids and fluids, using calculus to derive relationships. The first of a series of three courses designed for science and engineering majors. Prerequisite: Calculus I or its equivalent, or approval of department. 4 (4-2)

**212 Physics (Electricity, Magnetism, and Sound)****Four credits**

Designed to teach the basic principles of electricity and sound. Similar to PHY 202 but uses calculus extensively. Prerequisite: PHY 211, or approval of department. 4 (4-2)

**213 Physics (Optics and Modern Physics)****Four credits**

Principles of geometric and physical optics as well as developments in modern physics such as: atomic and nuclear phenomena, relativity, solid state physics, and quantum physics phenomena. Prerequisite: PHY 212, or approval of department. 4 (4-0)

**Independent Study in Science (SC)****297, 298, 299 Independent Study in Science****One to Three credits**

Special study, field work, or laboratory work in specific science topics such as: geology, astronomy, physiology, chemistry, physics, ecology, zoology, or other natural science. The topic is chosen by the student and the project is supervised by a member of the Science Department. Students devote an average of three or more hours per week to their research projects, and meet with a supervising instructor for one or more hours per week.

**Seminars in Science****193, 194, 195, 196, 297, 298, 299 Seminars in Special Subjects in Science****Variable credits: One to Four**

Freshman seminars are developed from many areas within the disciplines of biology, geology, astronomy, anatomy, physiology, heredity, ecology, chemistry, physics and the other natural sciences. There will be a published descriptive sub-title each time a seminar is offered.

*Department of Social Science**Chairperson: Dr. William Heater*

Social Science includes the fields of education, geography, psychology, sociology, anthropology, economics, political science, government and also job training in human services. Students who envision careers in teaching, law, social work, guidance counseling, public administration, personnel work, clinical psychology, urban planning, child development, youth service, foreign service, social research or similar occupations might major in this department either to begin a four-year program or to gain entry-level job skills. Several courses are designed to meet specific requirements of majors in other areas.

**Basic Social Science (SS)**

The three-term sequence of courses, Social Science I, II, and III, form an integrated introduction to the social sciences which meets the general education requirements in this area. These courses must be taken in sequence. Either SS 103, SS 104, or SS 105 will satisfy the State of Michigan requirement of one course in government.

**101 Introduction to Social Science I****Four credits**

Survey of major concepts and methods of sociology and anthropology. Emphasis is given to selective aspects of culture, socialization, social stratification, associations, primary groups, collective behavior, population-ecology, and cultural history. No prerequisite. 4 (4-0)

**102 Introduction to Social Science II****Four credits**

Deals with the economic institutions in their social context. The genesis and development of capitalism are covered, as well as comparisons with other major economic systems. Last portion of the course deals with the principle issues in economic development. Prerequisite: SS 101. 4 (4-0)

**103 Introduction to Social Science II****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: SS 102 or 112, 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. 4 (4-0)

**105 State and Local Government** **Four credits**

A study of state and local governmental activities, their structures, functions, and methods of organizing resources and making policy. Consideration is given to the relationships between governmental units and the problems they confront, including relations between federal, state and local government. 4 (4-0)

**112 Honors Section of Introduction to Social Science II** **Four credits**

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

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

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

**Geography (GEO)****101 Principles of Geography** **Four credits**

Specific geographic principles course emphasizing landforms, gradational forces, weather and climatic elements, and soils, on a worldwide basis. Offers an extensive study of these forces, noting their ecological principles and their effect on human life. Includes mapping techniques, land site analysis, and air-photo interpretation. Field trips will be an integral part of the course. 4 (4-0)

**201 World Regional Geography** **Four credits**

Describes and analyzes human and natural resources of countries and cultures of the world with major emphasis on their distribution over the surface of the earth. 4 (4-0)

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

A study of the human and physical resources of North America, Central America, and the Panama Canal Zone. Focus on distinct characteristics of the various regions. 3 (3-0)

**203 Economic Geography** **Three credits**

Study of geographic distribution and production of agricultural commodities, raw materials for industry, and the location of industries throughout the world. Some emphasis placed on trade of raw materials and finished products among nations. 3 (3-0)

**Political Science (PLS)****150 American Political Parties and Elections** **Three credits**

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

**200 Introduction to Political Behavior** **Four credits**

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

**207 Government Internship** **Four credits**

This course offers the student a chance to observe the actual workings of the political process by participating in it. Participation will provide students an exposure to public policy making. The program covers all levels of government, from city and township through the federal level. Prerequisite: SS 103 or SS 104 and departmental approval. 4 (1-12)

**210 Contemporary Political Affairs** **Three credits**

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

**260 Introduction to Comparative Government** **Four credits**

Introduction to the political institutions of modern government with emphasis given to the United Kingdom, France, Germany, USSR, and the European Economic Community. The course includes dynamics of political behavior in these and other societies as well as special problems of the newly emerging nations. Prerequisite: SS 103. 4 (4-0)

**271 International Relations** **Four credits**

Course in contemporary relations, with emphasis upon politics. Concepts, theories and rudimentary methods are surveyed. Relationships between international politics, foreign policy, and domestic policy in the U.S. explored. Prerequisite: SS 103. 4 (4-0)

**Psychology (PSY)****151 Psychology of Personal Adjustment** **Three credits**

Psychological principles applied to personal and social relations. Designed for students who desire a practical understanding of psychology but do not intend to enroll for advanced courses in the field. (Not eligible for credit after taking Psychology 200 or 201.) 3 (3-0)

**152 Applied Psychology** **Three credits**

Psychological principles applied to production, distribution and use of goods and services. Psychology as it relates to personnel, management, human relations on the job, work setting, marketing and law enforcement. Designed for students desiring practical understanding of psychological principles who do not intend to enroll for advanced courses in the field. 3 (3-0)

**200 Introductory Psychology: Social-Individual Behavior** **Four credits**

A basic orientation to the field of psychology with emphasis on social and individual behavior. Topics include interpersonal behavior, group process, personality, emotions, cognition, measurement and therapy. The course is designed both as a general survey and as a preparation for all advanced courses in psychology. Four credits. 4 (4-0)

- 201 Introduction to Psychology: Principles and Methods** **Four credits**  
An introduction to the methods and principles of the science of psychology. Emphasis is on processes underlying human behavior. Content includes brain function, sensation, perception, maturation, conditioning, verbal learning, and motivation. Experiments conducted by students in a laboratory. Prerequisite: PSY 200. Four credits. 4 (3-2)
- 202 Psychology of Personality** **Four credits**  
Discussion of concepts of adjustment, conflict, mental hygiene and behavior modification. Survey of leading theories of personality, emphasizing their implications for assessing and modifying normal personality. Prerequisite: PSY 200. 4 (4-0)
- 203 Introduction to Social Psychology** **Four credits**  
Designed to give the student an understanding of the influence of social interaction upon the development of personality. Interaction between the individual and society is stressed. Prerequisite: PSY 200 and SS 101. 4 (4-0)
- 204 Educational Psychology** **Four credits**  
An investigation of the contribution of psychology to education. Emphasis upon aspects of child growth and development, learning, measurement, and group dynamics which affect the achievement of pupils in the classroom. The course includes experiences in which students are able to practice some of the tasks and interpersonal skills involved in teaching. Prerequisite: PSY 200. 4 (4-0)
- 205 Human Growth and Development** **Four credits**  
A study of the human life cycle from conception to death. Designed to investigate, describe and explain changes in human behavior that are a result of the continuous interaction of maturation and experience. Prerequisite: PSY 200. 4 (4-0)
- 221 Child Psychology** **Four credits**  
Explores theories and principles of child development from conception to puberty. The course covers psychological, sociological, and biological aspects of maturation and development. Prerequisite: PSY 200. 4 (4-0)
- 222 Adolescent Psychology** **Four credits**  
Examines theoretical and empirical literature related to adolescence, emphasizing biological, psychological, and sociological aspects of maturation and development from puberty to young adulthood. Prerequisite: PSY 200. 4 (4-0)
- 250 Abnormal Psychology** **Four credits**  
An exploration of the nature, development, diagnosis, and treatment of psychopathology viewed from a general-systems (i.e., psychological, social, and physiological) perspective. Significant research, major theories, diagnostic techniques, and therapeutic techniques are discussed with respect to various psychological disorders. Prerequisite: PSY 200. 4 (4-0)

**Sociology and Anthropology (SA)**

- 160 Contemporary Chicano Problems** **Three credits**  
A survey of the social problems confronting the Mexican-American community. Emphasis will be placed on cultural identity, social integration, political participation, and economic status. 3 (3-0)
- 200 Principles of Sociology** **Four credits**  
Introductory analysis and description of the structure of human society, with emphasis on social norms, groups, social stratification and institutions as they are analyzed by modern sociological methodology. Prerequisite: SS 101. 4 (4-0)
- 210 Introduction to Research Methods in Social Science** **Four credits**  
Fundamental principles basic to empirical social science research. Overview of various forms and approaches involved in planning and conducting scientific studies. Intended to develop ability to understand and evaluate social science research literature. Practicum and field experience included. Prerequisite: SS 101 plus 8 other credits in SS. 4 (4-0)
- 230 Introduction to Substance Abuse** **Four credits**  
An overview of substance abuse and use from a historical, sociological, and psychological perspective. Includes drug classifications, street terminology, and causes of abuse. Also examines present and past legislation regarding substance abuse and use. 4 (4-0)
- 254 Men, Women and Change** **Four credits**  
A study of the changes in society over the past century in terms of their dramatic impact on sexual relationships, marriage, and family life. The course includes sex roles, sexual behavior, values, psychological needs, divorce, and parenting. Prerequisite: SS 101. 4 (4-0)
- 255 Contemporary Social Problems** **Three credits**  
Consideration of current social problems from a framework of sociological theory with special regard for current hypotheses and recent empirical studies relevant to particular problems; i.e., family stability, racism, urbanism, etc. Prerequisite: SS 103. 3 (3-0)
- 260 Minority Groups** **Three credits**  
An introduction to the culture and contemporary life styles of American minorities. Emphasis is placed on basic sociological and anthropological concepts with respect to selected minority groups, particularly the Black-American, Mexican-American and Native American. Prerequisite: SS 101 or departmental approval. 3 (3-0)
- 270 Introduction to Cultural Anthropology** **Four credits**  
Fields, methods, and findings of the science of man. Primary attention given to literature of culture. Historical development of anthropological theory and methodology will be surveyed. Students will research a cross-cultural study. Prerequisite: SS 101. 4 (4-0)



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

An introduction to human biological and cultural evolution; mechanisms of evolution; human origins and biological and cultural evidence from the fossil record; behavior among other animals and the development of human culture; culture as an adaptive mechanism; and modern human variation. 4 (4-0)

**Human Services**

The Human Services Program is a two-year career curriculum to prepare students who are interested in working in one of the following areas after graduation:

- Child Advocacy
- Child Development
- Corrections
- Gerontology
- Human Services
- Mental Retardation
- Public Administration
- Teacher Assistant

They may be employed as a:

- Community Outreach Worker
- Psychiatric Aide
- Worker in a Group Home
- Day Care Worker
- Social Service Technician
- Rehabilitation Counselor
- Teacher Aide
- Corrections Officer

The program provides courses for people already employed in community agencies who want to strengthen their knowledge and skills in order to work more effectively with others and to open new jobs for themselves.

The program also provides for students who enter undergraduate and graduate schools in many human service fields.

**Adult Foster Care (AFC)**

020

One credit

A series of courses that have been developed in cooperation with the Michigan Department of Social Services to increase the skills and affect the attitude of adult foster care providers. It includes specifics of the system as strategies for providing foster care. Prerequisite: None. 1 (1.6-0)

**Child Care and Guidance (HSL)**

Preparation for employment related to child care centers and young children in assisting directors of child day care centers or nursery schools, assisting with activities on playgrounds and in recreation center, and caring for children in homes and in such public places as stores, playgrounds, recreation centers, and transportation terminals. Developed for the Eaton Intermediate School District and limited to students approved by the EISD office of Vocational Education.

**COURSE DESCRIPTIONS****Human Services Core Courses (HUS)****101 Introduction to Human Services**

Four credits

An overview for the basic programs and social institutions which provide human services. The student will be exposed to both a philosophical as well as practical view of the goals, structure and policies of specific human services institutions and programs in our own community. Focus will be on the sub-specialty areas where human service workers are needed as well as on identifying a variety of curriculum choices for the Associate of Arts Degree student. 4 (4-0)

**110 Introduction to Child Abuse/Neglect**

Three credits

An overview of the history and scope of the problem; the dynamics of child abuse/neglect and the world of abnormal rearing; roles of community agencies and disciplines; approaches to treatment and coordination of cases and services; legal aspects and the law. 3 (3-0)

**203 Skills and Methods of Human Services**

Four credits

A course in basic social work methods and generic problem-solving skills used by human service workers in a variety of settings: community service agencies, crisis centers, and residential rehabilitation programs. Prerequisite: HUS 101 PSY 200, WRI 121. 4 (4-0)

**205 Personal Dimensions of Human Services**

Four credits

An exploration of the nature and development of personal dimensions of human services to meet the needs of the people preparing to work in the "helping professions." Prerequisites: None. 4 (4-0)

**212 Family Treatment—Child Abuse/Neglect**

Three credits

This course will address the special problems encountered working as a professional, para-professional or volunteer with abusive and neglectful families using individual, group, and family techniques. Legal, treatment, and value issues will be considered. A secondary focus of this course will be the issue of worker attrition in the field of abuse and neglect; its causes and some individual and agency solutions to the problem. 3 (3-0)

**214 Practicum I**

Three credits

Beginning practical experience and training in the field for individual students. The student is placed with community-based social agencies and institutions twelve hours per week. Accompanying classroom seminar (HUS 217) serves to integrate field experience with theoretical concepts and principles of human service. Prerequisite: Departmental approval. 3 (0-12)

**215 Practicum II**

Three credits

A continuation of HUS 214 providing additional practical experience and training in the field of human services. The student is placed with community-based social agencies and institutions twelve hours per week. Accompanying classroom seminar (HUS 218) serves to integrate field experience with theoretical concepts and principles of human services. Prerequisite: HUS 214 3 (0-12)

**216 Practicum III****Three credits**

A continuation of HUS 214 providing additional practical experience and training in the field of social work. The student is placed with community-based social agencies and institutions twelve hours per week. Accompanying classroom seminar (HUS 219) serves to integrate field experience with theoretical concepts and principles of social work. Prerequisite: HUS 215. 3 (0-12)

**217 Organizational Systems****Two credits**

The course is designed to provide the student with knowledge of the community power structure, funding bases and the internal workings of human services organizations. (This course is to be taken concurrently with HUS 214). 2 (2-0)

**218 Services Delivery Skills****Two credits**

The course is designed to help the human services student to identify the systems and resources to link the systems with the people and how to mobilize the systems and the people. (This course is to be taken concurrently with HUS 215). 2 (2-0)

**219 Employment Readiness****Two credits**

The course is designed to prepare students for the job market. They will learn how to complete applications, prepare resumes and how to apply for state certification. (This course is to be taken concurrently with HUS 216). 2 (2-0)

**Child Advocacy (CA)****101 Introduction to Child Advocacy****Four credits**

Historical look at childhood, discussion of children's rights, both legal and philosophical, philosophy and definition of child advocacy, a look at legislation affecting children, and an overview of advocacy skill and programs. 4 (4-0)

**203 Methods and Skills of Child Advocacy****Four credits**

Teaches students to analyze controversies, construct logical arguments from available evidence, and present a point of view persuasively. Upon completion of this course, the child advocate will be equipped to use techniques of argumentation effectively in both formal and informal settings. 4 (4-0)

**205 Family and Child Law****Four credits**

This course is a review of the basic legal concepts and principles with an emphasis on the balancing of rights among family, children and the state. Discussions and reasonings will include the areas of child abuse, neglect, marriage, divorce, foster care, juvenile status offenses and adoption. 4 (4-0)

**207 The Legal System and The Family****Four credits**

A survey of the agencies, institutions and courts as they directly affect the lives of children. 4 (4-0)

**211 Communicating with Youth****Three credits**

Designed to increase the student's skills in communicating with youth. The topics to be covered include life-styles, values clarification and sensitivity awareness. 3 (3-0)

**Child Development (CD)****101 Infants and Toddlers, 0 - 2½ years****Four credits**

Deals with the physiological and physical growth patterns, nutritional requirements, and emotional, social, and cognitive skills of children 0 - 2½ years for preparation in caring for the child in a child care setting. Includes relative influences of genetics and environment on growth; the relationship of the development of the body systems to the child's nutritional status; acquisition of skills in recognizing, recording, and interpreting child behavior. 4 (2-4)

**102 Infant and Toddler Laboratory****Two credits**

A supervised laboratory situation in which students have an opportunity to work directly with infants and toddlers four hours per week. Emphasis is on application of developmental information and care-giving skills discussed in CD 101. Prerequisite: To be taken concurrently with CD 101. 2 (0-4)

**121 The Preschool Child, 2½ - 6 years****Four credits**

Physiological and physical growth patterns, nutritional requirements, and emotional, social, and cognitive skills of children 2½ - 6 years. Includes relative influences of genetics and environment on growth; relationship of the development of the body systems to the child's nutritional status; acquisition of skills in recognizing, recording, and interpreting child behavior. 4 (4-0)

**261 Childhood: Interaction and Guidance****Four credits**

Developing skills in guidance techniques, working with families, and meeting individual needs of children in a variety of child care settings. Prerequisite: CD 101, CD 121, and departmental approval. 4 (4-0)

**262 Childhood: Curriculum and Planning****Four credits**

Emphasizes planning the curriculum for an early childhood program in small and large group settings for creative expression, language arts, music and rhythm, science, pre-number and large and small motor skills. Prerequisite: CD 261. 4 (4-0)

**280 Preschool Administration****Three credits**

Analysis of the administrator's role in menu planning, preparation and serving of food for infants, toddler, and preschool children; application of philosophy, communication, and business techniques to operating early childhood education programs; acquisition of knowledge about safety, licensing, and health regulations. Prerequisite: CD 262. 3 (3-0)

**Education (ED)****101 Curriculum Reinforcement I Three credits**

Role orientation of the teacher aide as a significant person in the reinforcement of the school curriculum. Includes theory and methods of preparing audio-visual materials in support of instruction. Introduction to school records, safety, discipline and permissible first aid. Techniques of assisting teachers through dramatic play and story telling. 3 (3-0)

**102 Curriculum Reinforcement II Four credits**

Methods of assisting an elementary teacher in math, reading, evaluation, home visits, parent-teacher conferences, art techniques, and classroom songs and games. Prerequisite: ED 101. 4 (4-0)

**150 Introduction to Education Three credits**

An introduction to teaching as a profession and education as a career. Included is an overview of the foundations, philosophy, history and organization of education as a human endeavor. Current issues and trends in education are examined. Students are offered an opportunity to assist teachers in the schools. 3 (3-0)

**221 Teacher Aide Practicum IV One credit**

A field-work course for second-year Teacher Associate students who have completed one year of experience as a classroom aide and desire continued supervision of such experience during the second year. Includes four meetings in seminar with other students, and individual consultation with the instructor based on the field work. Student must be working as an aide in a local school at least ten hours each week. Prerequisite: HUS 214, 215 and 216. 1 (0-10)

**222 Teacher Aide Practicum V One credit**

A continuation of ED 221. Prerequisite: ED 221. 1 (1-10)

**223 Teacher Aide Practicum VI One credit**

A continuation of ED 221 and ED 222. Prerequisite: ED 222. 1 (0-10)

**Mental Retardation Associate (MRA)****101 Introduction to Mental Retardation Three credits**

The purpose of this course is to obtain an overall understanding of the field of Mental Retardation with emphasis on historical development; definition, causes and treatment; psycho-social development; current service delivery systems; and the role of the Mental Retardation Associate. 3 (3-0)

**205 Human Growth and Development Three credits**

Introduction to the human growth and development of mentally retarded adults. Emphasis is given to developing teaching skills in areas of assessing, planning and implementing social, sexual training to MR adults. Prerequisite: MRA 101. 3 (3-0)

**209 Staff Roles and Relations in Mental Retardation Two credits**

Introduction to the staffing patterns and relationships of the Mental Retardation Associate (MRA). Emphasis will be given to the role and responsibilities of the MRA within and amongst agencies and institutions. 2 (2-0)

**211 Supportive Case Management with Families of the Mentally Retarded Two credits**

Explore theories, principles and practices of positive intervention with families of retarded persons. This course will deal with assessment, counseling techniques, and resource identification and utilization. 2 (2-0)

**213 Economics of Group Home Management Four credits**

Course will permit the examination of several significant areas involved in the economics and management of a group home. Included will be nutritional dietary planning, home budgeting, minor home repairs, emergency medical care, conflict management and developing a family atmosphere. 4 (4-0)

**215 Alternative Residential Care Three credits**

Exploration of residential services available to mentally retarded children and adults. The course will include philosophy of care, behavioral management theories, needs assessment, short term foster care, community involvement and future trends in housing for the mentally retarded. 3 (3-0)

**Public Service (PS)****201 Fundamentals of Public Administration Four credits**

Deals with the development and application of the basic principles and concepts underlying the generic field of public administration in federal, state, and local government. The relevance of these principles and concepts to paraprofessional and mid-management public employees will be emphasized. Prerequisite: SS 103 or SS 104 or PLS 205 or departmental approval. 4 (4-0)

**202 Public Personnel Administration Four credits**

A study of the principles of personnel administration as applied to government. Emphasis is on improving competencies and solving contemporary personnel problems as a first-line or mid-management public employee. Prerequisite: SS 103 or SS 104 or PLS 205 or departmental approval. 4 (4-0)

**203 Public Fiscal Administration Four credits**

Deals with the developmental and application of basic concepts of fiscal administration as related to federal, state, and local government. An emphasis is placed on contemporary problems in public fiscal administration facing employees from paraprofessional to mid-management levels. Prerequisite: SS 102 and SS 103 or SS 104 or PLS 205, or departmental approval. 4 (4-0)

**231 Staff Roles and Relations in Substance Abuse Two credits**

A survey of present funding sources and staffing patterns within substance abuse agencies. Points of conflict within agencies and among agencies, and the functional relationships between roles, are addressed. Prerequisite: SA 230. 2 (2-0)

**242 Public Sector Collective Bargaining and Arbitration** **Four credits**  
A study of the principles of, preparation for, and participation in collective bargaining and dispute resolution in the public sector. Students are given an opportunity to participate in various modes of dispute and impasse resolution. Prerequisite: SS 102 or departmental approval. 4 (4-0)

**243 Fundamentals of Manpower Planning** **Four credits**  
This course deals with the development and application of the basic principles and concepts underlying the area of local governmental comprehensive manpower program planning. The relevance of these principles and concepts to paraprofessional and mid-level manpower planners will be emphasized. Prerequisite: SS 102 or departmental approval. 4 (4-0)

**261 Public Grants-in-Aid** **Four credits**  
Deals with the principle and administration of the development, writing, and funding of public grants-in-aid as related to federal, state, and local government. An emphasis is placed on contemporary problems in public development and administration facing employees from paraprofessional to mid-management levels. 4 (4-0)

**262 Public Relations in Public Administration** **Two credits**  
Will provide students with practical first-hand experience using public relations tools, as well as knowledge about the fact-finding, planning, communicating and evaluating aspects of good public relations.

### Social Work (SW)

*(Note: Students planning to transfer to the social work program at Michigan State University should follow the pre-professional curriculum guide, which includes SW 101, rather than the Human Services program.)*

**101 Introduction to Social Work** **Four credits**  
Introduction to the principles of social work practice. Emphasis on social work careers, description of methods, skills and standards of practice, definitions of the helping roles, survey of helping agencies and institutions, an overview of social issues and client needs relative to social work practice. 4 (4-0)

**200 Introduction to Social Work Field Placement** **Two credits**  
Introduction to types of social agencies available for field placement in the community. Emphasis on client population, programs and placement opportunities for students. Prerequisite: SW 101 and application to field placement. 2 (2-0)

**201 Social Work Field Placement I** **Five credit**  
Individual beginning practical experience and training in the field. The student is placed with community-based social agencies and institutions twelve hours per week. Accompanying classroom seminar serves to integrate field experience with theoretical concepts and principles of social work. First in a series of three consecutive courses. See SW 211 and 221. Prerequisite: Departmental approval. 5 (2-12)

**203 Social Work Interviewing** **Four credits**  
An examination of the purposes and basic concepts of the interview relationship with emphasis on the helping interview. Instruction in the techniques of interviewing with an opportunity to engage in practice interviews including video taping and feedback. Prerequisite: Concurrent field placement or departmental approval. 4 (4-0)

**205 Social Welfare** **Three credits**  
Introduction to the definition and concept of social welfare, its history, programs, attitudes, values and philosophy. Emphasis is upon the development of private and public services, changing patterns of services, the evolving changes in the Social Security Act and community action, with attention to current issues in social welfare policy. Prerequisite: SS 101. 3 (3-0)

**207 Group Process Skills** **Three credits**  
Introduction to the concepts, principles, goals and skills of social group work as a method of social work. Emphasis is upon the introduction of basic practice skills and intervention techniques within a framework of beginning theoretical knowledge. Prerequisite: SS 101 or departmental approval. 3 (3-0)

**209 Community Organization** **Three credits**  
Introduction to the principles, concepts, and methods of community organization techniques. Emphasis is on the introduction of basic practice skills and intervention techniques within a framework of beginning theoretical knowledge. Prerequisite: SS 101 or departmental approval. 3 (3-0)

**230 Pattern of Addiction and Treatment** **Three credits**  
Covers the addiction cycle of alcoholics and drug abusers, personality and interactional patterns of addiction, and casework and group work techniques. Prerequisite: SA 230 and PSY 202. 3 (3-0)

**231 Substance Abuse Agencies and Treatment Modalities** **Three credits**  
A review and analysis of current models of treatment within programs. Includes review of inpatient, outpatient, Halfway Houses, and occupational programs. Prerequisite: SA 230 and SW 230. 3 (3-0)

*The courses in Accounting, Corrections and Gerontology, included in the Human Services program, are taught in other divisions of the college.*

### Special Seminars

A degree program is enriched by studying deeply certain issues, books, or events which have great current interest. Throughout life, also, people renew and broaden their knowledge and skills by participating in such study. To promote this enrichment, the Social Science Department offers many courses in the Arts and Sciences Seminar Series. Each seminar course, with its own descriptive title, is taught on a level appropriate to the degrees of Associate of Arts or Associate of Science. Each may be audited by students who wish to enroll for general interest.

Occasionally the department offers seminars with course codes carrying numbers below 100. The main intent of these seminars is to meet a particular community or student need. Usually they pertain to remedial content or home management, or nutrition, or family relations. There is a descriptive title for each seminar. Credit for such seminars applies toward the Associate Degree General.

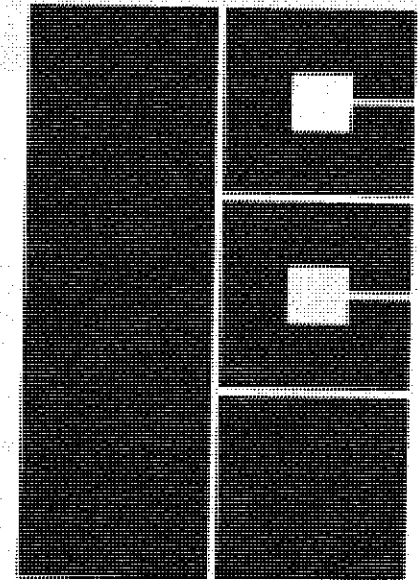
### Independent Study

Credit for independent study is available for special projects involving research, reading, or field experiences. Proposals for such projects must be approved by the department chairperson in advance of registration. To obtain approval the student must be currently enrolled for other courses and must have demonstrated competency through courses taken previously at L.C.C. The project must meet academic goals and must include enough supervised learning experiences to be commensurate with the amount of credit requested. Course codes for independent study carry numbers 297, 298, 299.

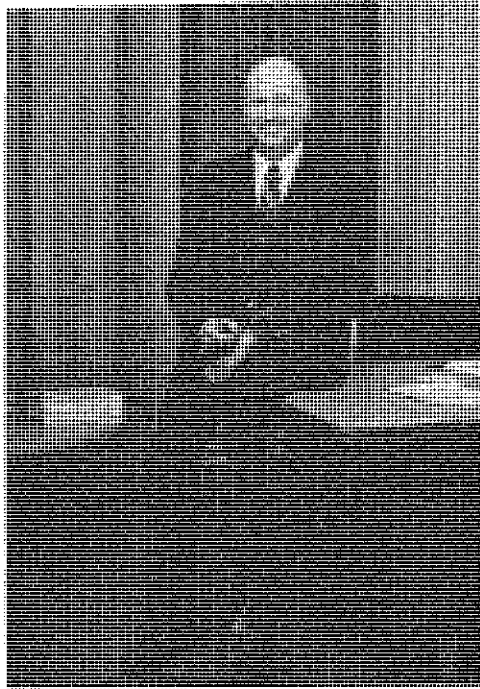


# DIVISION OF BUSINESS

Department of  
Accounting and  
Office Programs  
Department of  
Management and  
Marketing



# DIVISION OF BUSINESS

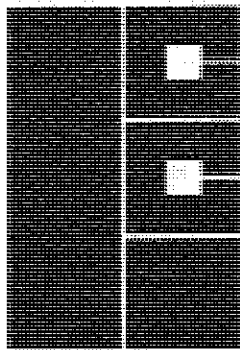


*Dean Norman Cloutier*

The Division of Business seeks to facilitate growth of an individual as a productive member of a business organization and society. The education provided ranges from preparation in fundamentals to the acquisition of more advanced business skills. Career training, college transfer, and community service programs are offered.

The overall purposes of the Division are: 1) to provide students with career-oriented educational opportunities and 2) to assist the College service-area businesses, industries, educational institutions, and government agencies in meeting their personnel development and training requirements. To achieve these purposes, the Division uses Advisory Committees consisting of leaders in their fields, to develop an array of programs and courses for satisfaction of individual and group needs.

Single courses, combinations of selected courses, and Certificate or Associate Degree programs are available to



prospective students. Courses offered by the Division are creditable towards the award of a certificate or a degree, either as a required course or an elective course, depending upon their relationship to the curriculum. Curricular guides for each program offered in the Division are available in the Counseling Offices and the Departmental Chairpersons' offices. These guides are frequently modified by the departments to accommodate an individual student's background, goals, and abilities.

The Division of Business' program objectives are:

1. To furnish pre-professional and career-oriented training to equip students with the knowledge and skills necessary to pursue further education or enhance their employment opportunities.
2. To provide opportunities for individuals to upgrade and update occupational and avocational skills.
3. To operate an educational system which uses and coordinates its activities with community resources and which is flexible enough to permit student re-entry.
4. To provide guidance and instruction needed to develop self-direction, expand occupational awareness, and encourage appropriate attitudes about the personal and social significance of work.

Education and training are available in the following occupational/career fields:

Accounting	Legal Assistant
Administrative Assistant	Legal Secretary
Banking	Management
Cashiering	Marketing and Sales
Computer Operations	Medical Secretary
Computer Programming	Medical Transcriptionist
Corrections	Property Assessment
Court Reporting	Real Estate
Food Specialist	Registered Chef
General Clerical	Secretary
Hotel-Motel Management	Security and Public Safety
Insurance	Stenographer
Key Punch Operator	Systems Analyst
Labor Relations/Personnel	Transportation
Law Enforcement	Word Processing

### Transfer Programs

Transfer programs are available to students who expect to transfer to a four-year institution. Students are advised to consult the current catalog of that institution and to follow its recommendations as to courses. Specific transfer credit information may be obtained from Lansing Community College counselors.

### Community Service Programs

An important function of the Business Division is service to local business, industry, and government. The Business Division provides a variety of community service courses and seminars designed to retrain or upgrade skills of area businessmen and employees. The Division stands ready to develop tailored courses or programs for specific requirements. Such courses or programs may consist of single or multiple sessions, depending upon need.

### Cooperative Internship

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

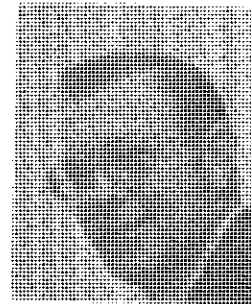
Placement for this training is made through the Internship Coordinator who makes special arrangements of each student based upon the student's interests and aptitudes. The student will receive course credit (three hours per term) and a wage for time spent at work. (Student may average fifteen or more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

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

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

### Department of Accounting and Office Programs

Chairperson: Dr. Ronald K. Edwards



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

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

- I. To maintain a personalized process of instruction that emphasizes learning and helps to develop integrity, loyalty, and dependability in the students' lives and in future job responsibilities.
- II. To keep subject matter current and practical in relation to present business practices so that new learning can be applied to an actual job situation with a minimum of substitution or deviation from classroom activities.
- III. To use the expertise, facilities, and realism of a wide variety of community resources in preparing students for the various levels and types of careers in business.
- IV. To provide academic advising to all students, and to assure students the guidance and counseling necessary to develop a self-awareness and self-direction in order to expand occupational aspirations and acquire appropriate attitudes about the personal and social significance of work.
- V. To assure students of services for placing them in the next stage of development whether it be employment or further education. To provide appropriate courses of immediate value for persons re-entering the educational system from the world of work.

General curricular guides for each program offered by the Department are available in the counseling offices and the Departmental Chairperson's office; however, guides are frequently modified by the Department to accommodate an individual student's background, goals, and abilities. The student is encouraged to discuss unique situations with an academic advisor within the Department of Accounting and Office Programs.

**Audio-Visual-Tutorial Instruction**

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

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

**Accounting****Certificate Program Curriculum Code: 405 Minimum 45 credits**

The Accounting Certificate curriculum is designed for students desiring to rapidly acquire those skills for entrance into paraprofessional levels of accounting employment such as account clerks, cashiers, and hookkeepers.

**Associate Degree Program Curriculum Code: 410 Minimum 90 credits**

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

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

**Pre-Accounting Curriculum Code: 412 Minimum 90 credits**

The Pre-Accounting curriculum is designed for students preparing to transfer to four-year institutions. Since the requirements vary for different institutions, students should check with the Department for specific course requirements.

**Court and Conference Reporting****Associate Degree Program Curriculum Code: 415 Minimum 90 credits**

The two-year Court and Conference Reporting curriculum, which includes the summer between the two regular school years, is an Associate Degree Program to prepare students for the many interesting positions open to shorthand reporters. Some of the occupations for which graduates may qualify are court reporters, conference reporters, hearing reporters, legislative reporters and general free-lance reporters. The program teaches machine shorthand and helps develop the skill necessary for verbatim reporting. In addition, it teaches the legal, medical, and other technical vocabularies and essential information for success on the job. Program begins each fall and spring term.

**Insurance****Associate Degree Program Curriculum Code: 413 Minimum 90 credits**

The two-year Associate Degree Program in Insurance is designed to prepare individuals for careers within the insurance industry in both field operations and home office activities. Individual course electives beyond the core requirements should be selected with employment goals such as sales, underwriting, or claims adjusting in mind. A transfer curriculum for those students seeking a Baccalaureate Degree is also available.

**Chartered Life Underwriter**

The Chartered Life Underwriter (C.L.U.) courses are conducted under the sponsorship of the Central Michigan Chapter of Chartered Life Underwriters, and the American College of Life Underwriters. Upon completion of the courses, the agent/student is eligible to take the comprehensive C.L.U. examination. When the examination is successfully completed, a Certificate is awarded with the professional designation of Chartered Life Underwriter.

**General Clerical****Certificate Program Curriculum Code: 420 Minimum 45 credits**

The one-year General Clerical Program is designed for those students who wish to rapidly develop or increase the basic skills necessary for entrance jobs in the modern office. Further courses may be elected on a full-time basis, or part-time during evenings, which will lead to the Associate Degree.

**Administrative Assistant****Associate Degree Program Curriculum Code: 425 Minimum 90 credits**

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



**Outdoor Education (OER)**

Courses in the Outdoor Education program are designed to provide a background of outdoor information and skills for teachers, camp or youth group leaders, or others interested in outdoor living.

**101 Living with Nature****Two credits**

This course is designed specifically to provide a basic understanding of the ecology of the wilderness. Man's relationship to wilderness is examined through history, literature and the writing of naturalists. 2 (2-0)

**102 Wilderness Survival****Two credits**

Designed to provide survival skills to those responsible for the safety and welfare of themselves and others. Topics include shelter, fire, water, signalling, and orienteering. 2 (2-0)

**103 Wild Food Plants****Two credits**

This course presents approximately 100 species of the common edible wild plants of Michigan and the Northeast United States. Topics include a discussion of economically important wild herbs and food plants, use of wild plants in survival situations, and toxic plant recognition. Recommended for youth group leaders, teachers, backpackers, and sportsmen. 2 (2-0)

**104 Field Naturalist****Two credits**

Designed to provide a broad introductory experience in the identification of Michigan flora and fauna. Includes a study of the habits and habitats of local birds, mammals, reptiles, and amphibians. The wild, edible plants in the local area are also studied. 2 (2-0)

**210 Foundations of Conservation (formerly FC 210)****Four credits**

Study of natural resources and the principles of utilization through management and conservation. Topics include history of conservation, ecology, soils, minerals, water, forests, wild life, human populations and man's effect on the natural resources of the earth. The laboratory consists of field investigations and guidance for conservation majors or others according to specific interest or declared vocations. 4 (2-4)

**Computer Science (CMP)****210 Computers, BASIC and Science****Three credits**

Students learn to program and to operate the IBM 5100 and the Hewlett Packard 9830 portable machines. The computer language employed in the programming is BASIC, a widely used language similar to FORTRAN. A broad range of computer applications, is discussed, with particular emphasis on problem-solving in science. 3 (3-0)

**Physics (PHY)****191 Physics for the Life Sciences****Five credits**

A one-term course in general physics designed to fulfill the physics requirement for certain Life Science and Health Career programs such as Respiratory Therapy and X-Ray Technology. Topics include force, motion, and energy; conservation theorems, fluid pressure and flow; wave phenomena; atomic structure and radioactive decay. This course may not be taken in place of a full year of physics; nor may it satisfy any other general physics requirement unless prior approval is obtained. Prerequisites: Intermediate algebra or departmental approval. 5 (5-0)

**201 Physics (Mechanics and Heat)****Four credit**

First of a series of three courses designed to give the student an understanding of the fundamental principles of physics. Considers the principles of mechanics (the laws of motion and equilibrium and their relation to work, energy and power), as they are applied to solids and fluids. Also includes the principles of heat and thermodynamics and their relationship to the operation of engines. Prerequisite: Trigonometry or approval of department. 4 (4-2)

**202 Physics (Electricity, Magnetism and Wave Motion)****Four credits**

Designed to explain the electrical nature of matter and to investigate its electrostatic and electromagnetic properties. Considers also the properties of waves and their application to sound. Engineering applications are emphasized. Prerequisite: PHY 201 or approval of department. 4 (4-2)

**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: PHY 202 or approval of department. 4 (4-2)

**209 Foundations of Physical Science (formerly FPS 211)****Four credits**

Primarily for students seeking an elementary education certificate. Surveys the theoretical as well as the practical aspects of physics, inorganic and organic chemistry. Methodology of teaching physical science will be included. Prerequisite: NS 121 or equivalent. 4 (2-4)

**211 Physics (Mechanics and Heat)****Four credits**

Designed to teach the static and dynamic behavior of solids and fluids, using calculus to derive relationships. The first of a series of three courses designed for science and engineering majors. Prerequisite: Calculus I or its equivalent, or approval of department. 4 (4-2)

**212 Physics (Electricity, Magnetism, and Sound)****Four credits**

Designed to teach the basic principles of electricity and sound. Similar to PHY 202 but uses calculus extensively. Prerequisite: PHY 211, or approval of department. 4 (4-2)

**Legal Assistant**

**Associate Degree Program Curriculum Code: 442 Minimum 90 credits**

A Legal Assistant is a paraprofessional who will work for a lawyer or law firm performing many duties from office management to preparing case materials for trial. The majority of the graduates will seek employment with legal firms. Opportunities will also be available in banks, real estate offices, welfare offices, credit and collection insurance companies, title insurance companies, abstract offices, and government agencies. The program provides needed background in legal procedures and also allows for ample elective choices to attain individual goals.

**Legal Secretary**

**Associate Degree Program Curriculum Code: 440 Minimum 90 credits**

The Legal Secretary curriculum provides the student with the skills and knowledge necessary to manage the office of an attorney. It develops an understanding of the specialized vocabulary and terminology, in addition to providing the normal secretarial skills. Varied teaching techniques are used including the traditional classroom, one-to-one tutoring, and Audio-Visual-Tutorial courses.

**Medical Secretary**

**Associate Degree Program Curriculum Code: 445 Minimum 90 credits**

The Medical Secretary curriculum provides basic secretarial skills and the technical knowledge and understanding necessary for competence and self-confidence in this specialized field. Graduates of this program may find employment in hospitals, medical offices, clinics, extended care facilities, or other health related institutions.

**Medical Transcriptionist**

**Certificate Program Curriculum Code: 423 Minimum 45 credits**

This program combines medical terminology knowledge with typing skills and office procedures to prepare the student for a typist's position in a medical office, hospital, clinic, extended care facility, or other health related institution.

**Secretarial Science**

**Associate Degree Program Curriculum Code: 435 Minimum 90 credits**

The two-year Secretarial Science Program will prepare the student for placement in the many interesting and challenging positions in business, from senior stenographer to executive secretary. The program provides the skills necessary for entrance-level jobs, and sufficient background in related areas to enable the serious graduate to advance rapidly. Varied teaching techniques are used including the regular classroom, one-to-one tutoring sessions, and Audio-Visual-Tutorial courses.

**Stenographic**

**Certificate Program Curriculum Code: 430 Minimum 45 credits**

This is an accelerated program for qualified students. It includes instruction and practice in all primary skills and abilities necessary for a wide variety of office occupations. A Certificate is awarded for satisfactory completion of the courses. Further study is possible, full or part-time, for earning an Associate Degree. Varied teaching techniques are used including the regular classroom, one-to-one tutoring sessions, and Audio-Visual-Tutorial courses.

**Word Processor (Correspondence Secretary)**

**Certificate Program Curriculum Code: 422 Minimum 45 credits**

The one-year Word Processor (Correspondence Secretary) Program is designed for those students who wish to rapidly develop employable skill levels in typewriting, machine transcription, and automatic typewriting. Varied teaching techniques are used including the regular classroom, one-to-one tutoring sessions, and Audio-Visual-Tutorial courses.

**COURSE DESCRIPTIONS****Accounting (ACC)**

**101 Accounting Information for Management Four credits**

For general business and secretarial students who do not plan to transfer to a four-year institution. Emphasis is on accounting terminology, accounting information, and accounting reports for management. Topics covered include financial statement analysis, budgeting, and decision making. 4 (4-0)

**140 Individual Income Tax Four credits**

A basic course designed to give the skills and knowledge necessary to complete and file all returns required of individual taxpayers. Course covers the basic concepts and terminology required for working with the Federal, State, and Local tax regulations pertaining to individuals. Includes practical experience in filling out all common individual tax forms and schedules. 4 (4-0)

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

To explain and apply basic principles of accounting by means of balance sheet and income statement approach. Topics include basic analysis, perpetual and periodic merchandise accounting, alternative adjustments to accounts, business documents and data flow and negotiable documents. Includes the concept for the use of data processing equipment in performing accounting functions. 4 (0-8)

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

Continuation of Accounting 210. Includes payroll and tax accounting, controlling accounts and subsidiary ledgers, cash records and forecasting, the voucher system, partnerships, corporations, and bonds. Show how the accounting services contribute to the recognition and solution of management problems. Prerequisite: ACC 210. 4 (0-8)

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

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

**220 Intermediate Accounting I****Four credits**

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

**221 Intermediate Accounting II****Four credits**

Reviews investments in stocks (types of dividends, rights of various stockholders, exchange of stocks, and investments and tax accounting); investments in bonds (kinds of bonds, amortization, redemption, conversion, U.S. bonds, and long-term notes and mortgages); investments in funds and miscellaneous items; plant equipment (acquisition, use, retirement, depreciation, and depletion, and re-valuation); intangible assets (kinds and goodwill); long-term liabilities. Prerequisite: ACC 220. 4 (4-0)

**222 Intermediate Accounting III****Four credits**

A study of stockholders' equity from paid-in capital (capital upon corporate formation and subsequent changes in paid-in capital); stockholders' equity from retained earnings (source of retained earnings and types of dividends); statements from incomplete records (single-entry systems); errors and correcting entries, financial statement analysis (use of comparative data and special ratios and measurement); funds-flow and cash-flow reporting; price-level adjustments in financial reporting. Prerequisite: ACC 221. 4 (4-0)

**230 Cost Accounting I****Four credits**

Explains the cost accountant's role in the organization. Stresses the objectives of planning and controlling routine operations, decision making, inventory valuation, and income determination. Topics covered include defining costs, cost/volume/profit analysis, job order costing, process costing, standard costing and variance analysis, budgeting, and the use of accounting information for motivation and control. Prerequisite: ACC 212. 4 (4-0)

**231 Cost Accounting II****Four credits**

Emphasizes long-range planning, goal setting, and non-routine decision making. Topics include cost allocation, capital budgeting, inventory planning, internal control, decentralization and transfer pricing for performance measurement and motivation, decision models, and determination of sales and production mix. Prerequisite: ACC 230. 4 (4-0)

**240 Federal Taxes I****Four credits**

Shows all aspects of Federal Income Taxes pertaining to individuals. Includes gross income, adjustments from gross income, deductions, and losses. Also includes basis of assets, capital gains and losses, income averaging, retirement income credit, non-taxable exchanges, sale or exchange of residence, and other special topics. Prerequisite: ACC 212. 4 (4-0)

**241 Federal Taxes II****Four credits**

An in-depth study of Federal tax laws relating to business and professional income, farm income, self-employment taxes, partnership, subchapter S and corporate returns. Special topics include: employment taxes, pensions, profit sharing, stock options, professional responsibility of the tax preparer, and audit and appeal procedures. Prerequisite: ACC 240. 4 (4-0)

**245 Michigan and Local Taxes****Four credits**

Covers State of Michigan taxes relating to individuals and employers. Special emphasis on the Single Business Tax. City taxes and local property taxes will be reviewed. 4 (4-0)

**250 Advanced Accounting****Four credits**

Areas of emphasis include installment and consignment sales, business combinations as a "pooling of interests" vs a purchase, and preparation of consolidated statements. Accounting practice for fiduciary relationships and separate sections on the implication of present value and compound interest are also included. Prerequisite: ACC 222. 4 (4-0)

**251 Accounting Seminar****One credit**

8-14 Classroom hours on special topics of current interest offered by the department. 1 (1-0)

**252 Accounting Seminar****Two credits**

15-24 classroom hours on special topics of current interest offered by the department. 2 (2-0)

**253 Accounting Seminar****Three credits**

25-34 classroom hours on special topics of current interest offered by the department. 3 (3-0)

**266 Special Projects/Accounting****One credit**

Available only with departmental approval for special projects in accounting requiring 20 to 30 hours of study and which are not available through regular courses.

267—2 credits requiring 40 to 50 hours of study

268—3 credits requiring 60 or more hours of study

**280 Governmental and Institutional Accounting I** **Four credits**  
Covers principles of fund accounting, provides a discussion of the characteristics of the government function as distinguished from commerce and industry, and analyzes the differences in records, accounting and reports required because of these differences. The essentials of fund accounting, appropriations, allotments, allocations, and budgetary controls are covered. Prerequisite: ACC 212 or departmental approval. 4 (4-0)

**281 Governmental and Institutional Accounting II** **Four credits**  
A continuation of Governmental Accounting I offering detailed accounting procedures and accepted practices in governmental accounting including institutional accounting for units such as hospitals and schools. Instruction is also provided in summarization and reports of activities and performance. Prerequisite: ACC 280. 4 (4-0)

**282 Governmental Budgeting** **Four credits**  
A continuation of Governmental Accounting II with emphasis on recent changes and current practices in different government units. Considerable instruction and work is devoted to program budgeting and performance measurement. Prerequisite: ACC 212 or departmental approval. 4 (4-0)

**290 Auditing** **Four credits**  
Specific topics covered are types of audits, need for auditing, legal liability of auditors, auditing of E.D.P. systems, statistical sampling, audit working papers, financial statements and the attest function in audit reports. The course prepares students for auditing positions and meets express requirements to sit for the C.P.A. examination. Prerequisite: ACC 222 or departmental approval. 4 (4-0)

#### C.P.A. Review Courses

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

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

<b>295 Theory of Accounts Review</b>	<b>Two credits</b>
<b>296 Commercial Law Review</b>	<b>Two credits</b>
<b>297 Auditing Review</b>	<b>Two credits</b>
<b>298 Accounting Practice Review</b>	<b>Four credits</b>

#### Business (BUS)

**100 Typewriting (AVT)** **Three credits**  
A beginning course in typewriting designed for students with no previous typing experience. Primary emphasis is placed on mastery of the keyboard and building speed and accuracy on straight copy. Personal letters, business letters, postcards, centering, themes, and envelopes are included. 3 (0-6)

**101 Typewriting II (AVT)** **Three credits**  
Intermediate typewriting serves as a refresher typewriting course and as a continuation of Typing 100. Special emphasis is placed on improving speed, accuracy and manipulation. The course covers tabulation, carbons, manuscripts, footnotes, business letters, and special communication forms. Prerequisite: BUS 100 or prior typing course. 3 (0-6)

**102 Typewriting III (AVT)** **Three credits**  
A continuation of Business 101, designed to improve judgment, skill and accuracy on straight copy as well as tabulated reports, business forms, programs, speeches, financial statements, job applications, special business letter forms, duplication masters, and news releases. Prerequisite: BUS 101 or departmental approval. 3 (0-6)



**103 Typing IV (AVT)****Three credits**

A continuation of Business 102 designed to increase typing speed along with skill and accuracy on governmental, medical, and technical reports, accounting reports and forms, legal documents, and the IBM Executive Typewriter. Prerequisite: BUS 102 or departmental approval. 3 (0-6)

**104 Beginning Shorthand I****Four credits**

Designed to teach the basic principles of Gregg shorthand and build an elementary business vocabulary. Emphasis on theory and brief forms. Dictation speed performance levels 60-80 words a minute (2 min.) 4 (4-0)

**105 Intermediate Shorthand II****Four credits**

Completes theory begun in Business 104. Develops speed and accuracy in reading from plates and individual notes. Emphasis on dictation skills. Dictation speed performance levels 70-90 words a minute (3 min.) Prerequisite: BUS 104 or departmental approval. 4 (4-0)

**106 Advanced Shorthand III****Four credits**

A continuation of Business 105. Emphasis on higher speed in business dictation. Dictation speed performance levels 80-100 words a minute (3 min.) Prerequisite: BUS 105 and BUS 095. 4 (4-0)

**107 Business Machines I (AVT)****One, Two, or Three credits**

Designed to teach the operations of the adding, the printing, the rotary, and/or electronic calculating machines. Includes instruction in the use of the 10 key adding machine, printing calculator, rotary calculator, and/or the electronic display and electronic printing calculator. Operations of addition, subtraction, multiplication and division, plus the various calculations of business-type problems dealing in percentages, interest, etc. are taught. Prerequisite: BUS 117. 3 (0-6)

**108 Business Machines II (AVT)****Three credits**

A continuation of Business 107. In addition, instruction is provided on the bookkeeping machine. Prerequisite: BUS 107. 3 (0-6)

**109 Secretarial Machines (AVT)****Three credits**

Operation and manipulation of the stencil and fluid duplicating processes. Includes study of machine transcription and filing procedure. Prerequisite: BUS 102. 2 (0-4)

**110 Word Processing I****Three credits**

To introduce the student to the principles and purposes of word processing, the language of word processing, the equipment used in word processing, and the implementation of word processing in the modern business office. Also explores career paths in word processing. 3 (3-0)

**111 Word Processing II****Four credits**

To provide transcription practice for production of mailable transcripts on a transcribing machine while developing proficiency in spelling, punctuation, grammar, and business vocabulary. 4 (0-8)

**112 Word Processing III****Four credits**

To provide students with the knowledge and skills necessary to operate memory and automatic magnetic card typewriters. 4 (0-8)

**114 Landmark I****Four credits**

An ABC shorthand system for taking notes or dictation. Designed to introduce writing principles and build an elementary vocabulary. 4 (4-0)

**115 Landmark II****Four credits**

Reviews the theory from BUS 114. Develops speed and accuracy in reading individual notes. Develops skill through timed dictation and transcription. Prerequisite: BUS 114. 4 (4-0)

**117 Business Mathematics****Four credits**

Designed to develop skill and accuracy in mathematics. Includes study of decimals, fractions, aliquot parts, percentages, discounts, inventory, payroll, interest. 4 (4-0)

**118 Introduction to Business****Four credits**

A survey of business activities, covering principles, problems and practices related to our economic framework. Includes topics such as organization, production, marketing, personnel administration, finance and economics. 4 (4-0)

**119 Office Methods****Three credits**

Offered primarily for the one-year office program. Emphasizes clerical office procedures and responsibilities. Includes the study and evaluation of effective personality traits. Prerequisite: BUS 101. 3 (3-0)

**120 Cashier-Checker Training (AVT)****Three credits**

Designed to teach the efficient use of the cash register and various topics as they relate to the checkout station. Includes a minimum of practice on three different registers. 3 (0-6)

**130 Spelling****One credit**

To improve the spelling capabilities of students through concentration on correct word pronunciation, word roots, prefixes, suffixes, and syllabication for spelling aid. Includes instruction in spelling rules and mnemonic devices, along with drill on the most commonly misspelled words. 1 (1-0)

**191 Independent Study-Management****One credit****192 Independent Study-Management****Two credits****193 Independent Study-Management****Three credits****194 Independent Study-Management****Four credits**

Special research projects and individual readings, offering the opportunity to apply past or present aspects of personal and professional experience to the student's academic program providing they are directly related to the degree being pursued. Minimum of ten hours work per credit required. Prerequisite: Departmental approval. 1 (0-1), 2 (0-2), 3 (0-3), 4 (0-4)

**200 Advanced Shorthand IV** **Four credits**

A continuation of BUS 106, emphasizing faster speed in business dictation. Designed for students who can take 100 words a minute from previous courses taken within the past five years. Prerequisite: BUS 106. 4 (4-0)

**201 Transcription** **Four credits**

Production of the mailable transcript from student's shorthand notes taken at speeds exceeding 80 words a minute. Prerequisites: BUS 095, BUS 102, and dictation speeds from 80-100 wpm.

**202 Shorthand Speed Building** **Four credits**

Continuation of Business 201. Emphasis on business vocabulary, speed writing, and related topics of grammar, punctuation, spelling and transcription. Dictation speed performance levels 120-140 words a minute. Prerequisite: 100 words a minute skill level. 4 (4-0)

**203 Secretarial Training** **Three credits**

Instruction in office procedures and responsibilities. Emphasizes the importance of pleasant, sincere personality and effective secretarial traits. Prerequisites: BUS 103 and BUS 200. 3 (0-6)

**204 Business Correspondence** **Three credits**

Writing principles are taught by illustration and application. Students learn techniques for writing business letters, memos and short reports. Prerequisite: BUS 095. 3 (3-0)

**205 Legal Shorthand (AVT)** **Two credits**

Designed to develop skill in writing and transcribing shorthand notes containing words and phrases commonly recurring in the spoken and written language of law. Background in law-office procedures, legal forms, and law reference books is also presented. Prerequisite: BUS 200. 2 (0-4)

**207 Medical Terminology** **Two credits**

Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine. 2 (0-4)

**208 Business Theory for Professional Secretaries** **Four credits**

This 28-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 operation and management of business, and who is interested in the study of human relations.

The program offers a special opportunity to the secretary who plans to prepare for the national CPS® examination. Classes are organized to review subject matter in four sections of the test.

Course content:

**1. Secretarial Procedures**

Includes office procedures, basic concepts of office management and records management, and a survey of data processing.

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

**209 Estate Planning** **Two credits**

Topics include will, trusts, gift and estate taxes, life insurance in estate planning, and investments for estate building. 2 (2-0)

**215 Records Management I** **Three credits**

Secretarial and business management students study increasing importance of records management; that is, managing the creation, protection, storage, and disposition of business records. Included are clear-cut rules for alphabetic indexing, the foundation of other storage methods, principles for selection of proper records equipment, and procedures for the operation and control of filing methods and systems. 3 (3-0)

**216 Records Management II** **Three credits**

A continuation of BUS 215. Guidelines for the establishment, implementation, and maintenance of records control programs in all types of organizations. Prerequisite: BUS 215 or departmental approval. 3 (3-0)

**217 Micro-Records** **Two credits**

An introduction to all microforms—microfilm, roll film, aperture card, cartridge cassette, and micro-opaques. Also covers the benefits of microfilm, the considerations for decision making in "should we microfilm?", retrieval methods, and privacy laws. 2 (2-0)

**220 Office Management I** **Three credits**

Deals with the principles of office management. Includes study of office organization and layout; work flow, procedures, standards, personnel and supervision procedures; equipment, centralized services, and automation trends. 3 (3-0)

**221 Office Management II** **Three credits**

Deals with automation and trends in the problem areas of social, economic organization, management, feasibility, and automated service centers. 3 (3-0)

**222 Small Business Management** **Three credits**

A complete coverage of small business operation, including business and managerial functions. Emphasis on basic principles of management for various kinds of small business concerns. Includes environment of small business; financial, marketing, and production management of the "going concern." Legal and governmental relationships are covered, with actual case studies relevant to those involved in the smaller businesses. 3 (3-0)

**231 Office Seminar****One credit**

8-14 classroom hours on special topics of current interest offered by the department. 1 (1-0)

**232 Office Seminar****Two credits**

15-24 classroom hours on special topics of current interest offered by the department. 2 (2-0)

**233 Office Seminar****Three credits**

25-34 classroom hours on special topics of current interest offered by the department. 3 (3-0)

**236 Communication Techniques in Business****Three credits**

A study of special communication areas including public speaking, memo writing, information processing, message construction, perception, persuasion, effects of media, interpersonal and small group communication. Emphasis will be placed on applying communication methods to actual business situations. 3 (3-0)

**240, 241, 242, and 243 Office Internship—Seminar (Each) Three credits**

After successful completion of basic courses, usually following the freshman year, students may elect internship. This course allows the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program, students must be qualified to receive approval from their department and enroll with the coordinator. Their occupational interests are considered with their background or related classes to determine employment arrangements. The flexibility of developing individual programs for interested students in any related occupational opening is accomplished in agreement with the training station supervisors and college coordinator. 3 (3-0)

**251 Basic Investment Essentials****Three credits**

Reviews fundamental principles of investing and its role in our economy. Emphasis will be upon developing terminology, types of investments (common and preferred stocks, bonds, mutual funds, and security analysis). An in-depth study of the stock exchanges and the external forces that affect them. Analysis of personal objectives and portfolio management will be discussed and put into practice. 3 (3-0)

**252 Advanced Investment Essentials****Three credits**

Shows techniques of options buying, analysis of the commodities markets, fundamentals of speculative trading, uses of margin transactions to increase buying power. Prerequisite: BUS 251 or departmental approval. 3 (3-0)

**253 NASD Qualification Examination****Three credits**

Designed to help sponsored persons qualify for a sales license with the National Association of Security Dealers and the State of Michigan for Mutual Funds and Variable Annuity Registered Representative. 3 (3-0)

**258, 259 Transportation Law I and II****(Each) Three credits**

The two terms of Transportation Law will include a study of the Interstate Commerce Act, amendatory legislation, leading decisions of the Interstate Commerce Commission (I.C.C.) and courts, I.C.C. rules of practice, drafting of an I.C.C. complaint, canons of ethics applicable in I.C.C. practice, remedial provisions of the I.C.C. Act. Prepares student for the I.C.C. Practitioner's License. 3 (3-0)

**260-265 Traffic and Transportation Management** (Each) **Three credits**  
Two-year, six-term program resulting in a Certificate issued by the College. Theoretical, historical, and academic aspects of traffic management are presented with analysis of practical problems and specific cases. 3 (3-0)

**266 Special Projects/Business** **One credit**  
Available only with departmental approval for special projects in business requiring 20 to 30 hours of study and which are not available through regular courses.

**267 Special Projects/Business** **Two credits**  
2 credits requiring 40 to 50 hours of study

**268 Special Projects/Business** **Three credits**  
3 credits requiring 60 or more hours of study

### Court and Conference Reporting (CCR)

Court and Conference Reporting students have an option of completing the first year Machine Shorthand requirement by taking either four terms during the day for six credits each (CCR 101-104), or six terms at night for four credits each (CCR 111-116). Students who successfully complete the first year night sequence must enroll for day classes in the second year. Second year CCR classes are not offered at night. Students must receive at least a grade of "C" in any of the 100 level CCR classes in order to continue on with the next course.

### First Year CCR-Day Sequence

**101 Machine Shorthand I** **Six credits**  
Basic Touch Shorthand Computer-Compatible Theory taught on the Stenograph machine, developing speeds up to 80 wpm. 6 (8-0)

**102 Machine Shorthand II** **Six credits**  
Additional Touch Shorthand Theory and speed building up to 100 wpm. Prerequisite: CCR 101 or departmental approval. 6 (8-0)

**103 Machine Shorthand III** **Six credits**  
Intermediate speed building with skills up to 120 wpm. Introduction to jury charge and legal abbreviations. Prerequisite: CCR 102 or CCR 113 or departmental approval. 6 (8-0)

**104 Machine Shorthand IV** **Six credits**  
Advanced speed building up to 140 wpm. Medical terminology and dictation. Prerequisite: CCR 103 or departmental approval. 6 (8-0)

### First Year CCR—Night Sequence

**111 Machine Shorthand I-N** **Four credits**  
Basic Touch Shorthand Computer-Compatible Theory taught on the Stenograph Machine, developing speeds up to 70 wpm. 4 (4-0)

**112 Machine Shorthand II-N** **Four credits**  
Additional Touch Shorthand theory and speed building up to 90 wpm. Prerequisite: CCR 111 or departmental approval. 4 (4-0)

**113 Machine Shorthand III-N** **Four credits**  
Touch Shorthand theory and speed building up to 100 wpm. Prerequisite CCR 112 or departmental approval. 4 (4-0)

**114 Machine Shorthand IV-N** **Four credits**  
Intermediate speed building with skills up to 110 wpm. Introduction to jury charge and legal abbreviations. Prerequisite: CCR 113 or departmental approval. 4 (4-0)

**115 Machine Shorthand V-N** **Four credits**  
Intermediate speed building with skills up to 130 wpm. Additional jury charge dictation. Prerequisite: CCR 114 or departmental approval. 4 (4-0)

**116 Machine Shorthand VI-N** **Four credits**  
Advanced speed building up to 140 wpm. Medical terminology and dictation. Prerequisite: CCR 115 or departmental approval. 4 (4-0)

### Second Year CCR Classes

**211 Q & A I** **Four credits**  
Two-voice testimony dictation and speed building; 120-160 wpm. Prerequisite: CCR 104 or CCR 116 or departmental approval. 4 (4-0)

**212 Q & A II** **Four credits**  
Two-voice testimony dictation and speed building; 160-180 wpm. Prerequisite: CCR 211 or departmental approval. 4 (4-0)

**213 Q & A III** **Four credits**  
Two-voice testimony dictation and speed building; 190-200 wpm. Introduction to four-voice testimony. Prerequisite: CCR 212 or departmental approval. 4 (4-0)

**214 Q & A IV** **Four credits**  
Two-voice testimony dictation and speed building; 210-230 wpm. Expert witness testimony dictation. Prerequisite: CCR 213 or departmental approval. 4 (4-0)

**221 Jury Charge I** **Three credits**  
Jury Charge dictation and speed building; 130-140 wpm. Prerequisite: CCR 104 or CCR 116 or departmental approval. 3 (3-0)

**222 Jury Charge II** **Three credits**  
Jury Charge dictation and speed building; 150-160 wpm. Land Descriptions, Informations and Statutes dictation. Prerequisite: CCE 221 or departmental approval. 3 (3-0)

**223 Jury Charge III** **Three credits**  
Jury Charge dictation and speed building; 170-180 wpm. Argument dictation. Prerequisite: CCR 222 or departmental approval. 3 (3-0)

**224 Jury Charge IV** **Three credits**  
Jury Charge dictation and speed building; 190-200 wpm. Legal Opinion dictation. Prerequisite: CCR 223 or departmental approval. 3 (3-0)



**231 Literary I** **Three credits**  
Literary dictation and speed building; 100-120 wpm. Prerequisite: CCR 104 or CCR 116 or departmental approval. 3 (3-0)

**232 Literary II** **Three credits**  
Literary dictation and speed building; 150-160 wpm. Specialized terminology dictation. Prerequisite: CCR 231 or departmental approval. 3 (3-0)

**233 Literary III** **Three credits**  
Literary dictation and speed building; 150-160 wpm. Specialized terminology dictation. Prerequisite: CCR 232 or departmental approval. 3 (3-0)

**234 Literary IV** **Three credits**  
Literary dictation and speed building; 170-180 wpm. Specialized terminology dictation. Prerequisite: CCR 233 or departmental approval. 3 (3-0)

*To receive credit for the second-year courses, the student must attain the top speed listed. If student does not reach the required speed, re-enrollment will be necessary until the course is successfully completed.*

**240 Court Practice** **Four credits**  
Student will spend 20 hours per week recording courtroom trials, conferences, hearings, or depositions with an experienced shorthand reporter and transcribing notes into proper form. Prerequisite: Q & A speed, 180 wpm. 4 (0-4)

#### Data Processing (DP)

**101 Key Punch Training** **Three credits**  
Provides speed and accuracy on a training tandem—a simulator for the numerical keys on a key punch machine. A programmed instruction guide is used to present facts about the key punch machine and data processing in general. The course provides actual practice on the key punch machine, using practical jobs, including the preparation of program cards and verification of the work on the card verifier. The course is designed to provide the necessary knowledge and needed skills for actual performance on a job. A Certificate is presented at completion of course. The key punch course is presented on a lab basis with open enrollment and individual assistance at all times. The student may establish individual hours and pace for learning. Previous typewriting is required (approximately 40 w.p.m.) 3 (0-6)

**102 Key Punch Training** **One credit**  
A follow-up of DP 001. It includes the Data Card Recorder 129, which punches, verifies and corrects on the same machine.

There are four jobs to punch and verify in this one-credit course, offered on a pass/fail basis in a laboratory situation with individual assistance at all times. The student may establish individual hours and pace for learning. A Certificate is presented at completion of the course. Prerequisite: DP 001. 1 (0-2)

**103 Data Recorder Training** **Two credits**  
Programmed instruction to teach the operation of the "3742 dual data station" via keyboard to diskette. Prerequisite: DP 002. 2 (0-4)

#### Economics (EC)

**101 Applied Economics** **Three credits**  
An introductory survey of business economics. Course work focuses attention on the major economic problems and issues within our American economy. Provides an overview and some tools of economic analysis to aid in logical interpretation. Major subject areas relate to an overall look at our economic system; government policy; prices and their application; money; income, and economic growth. 3 (3-0)

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

**201 Principles of Economics I** **Four credits**  
To develop objective consideration of economic issues; specifically, the knowledge and understanding of how resources are allocated by prices. Consists of price theory; consumer demand; cost structure of firms; aiding the supply of goods to the market; factor pricing, and income distribution. Prerequisite: Sophomore standing or departmental approval. 4 (4-0)

**202 Principles of Economics II** **Four credits**  
Deals with the theory of national income, employment, and prices, and with government fiscal and monetary policies designed to influence aggregate economic activity. Also includes the relationship of the domestic economy to international economic activity. Prerequisite: EC 201. 4 (4-0)

**203 Economic/Business History** **Three credits**  
A survey of American economic and business history, change, and growth since the Civil War. Provides an overview of business organization, the role of government, technological change, American industrial development, transportation, labor unions, and capitalization patterns. 3 (3-0)

**266 Special Projects/Economics** **One credit**  
20 to 30 hours of study in special economics projects, available only with departmental approval. 1 (0-1)

**267 Special Projects/Economics** **Two credits**  
2 credits requiring 40 to 50 hours of study. 2 (0-2)

**268 Special Projects/Economics** **Three credits**  
3 credits requiring 60 or more hours of study. 3 (0-3)

**Insurance (INS)**

- 208 Certified Insurance Technician** **Four credits**  
A 30-week program designed to train technicians for the insurance industry. The course provides an opportunity to gain knowledge or upgrade existing skills in insurance. A Certified Insurance Technician Examination will be given at the end of the program. Class is organized to cover insurance theory, financial procedures, office procedures, and communications. Students requiring the complete program should register both fall and spring terms.
- 251 Insurance Seminar** **One credit**  
8-14 classroom hours on special topics of current interest offered by the department. 1 (1-0)
- 252 Insurance Seminar** **Two credits**  
15-24 classroom hours on special topics of current interest offered by the department. 2 (2-0)
- 253 Insurance Seminar** **Three credits**  
25-34 classroom hours on special topics of current interest offered by the department. 3 (3-0)
- 265 Principles of Risk and Insurance** **Four credits**  
This course presents the fundamental principles involved within the business environment for handling risk, with emphasis on those indicating insurance solutions. 4 (4-0)
- 266 Life Insurance** **Four credits**  
This course is designed primarily for insurance majors or others wishing an in-depth study of life, health estate planning and annuity contracts in detail, including preparation for State licensing examination. 4 (4-0)
- 267 Casualty Insurance** **Four credits**  
A course designed principally for insurance majors, but including all those desiring an in-depth study of the major property and liability contracts, including preparation for State licensing examinations. 4 (4-0)
- 268 Agency Operations** **Four credits**  
A course designed for insurance majors covering all aspects of the setup and operation of an insurance agency. Treats the agency as an independent business. 4 (4-0)
- 269 Portfolio Analysis** **Four credits**  
A stock market course geared to the life cycle approach of portfolio management emphasizing individual stock analytic techniques hut including preparation for NASD mutual fund examinations. 4 (4-0)

**271 Special Projects/Insurance****One credit**

Available only with departmental approval for special projects in insurance requiring 20 to 30 hours of study and which are not available through regular courses.

**272 Special Projects/Insurance****Two credits**

2 credits requiring 40 to 50 hours of study.

**273 Special Projects/Insurance****Three credits**

3 credits requiring 60 or more hours of study.

**Chartered Life Underwriter (CLU)****101 Individual Life and Health Insurance****Three credits**

An introductory course in the C.L.U. program that investigates life insurance in depth. The several types of life insurance are discussed, including options. Health insurance, probability concepts and mortality tables, and the construction of policies for individuals are treated. 3 (3-0)

**102 Life Insurance Law and Mathematics****Three credits**

The course explains the formation of a life insurance policy within the framework of laws governing contracts and agency. Policy provisions, operation, and contests are presented. Disposition and settlement options are included and government regulations and taxation of companies are discussed. 3 (3-0)

**103 Group and Social Insurance****Three credits**

The nature and development of group insurance including coverage and master contract writing are the basis for the course. It includes health, disability, medical, and social insurance with the benefits and problems encountered with each. 3 (3-0)

**104 Economics****Three credits**

A general overview of our economic system and the forces affecting it. The measurement of income, monetary policy, income determination, prices and problems of economic growth are a few of the topics covered. 3 (3-0)

**105 Insurance Accounting/Finance****Three credits**

The importance and techniques of financial record-keeping and income measurement are presented in detail. Budgeting and methods of financing are covered. 3 (3-0)

**106 Investments and Management****Three credits**

Various types of investments are discussed as they relate to family financial plannings. Stocks, securities, mutual funds and real estate are among the topics covered. 3 (3-0)

**107 Insurance Accounting/Finance****Three credits**

The importance and techniques of financial record-keeping and income measurement are presented in detail. Budgeting and methods of financing are covered. 3 (3-0)

**108 Pension Planning****Three credits**

The forces underlying the pension movement and basic features of plans are discussed. Included are tax considerations and various types of funds. 3 (3-0)

**109 Business Insurance****Three credits**

The basic concepts of proprietorships, partnerships, and corporations are discussed with emphasis on the problems of a variety of corporate agreements and their relation to the insurance industry. Includes management techniques and professional ethics. 3 (3-0)

**110 Estate Planning and Taxation****Three credits**

An introduction to Estate Planning including acquisition, administration, disposition and taxation of property. Federal estate, gift and capital gains taxes are discussed in depth. 3 (3-0)

**Life Underwriters Training Council (LUT)**

The Life Underwriters Training Council Program is a 4-part pragmatic sales program for currently licensed agents. Applicants must have a company sponsor and have sold at least 50 contracts before enrolling. Besides text and workbook assignments, the student will make sales appointments correlating to the insurance contracts under study. Classroom time is devoted to discussion of these product lines and improving sales techniques based on the previous week's appointments.

LUT 101, 102, 103 LUTC Part I Life Insurance **Three credits each**

LUT 201, 202, 203, LUTC Part II Life Insurance **Three credits each**

LUT 213 LUTC Part III Disability Income Insurance **Three credits**

LUT 214 LUTC Part IV Securities **Three credits**

**Law (LAW)****100 Legal Rights****Three credits**

An analysis of landlord-tenant law, debtor-credit law, contract relationships, consumer credit and consumer rights, and other legal regulations affecting private citizens. 3 (3-0)

**105 Law and Social Issues****Two credits**

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

**120 Legal Research****Four credits**

Research procedures of law offices including the functions of a law library and research methods. In-depth investigation into the following Federal, National, and Michigan research tools: Encyclopedias, digests, reporter systems, practice manuals, statutes, periodicals, treatises, court rules, Attorneys General Opinions, court administrative publications and citators. Practical application of research techniques is required. 4 (4-0)

**121 Legal Writing****Four credits**

Lecture, class discussion, and writing assignments covering identification of issues, statement of facts, and arguments of law as they apply to writing briefs, pleadings, opinions, client letters, and drafting instruments. 4 (4-0)

**130 Introduction to the Michigan Judicial System****Two credits**

A survey course designed to provide an understanding of Michigan's overall judicial system. 2 (2-0)

*NOTE: LAW courses 210, 211, 212, 221, 222, & 223 are designed to view the technical problems of the respective legal areas from the standpoint of the legal assistant.*

**210 Pre-Trial Procedures****Four credits**

An in-depth study of pre-trial considerations necessary for litigation, including jurisdiction, venue, statutes of limitation, parties, service of process, third-party practice, pleadings, discovery, and pre-trials. Practical application through drafting of Complaints, Answers, Motions for Accelerated Judgment, Motions for Summary Judgment, Interrogatories, Demands for Admissions, Pre-Trial Statements, and others. Prerequisite: Law 120. 4 (4-0)

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

An in-depth study of trial considerations and procedures, including investigation, client and witness interviews, client preparation; evidence, including hearsay, materiality and relevancy, competency of evidence, best evidence, parole evidence, etc.; right of trial by jury, selection of jury, challenges to array, voir dire examination, opening statements, presentation of evidence, arguments to jury, instructions to jury, requests to charge, dismissals, verdicts, post-trial procedures, appeals to Court of Appeals and Supreme Court. 4 (4-0)

**212 Legal Field Specialties****Four credits**

An overview of specialty areas of law, including drafting of pleadings and related legal instruments. Areas covered include real estate, administrative law, corporate law, bankruptcy, probate, domestic relations, Workers' Compensation, criminal law, and personal injury. 4 (4-0)

**215 Business Law I****Three credits**

Covers fundamental principles of our law for business and non-business students, to develop understanding of our legal system (Federal, State, and local) its purposes and importance to society. Course contents include study of the nature and sources of law, study of courts and court procedure, legal reasoning, crime and torts, and the law of contracts, personal and real property, leases and mortgages and bailments. 3 (3-0)

**216 Business Law II****Three credits**

The nature and law of sales, commercial paper, security devices, agency, employment, partnerships, corporation—profit and non-profit types—insurance, and the 1972 Michigan Uniform Commercial Code. Prerequisite: Law 215. 3 (3-0)

**221 Real Estate Transactions****Four credits**

An in-depth treatment of real property and common types of real estate transactions and conveyances. Includes drafting problems involving deeds, mortgages, notes assignments, leases, land contracts, summary proceedings, title opinions, closing statements, security agreements, financing statements, and others. Study of abstracts and examination thereof, recording systems, and tax histories. Prerequisite: Law 120. 4 (4-0)

**222 Probate****Four credits**

Reviews practical problems in probating estates including all procedures involved in the commencement of probate through settling and closing the estate. Prerequisite: LAW 120. 4 (4-0)

**223 Domestic Relations****Four credits**

Includes case law, statutes, and rules pertaining to divorce, separate maintenance, annulment, the Child Custody Act, Family Support Act, Uniform Reciprocal Support Act, and paternity. Covers the practical activities and function of the legal assistant in the management of the typical domestic relations case. Prerequisite: LAW 120 4 (4-0)

**266 Special Projects/Law****One credit**

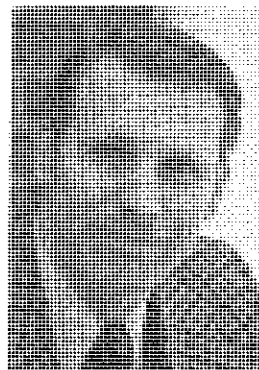
A special course available only with departmental approval for special projects in law requiring 20 to 30 hours of study and which are not available through regular courses.

**267 Special Projects/Law****Two credits**

2 credits requiring 40 to 50 hours of study

**268 Special Projects/Law****Three credits**

3 credits requiring 60 or more hours of study

*Department of Management and Marketing**Chairperson: James E. Person*

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

- I. To provide to pre-professional and career-oriented students a personalized process of instruction as developed by learning-oriented faculty. This faculty will maintain constant evaluation and assessment of themselves and their methods to provide understanding and analysis of our system's response to student needs.
- II. To make all educational subject matter more meaningful and relevant to the individual by structuring and focusing it around a career development theme. The Department will provide all persons completing its programs with the knowledge and skills necessary to pursue further education or enter the labor market with a marketable skill.
- III. To provide an educational system which utilizes and coordinates its activities with community resources being responsive to needs of business, industrial, and governmental community.
- IV. To provide or assure availability to all its students the guidance, counseling and instruction needed to develop self-direction; to expand occupational awareness and aspirations, and to develop appropriate attitudes about the personal and social significance of work.
- V. To perform articulation to assure students of services for placing every person in the next step in individual development whether it be employment or further education. The department will also provide a flexible educational system which provides for re-entry into the educational system from the world of work.

General curricular guides for each program offered by the Department are available in the Counseling offices and the Departmental Chairperson's office; however, these guides are frequently modified by the Department to accommodate an individual student's background, goals, and abilities. The student is encouraged to discuss unique situations with an academic advisor within the Management and Marketing Department.

NOTE: Students interested in Industrial Management may refer to programs and courses offered by the Department of Applied Technology

**Assessment Administration**

**Associate Degree Program** Curriculum Code: 490 Minimum 90 credits  
**Certificate Program** Curriculum Code: 491 Minimum 18 credits

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

The curriculum is designed to provide preparation for employment, either in an Assessor's Office or an Equalization Department, and to help toward improving the competence of those already in the field. Program objectives are:

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

**Banking Management**

**Associate Degree Program** Curriculum Code: 492 Minimum 90 credits  
**Certificate Program** Curriculum Code: 493 Minimum 45 credits

Certificate and Associate Degree Programs in Banking Management are under the sponsorship of the College and the American Institute of Banking (AIB). AIB members also may achieve the AIB Basic and Standard Certificate under the program. The local chapter of the AIB serves as the advisory committee for the program to assure continued relevancy for each course.

**Management**

**Associate Degree Program** Curriculum Code: 470 Minimum 90 credits

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

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

**Certificate Program** Curriculum Code: 471 Minimum 45 credits

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

**Certificate in Advanced Management** Minimum 45 credits  
 Curriculum Code: 472

A Certificate in Advanced Management is designed especially for those who have a degree, or an employment background, who want an intensive program in up-to-date management courses of high level quality and content. Management advisors at the College will tailor a program for participants which takes into account relevant background and future goals. The Certificate in Advanced Management is recognized and accepted for transfer to a number of Michigan colleges and universities, as well as out-of-state institutions.

**Cosmetology Management**

**Associate Degree Program** Curriculum Code: 470 Minimum 90 credits

An Associate Degree Program is offered to students who have completed cosmetology certification requirements. To assure future success, business and management courses are prescribed for individuals desiring this degree.

**Safety Management**

**Associate Degree Program** Curriculum Code: 473 Minimum 90 credits  
**Certificate Degree Program** Curriculum Code: 474 Minimum 45 credits

Safety Management is an option in management to include both a Certificate and as Associate Degree. New legislation such as the Occupational Safety and Health Act has given emphasis to the importance of this operational phase of business, government and industry. Safety is a management directed activity. An overall conceptual viewpoint of understanding the mutual responsibilities for compliance requirements and being able to direct effective practices can allow organizations to avoid employee hardships and crippling penalties.

**Labor Relations**

Labor Relations has become an essential ingredient in successful management activity. The growth of collective bargaining has created a demand for skilled persons to administer contractual agreements.

New legislation has created additional demands upon administrators who must be equipped to achieve and maintain healthy balance between the pressures of unionized employees and management to ensure the future of their organization and to protect the public welfare.

The need for highly trained men and women in labor relations has seldom been more acute or pronounced. A Certificate will be awarded to all students who successfully complete the basic Labor Relations courses, LR 200, 201, 202 and 203.

**Transportation and Traffic Management**

<b>Associate Degree Program</b>	<b>Curriculum Code: 495</b>	<b>Minimum 90 credits</b>
<b>Certificate Program</b>	<b>Curriculum Code: 496</b>	<b>Minimum 18 credits</b>
<b>Certificate Program (Transportation Law)</b>	<b>Curriculum Code: 497</b>	<b>Minimum 9 credits</b>

A two-year, six-term program in Transportation and Traffic Management is offered in cooperation with the Traffic Club of Lansing. (Associate Degree Program—Curriculum Code 495.)

A Transportation and Traffic Management Certificate Program, in cooperation with the Traffic Club of Lansing, deals with the theoretical, historical, and academic aspects of Traffic Management; analyzes practical problems and specific cases, and provides excellent technical training. This course, in six terms, imparts information which might take years to obtain in the normal course of work in an individual traffic department or carrier's general office. This program is also transferable to other programs leading to degrees in the department. Additional management and general education courses allow a student to earn an Associate Degree in this area. (Certificate Program—Curriculum Code 496.)

Transportation Law is of special value for preparing candidates for the Interstate Commerce Commission Practitioner's Examination. This three-course sequence includes a study of the Interstate Commerce Act; amendatory legislation; leading decisions of the Interstate Commerce Commission and courts, and the Interstate Commerce Commission rules of practice; drafting of an Interstate Commerce Commission complaint; Canons of Ethics applicable in Interstate Commerce Commission; practice, and remedial provisions of the Interstate Commerce Commission Act. (Certificate Program—Transportation Law—Curriculum Code 497.)

**Management Development Center**

The Management Development Center serves organizations, associations, and groups of people in their individual management training needs.

The Center's purposes are:

- To tailor and develop college courses to meet the management development and training needs of organizations within the community.
- To provide these courses at the convenience of the organization at the best time and place.
- To assist participants in the on-the-job application of concepts taught in the courses.
- To provide the highest quality training and development possible by seeking out resources which will meet the needs of the organization.

The Management Development Center has instituted and conducted programs for a variety of community organizations and businesses of all sizes, hospitals, banks, industries, police organizations, other colleges, technical people, systems personnel, and governmental employees.

These programs are specially prescribed courses and seminars responding to the requests and specific needs of particular organizations. They may involve any type of training from short courses for small groups of people, to total organizational programs built around implementing a whole new management system.

The Center reaches out in an effort to help serve the community.

The Management Development Center, in addition to developing specialized seminars, offers the following supportive services for the management community:

- I. Advanced Management Seminars addressing topics of current interest in which guest speakers are brought in to help bridge the gap between theory and practice
- II. Total Instruction in Management Effectiveness (TIME Series)  
Programmed instruction in management which covers materials on a variety of managerial topics that can be taken at the individual's own pace and convenience. (MGT 350 through MGT 394)
- III. Resource Material  
The Center helps individuals in acquiring material to support their educational needs

**Marketing**

**Associate Degree Program**      **Curriculum Code: 475**      **Minimum 90 credits**  
Offers organized training in retail distribution, wholesaling, management and other activities related to the marketing of goods and services. The courses offered in this area provide education and training to improve the skills, business knowledge, and judgement of those preparing for, or now engaged in, the growing areas of distribution and marketing. The primary objective is to train individuals to participate more efficiently in business activities.

**Certificate Program**      **Curriculum Code: 476**      **Minimum 45 credits**  
A condensed one-year curriculum in marketing for qualified students. The courses are designed to meet the needs of both students and business. The curriculum has special value to those already employed who desire upgrading or promotion. A Certificate is granted to those students successfully completing this curriculum.

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

**Sales**

**Associate Degree Program**      **Curriculum Code: 479**      **Minimum 90 credits**  
Offers educational training to develop behavioral science and selling skills necessary for students entering the dynamic and growing field of sales. The program provides students with the fundamentals of sales needed to deal with the consumers' buying habits. The curriculum is divided into a general program for those students who are undecided on an area of concentration and a specialized program for those students who have already identified a particular area of interest. The College offers a number of courses which may be taken singly or as part of a planned curriculum. 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 growing field of Sales. The object of this two-year program is to train individuals to participate more efficiently in business activities.

**Certificate Program**      **Curriculum Code: 478**      **Minimum 45 credits**  
 Courses in this condensed one-year curriculum in Sales are designed to meet the needs of students and local business. The curriculum is of special value to those already employed who desire upgrading or promotion. A Certificate is granted upon successful completion, and the credits earned are transferable to the two-year Associate Degree Program.

### Data Processing

**Associate Degree Program**      **Curriculum Code: 450**      **Minimum 90 credits**  
 Designed to provide trained graduates capable of meeting the increasing demand of the modern business world. These graduates will have acquired an understanding of the concepts, principles, and techniques of data processing together with a working understanding of modern, complex, high-speed data processing machines.

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

**Certificate Program**      **Curriculum Code: 451**      **Minimum 45 credits**  
 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 those who desire rapid but comprehensive training to enable them to enter the labor market as soon as possible. A Certificate is granted upon completion of this program. Also, the courses may be transferred to the two-year program.

### Hotel-Motel and Food Service Management

**Associate Degree Program**      **Minimum 90 credits**  
**Curriculum Code: 455, 457, 458**

**Certificate Program**      **Minimum 45 credits**  
**Curriculum Code: 456, 459**

Lansing Community College offers both a one-year Certificate and two-year Associate Degree in Hotel-Motel Management and Food Service Management, and a two-year Associate Degree in a Registered Chef Apprenticeship Program sponsored by the Department of Labor and the American Culinary Federation. Certified Hotel Administrator (CHA) courses are also available, sponsored by the American Hotel Motel Association. These programs are designed to prepare the student for mid-management level positions as supervisory personnel in hotels, motels, restaurants, and other hospitality institutions. Specially trained supervisory personnel for positions in hotels, motels, and food service establishments are in demand, and more employers in the industry are showing a preference for college-trained personnel. Predictions are for accelerated growth in the hospitality industry in the 1980's and 1990's.

The student has access to hotels, motels, food service operations, retirement homes, hospitals, clubs, and airline feeding companies. Upon request, hotel-motel management and food service coordinators at the College may arrange for students to obtain full and part-time employment during the school year in the following career-related positions:

- Hotel-Motel Management
- Assistant Manager Trainee
- Front Office Manager
- Catering Manager
- Assistant Auditor
- Sales Representative
- Reservation Manager
- Entertainment Director
- Food Service Management
- Assistant Manager Trainee
- Food Production Supervisor
- Assistant Steward
- Dining Room Supervisor
- Assistant Manager—Institutional
- Food Service Hostess
- Director of School Lunch Programs
- Bartending
- Chef

### Community Service Programs

Whatever the need, the Hotel-Motel-Food Service Program is prepared to offer special classes, seminars, and in-service training programs designed to prepare the student for employment, for upgrading, or to update employed persons. These special classes may be held at the College or off-campus according to the needs of those involved. Instructors and coordinators of special classes include College staff, businessmen, and employers with expert qualifications and experience. Special programs may include: apartment management and leasing, hostess and waitress training, a learn-to-cook program, innkeeping law, the internship program, preparation of party foods, executive housekeeping, ice carving and baking.

**Law Enforcement**

<b>Associate Degree Program</b>	<b>Curriculum Code: 460</b>	<b>Minimum 90 credits</b>
<b>Associate Degree Program</b>	<b>Curriculum Code: 460</b>	<b>Minimum 90 credits</b>
	<b>(Dual Career Program)</b>	
<b>Associate Degree Program</b>	<b>Curriculum Code: 461</b>	<b>Minimum 90 credits</b>
	<b>(Transfer Program)</b>	

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

The problems of law enforcement are as complex as the society in which we live. The man or woman who chooses a career in this field must have the necessary educational background to cope with these problems on a day-to-day basis. Many challenging careers are open to those who prepare themselves for the opportunity.

Recognizing the growing need for law enforcement personnel, and the need for additional training for those in the field, Lansing Community College has developed a program which can meet both needs. It can prepare a man or woman for entrance into police work, and it can assist those already in the field toward promotion through necessary general and technical training.

The program includes a two-year curriculum leading to the Associate in Arts Degree as preparation for entry into the field. Men and women presently engaged in police work may enroll in any of the specialized law enforcement classes, based upon interest or need. Extensive offerings in Corrections and Security are also available.

The Dual-Career Program is designed for the student who desires an Associate Degree in addition to meeting the minimum Michigan Law Enforcement Officers Training Council standards for employment as a police officer within the State of Michigan.

**Corrections**

**Associate Degree Program Curriculum Code: 465 Minimum 90 credits**

An Associate Degree Program is available in the law enforcement option area of Corrections. Agencies and processes within the correctional system are included in the program as well as technical courses for the corrections practitioner. A broad base of knowledge is afforded to corrections personnel as well as an overview of modern, innovative and progressive correctional processes and institutions. Articulation with universities and the Michigan Criminal Justice Educator's Association has allowed for uniformity in this program as well as assuring its quality and practicality.

**Mid-Michigan Law Enforcement Center**

This center is a cooperative venture into police education by local police agencies, with Lansing Community College as the setting.

Staff is comprised of Training Officers from Lansing and East Lansing Police Departments; Michigan State University Department of Public Safety, and the Ingham County Sheriff Department. The Training Officers make up the Metro-Police Training Team, and act as coordinators and program developers for the police education-training needs of the Tri-County Area. The operation is a full-time, year-round center of police education. At this time, 32 degree credits are granted for the successful completion of the eleven-week Basic Police Science Program as designated by the Michigan Law Enforcement Officers Training Council.

The Center is available to organize, conduct and coordinate programs on an individual or group basis as education and training needs are expressed.

**Real Estate**

**Associate Degree Program Curriculum Code: 477 Minimum 90 credits**

The Real Estate Program can provide the background for persons of all ages to engage in the many activities of the real estate field.

Through a series of courses leading to an Associate Degree, it is possible to specialize in a number of vocations that need experienced and knowledgeable personnel. In many cases, it is possible to "try out" these various activities by working part time.

Some of the specialities in real estate include selling residential, commercial, and industrial properties; appraising all types of property; real estate investment counseling; property management; urban planning; industrial planning; serving as housing specialist, mortgage specialist, or advertising specialist in real property; or as closing officer in a real estate brokerage office.

Since the real estate community is involved with the program, the student can benefit from close association with those already in the field who are knowledgeable and willing to give their time.

Real estate is a very competitive business, and only those with the willingness to learn, the ability to work long and varied hours, and a strong desire for success, can expect the rewards the field can offer.

**Pre-Business Administration**

**Associate Degree Program Curriculum Code: 480 Minimum 90 credits**

The Pre-Business Administration curriculum is designed for students preparing for transfer to a four-year institution to complete work in professional areas of communications, law, management, marketing, business education, professional secretary, engineering, statistics or related business professions. Each university has its own curricular guide for students to follow to allow a smooth, efficient transfer.



**COURSE DESCRIPTIONS****American Institute of Banking (AIB)**

- 101 Principles of Bank Operations** **Three credits**  
Fundamentals of bank functions in a descriptive (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective necessary for career advancement. 3 (3-0)
- 102 Effective English** **Three credits**  
Considers both the purpose of the communication and the person who will receive it. Covers the fundamental principles for using the English language, and points out the ways in which communication may be heightened by proper use of the techniques of language. 3 (3-0)
- 103 Oral and Written Communications for Bankers** **Three credits**  
Emphasizes identification and analysis of the message, the respondent, and personal communications roadblocks. The materials, production, functions, and the situations of speech are covered in detail. 3 (3-0)
- 105 Conference Planning/Leadership** **Three credits**  
Covers a specific phase of the problem of human understanding. It is concerned with an important responsibility of management: to communicate and to coordinate ideas in the most effective way possible. It gives consideration to the dynamics of human interaction in groups convened to solve problems and make decisions. The essentials of parliamentary procedure are also stressed. 3 (3-0)
- 106 Math for Bankers** **Three credits**  
Development of a bank employee's ability to solve mathematical problems quickly and accurately. Covers a variety of subjects, among which are fundamental arithmetic tools, fractions, decimals, business documents, payrolls, statistical data and graphs, depreciation, and simple interest. 3 (3-0)
- 111 Information Processing** **Three credits**  
Covers methods which will increase flexibility and ease in processing information. Primary content is aimed at increasing the participant's rate of processing banking information and reports. 3 (3-0)
- 131 Fundamentals of Bank Data Processing** **Three credits**  
Introduces the bank employee to the principles and purposes of data processing, the language of data processing, and the application of data processing in a bank environment. 3 (3-0)
- 161 Fraudulent Check Seminar** **One credit**  
To identify counterfeit checks; verify information submitted for opening new accounts and servicing present accounts; proper handling of returned checks; identifying, determining validity and reporting discrepancies of Michigan operator's license, State of Michigan I.D., School I.D., Company I.D., Social Security card and other forms of identification. 1 (1-0)

- 162 Customer Relations for Bankers** **One credit**  
Covers basic principles of interpersonal relations as they relate to the decisions and actions of bank employees when interacting with the customer. 1 (1-0)
- 163 Customer Relations for Bankers-2** **One credit**  
An overview of practical applications of the basic principles of interpersonal relations as they relate to the decisions and actions of bank employees when interacting with the customer. It will provide activities where participants can practice building their skills when interacting with people. 1 (1-0)
- 164 Customer Relations for Bankers-3** **One credit**  
Shows techniques which can be used by bank employees when interacting with the customer, including the use of transactional analysis, conflict resolution, and organizational communications. 1 (1-0)
- 203 Trust Service** **Three credits**  
Shows the services rendered by institutions engaged in trust business. Primarily for the personnel of trust departments in commercial banks and trust companies as a part of their formal education. 3 (3-0)
- 204 Credit Administration** **Three credits**  
Directed toward the executive level. Concerns itself partly with a statement and a discussion of factors influencing and determining loan policy. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are discussed. 3 (3-0)
- 205 Real Estate Financing** **Three credits**  
Covers functions of the real estate mortgage credit operation of commercial banks. Concentrates on the mortgage markets, financing of residential property, financing of special purpose property, and the administrative tasks common to most mortgage departments. The analysis of mortgage credit, policies related to collection, the administration of a bank's mortgage portfolio and the analysis of real estate investment yields are also covered. 3 (3-0)
- 206 Money and Banking** **Three credits**  
Stresses the practical aspects of money and banking and emphasizes the basic monetary theory. Emphasis also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. 3 (3-0)
- 207 Installment Lending** **Three credits**  
Examines the techniques of installment lending with emphasis placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending. 3 (3-0)

**208 Commercial Lending****Three credits**

A study of commercial lending from the viewpoint of the commercial loan office of a bank or financial institution. Commercial loan processing, procedures and servicing are included. Small business loans, real estate loans, various dealership loans and related areas to qualify for commercial loan status are covered in detail. 3 (3-0)

**209 Bank Cards****Three credits**

Gives an overview of the bank card industry, the role of the bank card in the economy and the basic operational problems involved in the successful management of a bank card plan. The interrelated nature of the various bank card functions is emphasized. 3 (3-0)

**212 Analysis of Financial Statements****Three credits**

Covers the characteristics of financial statements and financial statement analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis. 3 (3-0)

**213 Federal Regulation of Banking****Three credits**

The "why" and "what" of federal bank supervision. Recommended for both beginning and advanced students in banking and related fields. Covers agencies regulating banks, bank charters, bank reports and examinations, federal limitations on banking operations, and the regulation of bank expansion. Emphasis is on supervision rather than the role of the federal government as it indirectly influences the operations of banks through fiscal and monetary policy decisions. 3 (3-0)

**214 Law and Banking****Three credits**

Examines the legal principles and provides a general review of legal problems pertaining to business and banking. Includes contracts, consideration, statute of frauds, commercial paper, bank deposits, bank collections, sales, titles, agencies and others. Extracts from the Uniform Commercial Code are provided as a part of this course. 3 (3-0)

**215 Negotiable Instruments****Three credits**

Covers the legal aspects of negotiable instruments used in bank deposit and collection operations, and the payment mechanism. Legal implications of normal activities and transactions in banking operations. The impact of the law and applicable bank regulations rather than the resolution of legal issues or problems. 3 (3-0)

**222 Bank Management****Three credits**

Presents new trends which have emerged in the philosophy and practice of management. The study and application of the principles provide new and experienced bankers with a working knowledge of bank management. Case studies will be used as an effective learning technique. 3 (3-0)

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

Designed for present and future bank managers. The manager's role and the managerial process will be discussed and analyzed. Emphasis will be placed upon developing practical approaches to solving typical management and supervisory problems. 3 (3-0)

**224 Bank Personnel Management****Three credits**

A survey of the principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees from the recruiting stages through the post-retirement stage. Emphasis will be on the use of the appropriate practices applicable to various size organizations. 3 (3-0)

**230 Marketing for Bankers****Three credits**

Designed for bankers who are unacquainted with marketing. Deals with concepts and philosophies of marketing; marketing information, research, and target; the marketing mix (product strategy, distribution strategy, advertising and sales promotion, personal selling, and pricing strategy); and the methods of marketing planning. 3 (3-0)

**240 Management of Commercial Bank Funds****Three credits**

A review of the principles and philosophy of funds management. Covers a broad range of bank situations and the overall banking environment, facets of bank operations and their relationships with the funds management function. 3 (3-0)

**923 Management by Objectives I****Four credits**

Course in which the supervisor and subordinate identify and agree on major areas of subordinate responsibility. Goals are set, standards of performance to attain these goals are established, and the results measured against these standards by supervisor and subordinate. 4 (4-0)

**924 Management by Objectives II****Four credits**

A continuation of AIB 923. Develops conferee expertise in application of Management by Objective principles and concentrates on building skills in the area of counseling for effective follow-through with the system. 4 (4-0)

**Business (BUS)****118 Introduction to Business** **Four credits**

A survey of business activities, covering principles, problems and practices related to our economic framework. Includes topics such as organization, production, marketing, personnel administration, finance and economics. 4 (4-0)

**191 Independent Study-Management** **One credit****192 Independent Study-Management** **Two credits****193 Independent Study-Management** **Three credits****194 Independent Study-Management** **Four credits**

Involves special research projects and individual readings, offering the opportunity to apply past or present aspects of personal and professional experience to the student's academic program providing they are directly related to the degree being pursued. Minimum of ten hours work per credit required. Prerequisite: Departmental approval. 1 (0-1), 2 (0-2), 3 (0-3), 4 (0-4)

**214 Teller Training** **Four credits**

Reviews the complete activities of a bank teller covering identifications, check cashing, money handling, the teller machine, coin dispenser and use of the adding machine. 4 (4-0)

**219 Employee Development** **Three credits**

Introduces interpersonal principles, skills and functions, functions of human relations and communication methods through case situations, and self-analysis for a continuous self-development program. 3 (3-0)

**222 Small Business Management** **Three credits**

Complete coverage of small business operation, including business and managerial functions. Emphasis on basic principles of management for various kinds of small business concerns. Includes environment of small business; financial, marketing, and production management of the "going concern." Legal and governmental relationships are covered, with actual case studies relevant to those involved in the smaller businesses. 3 (3-0)

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

Management principles oriented to first-line supervisory levels in business, government, and other organizations. Emphasis is placed on managerial functions of planning, organizing, directing, coordinating, and controlling; working through policies and procedures; decision making; and the responsibilities of supervisors for overall work performance and employee development and evaluation. 3 (3-0)

**224 Personnel Management** **Three credits**

A survey of the principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees from the recruiting stages through the post-retirement stage. Emphasis is on the use of the appropriate practices in keeping with the type and size of organization. 3 (3-0)

**225 Principles of Management** **Three credits**

An overview of the management principles oriented to middle and upper level managers and the relationship of the management of people, communications, morale, and motivation to the leadership concept of management. Topics include history of management, theoretical framework and practical applications of management, qualifications of executives, business ethics, and in-depth study of managerial functions. 3 (3-0)

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

A study of the problems of small business management and financial control through use of a wide variety of actual case studies. Problems are identified and sound management principles employed to solve problems. 3 (3-0)

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

An application of psychological principles and methods to selection, placement, training, supervision, evaluation and motivation of workers' and managers' efficiency. Accident prevention included with an introduction to the problems of human relations and psychological illnesses in business and industry. 4 (4-0)

**229 Public Relations** **Three credits**

Examines the techniques of public relations for those in managerial positions in business, government, and other organizations. Shows the principles of creating and maintaining good public relations, including employee-employer relations. Customer-employee relations receive emphasis, while focusing on the programming of the total public relations effort and selecting of appropriate strategy, media, and persuasive devices to accomplish objectives. 3 (3-0)

**236 Communication Techniques in Business** **Three credits**

A study of special communication areas including public speaking, memo writing, information processing, message construction, perception, persuasion, effects of media, interpersonal and small group communication. Emphasis will be placed on applying communication methods to actual business situations. 3 (3-0)

**251 Basic Investment Essentials** **Three credits**

Covers the fundamental principles of investing and its role in our economy. Emphasis will be upon developing terminology, types of investments (common and preferred stocks, bonds, mutual funds, and security analysis). An in-depth study of the stock exchanges and the external forces that affect them. Analysis of personal objectives and portfolio management will be discussed and put into practice. 3 (3-0)

**252 Advanced Investment Essentials Three credits**

Reviews the techniques of options buying, analysis of the commodities markets, fundamentals of speculative trading, uses of margin transactions to increase buying power. Prerequisite: BUS 251 or Departmental Approval. 3 (3-0)

**253 NASD Qualification Examination Three credits**

Designed to help sponsored people qualify for a sales license with the National Association of Security Dealers and the State of Michigan for Mutual Funds and Variable Annuity Registered Representative. 3 (3-0)

**260-265 Traffic and Transportation Management (Each) Three credits**

Two-year, six-term program resulting in a Certificate issued by the College. Theoretical, historical, and academic aspects of traffic management are presented with analysis of practical problems and specific cases. 3 (3-0)

**269, 270, 271 Transportation Law I, II and III (Each) Three credits**

The three terms of Transportation Law will include a study of the Interstate Commerce Act, amendatory legislation, leading decisions of the Interstate Commerce Commission (I.C.C.) and courts, I.C.C. rules of practice, drafting of an I.C.C. complaint, Canons of Ethics applicable in I.C.C. practice, remedial provisions of the I.C.C. Act. Prepares student for the I.C.C. Practitioner's License. 3 (3-0)

**280 Property Valuation and Assessment Administration I Three credits**

Covers history of property tax, public relations, local government financing, property tax law, assessment-valuation concepts and equalization, appeals, assessment, equalization and allocation. 3 (3-0)

**281 Property Valuation and Assessment Administration II Three credits**

This course includes aerial photography, interpretation, property descriptions, tax law, and residential appraisal. Continues to acquaint the student with various sources of information available to appraisal personnel. Prerequisite: BUS 280. 3 (3-0)

**282 Property Valuation and Assessment Administration III Three credits**

Provides discussion of valuation concepts, economic concepts of value, cost approach to value, market approach to value, and income approach to value as well as proper procedures, forms, reports, etc. 3 (3-0) Prerequisite: BUS 281. 3 (3-0)

**283 Property Valuation and Assessment Administration IV Three credits**

A study of the appraisal of residential, commercial, agricultural, and personal properties, and the proper procedures relative to these appraisals. Prerequisite: BUS 282 3 (3-0)

**284 Property Valuation and Assessment Administrative V Three credits**

Continuation of residential, commercial, agricultural, and personal property appraisals presented in effective and organized manner for the professional advancement of personnel in property valuation and assessment administration. Prerequisite: BUS 283. 3 (3-0)

**285 Property Valuation and Assessment Administration VI Three credits**

Real and personal property appraisals, legal and procedural aspects of appraisal, and appeal procedures are studied. A Certificate is awarded upon successful completion of the Property Valuation and Assessment Administration courses. Prerequisite: BUS 284. 3 (3-0)

**286 Property Valuation and Assessment Administration Four credits**

The Society for Real Estate Appraisers issues a certificate for those students completing this course as SREA 101. Covers the concepts and principles of real property appraising and the technical skills required for application. Emphasis is on the use of fundamental appraisal principles and tools for the valuation of residential properties. Introduction to real property valuation for the beginning appraiser, real-estate broker-salesman, lender, assessor, or builder. 4 (4-0)

**288 Income Approach to Value Three credits**

Presents the techniques used in appraising income producing properties. Emphasis is placed on the use and application of the mortgage equity process which is also known as the Ellwood Technique. Problems will be used extensively to acquaint students with the mechanics for application to real world situations. 3 (3-0)

**290, 291, 292, and 293 Management Internship (Each) Three credits**

A cooperative offering involving weekly, on-campus independent seminars with the coordinator and the student intern. The student intern also receives actual training and experience in tasks performed by owners, proprietors, and managers in organizing and operating a business in our enterprise system. Coordinator's approval required. 3 (3-0)

**Data Processing (DP)****100 Introduction to Data Processing Four credits**

Introduces the concepts of business data processing. Data processing terminology, applications and machines are among the major topics to be studied. Prerequisite: Data Processing major. 4 (4-0)

**105 Introduction to Programming Languages Four credits**

An introduction to the use of computer programming languages in problem solving, and programs in two computer languages (Basic and Fortran). Designed to prepare the student for advanced data processing language courses. 4 (4-0)

**109 BASIC Programming Language Three credits**

Helps to develop the ability to understand a programming language and to program in BASIC language. Included are problem definitions, arithmetic statements, do loops and arrays. The student will write and correct actual BASIC programs. 3 (3-0)

**110 Fortran Three credits**

Presents the basic language and procedures to program in it, including coverage of problem definitions, arithmetic statements, DO statements, arrays, and sub-programs. The student will write and correct actual Fortran programs. Prerequisite: MTH 102 or equivalent. 3 (3-0)

- 111 Advanced Fortran** **Three credits**  
Further in-depth study of the Fortran language, especially in the area of arrays, sub-programs, character manipulation and business applications. Prerequisite: DP 110. 3 (3-0)
- 115 Data Processing Math/Logic** **Five credits**  
Reviews mathematical concepts frequently used in the business data processing environment. Such topics as flowcharts, error analysis, logic, vectors, matrices and statistics will be studied. Prerequisite: MTH 012 or equivalent. 5 (5-0)
- 131 Survey of Data Processing** **Three credits**  
Covers the principles and purposes of data processing; the language of data processing, and the application of data processing in a business environment. An introduction and orientation course for the non-data-processing student. 3 (3-0)
- 140 Operating Systems** **Four credits**  
An introduction to computer operation system software. Such topics as job control language, file organization, computer architecture, instruction formats and software design will be studied. Prerequisite: DP 105 and DO 100. 4 (4-0)
- 141 Small Computer Operations** **Three credits**  
The first of two courses in computer operation. Shows basic machine operation and usage of tape and disk storage features on a small computer. Prerequisite: DP 105 and DP 115. 3 (3-0)
- 142 Large Computer Operations** **Three credits**  
Provides information and experience in unit record operations and control, forms handling equipment, equipment, equipment upkeep, forms inventory, supply storage and handling, tape and disk library systems and basic machine room procedures. Prerequisite: DP 105 and DP 115. 3 (3-0)
- 163 Report Program Generator (RPG)** **Three credits**  
A beginning course in Report Program Generator (RPG) to give a basic understanding of the language and the ability to program in it. Included are problem definitions, control levels, tables, and matching records. The student will write and correct actual RPG programs. Prerequisite: DP 105 and DP 115. 3 (3-0)
- 164 Advanced RPG** **Three credits**  
Further study of the RPG language, especially in the area of disk applications and additional RPG features. Prerequisite: DP 163. 3 (3-0)
- 171 Cobol I** **Four credits**  
Basic components of the Cobol language are covered and applied in learning to write efficient programs. Prerequisite: DP 105 and DP 115. 4 (4-0)
- 172 Cobol II** **Four credits**  
A continuation of Cobol I, including disk file organization and processing. A program to form and update an ISAM (Index Sequential Access Method) file containing rings and strings is developed. Prerequisite: DP 171. 4 (4-0)

- 173 Cobol III** **Four credits**  
An advanced Cobol course designed to provide additional programming experience in the ISAM data base environment. Prerequisite: DP 172. 4 (4-0)
- 174 Special Cobol Features** **Three credits**  
A continuation of Cobol I, including table handling, report writer feature and sort feature. Prerequisite: DP 173. 3 (3-0)
- 182 Assembly I** **Four credits**  
A study of the mechanics of a machine-oriented, symbolic programming language for third-generation "byte" computers, stressing the IBM System/370 type. Programs will be coded and run. Prerequisite: DP 105 and DP 115. 4 (4-0)
- 183 Assembly II** **Four credits**  
A continuation of Assembly I, including indexing and table look-up, DTF entries (file processing), macro writing, subroutines and program linkage. Prerequisite: DP 182. 4 (4-0)
- 191 Algol** **Four credits**  
Covers concepts of the Burrough's large-scale computer systems, with the Algol programming language. Prerequisite: DP 110 or equivalent. 4 (4-0)
- 221 Forms Design and Control** **Three credits**  
Forms design and control from the initial phase of recognizing that a form is needed, to the utilization of the form. Topics covered are: (1) layout of items by importance, (2) design of margins and print spacing, (3) grades of paper reproduction and binding, (4) forms processing by users. 3 (3-0)
- 223 Introduction to Systems Analysis** **Four credits**  
Basic Systems Design covers topics such as (1) definition of the characteristics of a system, (2) definition of Systems Analysis, (3) definition of the role of the Systems Analyst, and the importance of understanding how Systems Analysis relates to the organization. Prerequisite: DP 100. 4 (4-0)
- 224 Structured Design Techniques** **Three credits**  
Shows tools used for structured design and documentation aids, with emphasis on the "Warnier-On Approach". All techniques will be taught at the program level using the Cobol language. Prerequisite: DP 172. 3 (3-0)
- 225 Structured System Design** **Three credits**  
An application of structured design techniques learned in DP 224 to development of information systems. Case problems. Prerequisite: DP 224. 3 (3-0)

**226 Data Base Concepts I** **Four credits**  
Examines principles of computerized data structures, including sequential, indexed sequential and data base management systems. Prerequisite: DP 172. 4 (4-0)

**227 Data Base Concepts II** **Four credits**  
A review of data base software currently available through commercial vendors and computer companies such as IBM, Burroughs, Honeywell, Univac and Digital Equipment. Prerequisite: DP 226. 4 (4-0)

**230 Minicomputers** **Three credits**  
Examines the basic characteristics of minicomputer hardware and software design, the relationship between specific application perimeters and the resulting mini-computer hardware component and software configurations, the categories of application that are feasible with specialized I/O (input/output) devices and turn-key minicomputer hardware and software. Prerequisite: DP 100. 3 (3-0)

**231 Teleprocessing** **Three credits**  
Shows fundamentals of telecommunications, including such topics as data transmission networks, communications interface equipment, types of terminal systems, software design and the teleprocessing computer. Prerequisite: DP 100. 3 (3-0)

**232 Telecommunications** **Three credits**  
An overview of major considerations in the design of a telecommunication system. These include: (1) user design requirements, (2) terminal specifications, (3) network requirements, (4) software requirements, (5) quantification techniques for design specifications. Prerequisite: DP 231. 3 (3-0)

**246 DP Intern or Field Project** **Three credits**  
To provide each student with a meaningful contact in a Data Processing environment in the community. Note: the student should be within one academic year of completing the two-year degree program before enrolling in this course. Prerequisite: Departmental approval. 3 (3-0)

**247 Systems Field Study** **Five credits**  
Shows the development of an information system with an approved business firm or an approved independent study project. 5 (5-0)

**281 Assembler Applications** **Three credits**  
An advanced assembler course designed to provide additional programming experience through coding a program to form and update an ISAM file containing data characteristics in binary form. Prerequisite: DP 183. 3 (3-0)

**282 Software Programming** **Three credits**  
Provides experience in the specialized field of software programming. Focuses on the development of a compiler (OPLANI) oriented to the needs of operational personnel in a modern data processing installation. Prerequisite: DP 183. 3 (3-0)

**291 Special Projects/Data Processing** **One credit**  
20 to 30 hours of study in special data processing projects, available only with departmental approval. 1 (0-1)

**292 Special Projects/Data Processing** **Two credits**  
40 to 50 hours to study in special data processing projects, available only with departmental approval. 2 (0-2)

**293 Special Projects/Data Processing** **Two credits**  
60 or more hours of study in special data processing projects, available only with departmental approval. 3 (0-3)



### Hotel-Motel Management (HMF)

**101 Introduction to Hospitality Industry** **Four credits**  
(AHMA American Hotel Motel Association 103)  
Introduction to the Hotel-Motel industry, history, management departments, industry's responsibilities, and opportunities for creative employment. 4 (4-0)

**102 (AHMA 214) Communications** **Three credits**

A study of the principles of communication, examining oral and written communications and explaining how to get your message accepted. To gain a basic understanding of communication principles; two-way communication; efficient listening; oral communication; communication on the job; written communication principles; writing effective letters; audio-visual communication; and the "chain" of communication. 3 (3-0)

**103 (AHMA 216) Training and Coaching Techniques** **Three credits**

To help develop supervisory skills needed to train employees; devise economical and efficient work methods; improve day-to-day job performance from subordinates through sound coaching techniques, and assist in setting realistic job performance standards. 3 (3-0)

**104 Introduction to Food Service Operation** **Four credits**

An introduction to modern food and beverage operations, their size, management departments and employment and growth potential. 4 (4-0)

**130 Table Service** **Two credits**

Presents the basic principles and procedures of efficient service of food and beverage, enabling the student to gain an understanding of these principles for adaptation to any food and beverage operation. 2 (2-0)

**131 Food Production I** **Five credits**

Covers basic concepts in menu planning, food purchasing, nutrition, sanitation and food storage. Lecture and laboratory combination. 5 (5-0)

**132 Food Production II** **Four credits**

An overview of food production as applied to quantity operation and application, with emphasis on managerial methods and concepts utilized in the administration of special food functions. To include laboratory exercises and preparation and service of food. Project required. 4 (4-0)

**133 (AHMA 315) Food Production III** **Five credits**

A presentation of the various food production methods geared toward quantity production. Includes basic terminology with an overview of the entire food production area. Lecture and laboratory combination. 5 (5-0)

**134 (AHMA 309) Food Service Operations** **Three credits**

Covers the five functions of management with emphasis on supervision and service. The student is trained in the art of food service, food handling, and sanitation. 3 (3-0)

**135 (AHMA 308) Quantity Food Purchasing** **Five credits**

Standards of quality and quantity applied to food, beverages, china, glass, silver, linen, furnishings and supplies, including the writing of specifications and establishing procurement policies. The menu planning and design phase of the course includes wording, selection of items, design and layout, projections of acceptability and the study of several market areas. Field project required. 5 (5-0)

**141 Meat Identification** **Three credits**

Methods of identifying wholesale and retail cuts of beef, pork, lamb, veal, poultry, and fish, and correct preparation procedures for each retail cut. 3 (3-0)

**142 Meat Cutting I** **Five credits**

Students will become acquainted with the retail cuts of beef and pork, and will prepare, process, cut, and merchandise each of the cuts for service, utilizing the basic equipment needed in meat cutting. 5 (5-0)

**143 Meat Cutting II** **Five credits**

Student will identify and cut wholesale and institutional cuts of pork, beef, lamb, poultry and fish; learn preparation and merchandising techniques; run cutting tests; learn yield and loss percentage anticipated from each cut of the carcass; and learn the differences between retail and wholesale cuts. 5 (5-0)

**144 Meat Cutting III** **Five credits**

A study of wholesale meat cutting, processing, and freezing. Covers the best methods to use in cutting and freezing; storage times; and the best cuts and grades of beef for home, retail, and restaurant use. The class will also prepare various types of sausage, and will clean, fillet, and prepare fresh fish for cooking and storage. 5 (5-0)

**145 Meat Merchandising I** **Three credits**

Covers the wholesale cuts of the whole heef; front and hind quarters; processing wholesale cuts into retail cuts; merchandising and displaying retail cuts; and meeting proper sanitation standards. Students will conduct cutting tests on loss and yields, and will learn cooking times and techniques on all retail cuts of heef. 3 (3-0)

**146 Meat Merchandising II** **Three credits**

Covers wholesale and retail cuts of pork, veal, lamb, fish, and poultry. Yield tests are required along with cooking procedures. 3 (3-0)

**170 Menu Design and Layout** **Three credits**

Shows selection of menu items, design and layout, projections of acceptability and the study of several market areas. Field project required. 3 (3-0)

**190 Internship and Seminar** **Three credits**

Offered to students who have successfully completed basic courses. Allows the student to be placed in an approved training facility; to earn credits for satisfactory work performance; and earn wages for hours worked. Prerequisite: Approval of coordinator. 3 (3-0)

**214 Management and Marketing**

- 191 Independent Study-HMF** **One credit**
- 192 Independent Study-HMF** **Two credits**
- 193 Independent Study-HMF** **Three credits**
- 194 Independent Study-HMF** **Four credits**  
Each provides an opportunity to explore a topic or problem of interest through readings, research, etc., under the guidance of a faculty member. The student may elect the course offerings from one to four credits, with a requirement of at least ten hours work per credit. Prerequisite: Departmental approval. 1 (1-0), 2 (2-0), 3 (3-0), 4 (4-0)
- 195 Culinary Art Practicum** **One credit**
- 196 Culinary Art Practicum** **One credit**
- 197 Culinary Art Practicum** **One credit**
- 198 Culinary Art Practicum** **Two credits**
- 199 Culinary Art Practicum** **Two credits**  
On-the-job apprentice training under the supervision of a qualified chef affords the apprentice an opportunity to learn food preparation and presentation techniques in college courses and to apply this knowledge and skill on the job. The assignments in the operation will provide experience and training in all aspects of the food service operation. The practicum will be conducted by a staff member of Lansing Community College and supervised by an appointed member of the Capitol Professional Chefs' Association of Greater Lansing. Practicum students will meet for a seminar once each term. 1 (1-0), 2 (2-0)
- 201 (AHMA 305) Hospitality Merchandising** **Four credits**  
Shows sales promotion and methods used to obtain public recognition and good will. 4 (4-0)
- 202 (AHMA 312) Maintenance and Equipment** **Four credits**  
Provides basic technical information in electronics, air conditioning, plumbing, heating, electricity, acoustics and other equipment to establish preventive maintenance routine and make necessary operating decisions. 4 (4-0)
- 203 (AHMA 307) Law and Innkeepers** **Four credits**  
A course for innkeepers and their personnel, as well as HMF students. Presentation of safe, sound rules to assist in avoiding law suits and legal pitfalls. 4 (4-0)

**Management and Marketing****215**

- 204 (AHMA 204) Human Relations** **Three credits**  
Covers basic knowledge of human behavior and suggestions of possible ways to channel that behavior to achieve worthwhile purposes. 3 (3-0)
- 205 (AHMA 106) Hospitality Management** **Three credits**  
A presentation of various subjects and problems of hospitality management including general concepts of management, personnel, guests, and technical problems of operation. 3 (3-0)
- 206 (AHMA 301) Front Office Procedures** **Four credits**  
Presents organization, control and operation of the front office as applied in the reservation and sale of rooms, service, keeping of accurate accounts, presenting bills and receipts of payment. 4 (4-0)
- 207 (AHMA 302) Financial Control & Management** **Four credits**  
A systematic, integrated study of hotel, motel, and food institutional financial management. Principles, problems, and practices related to finance will be presented in a balanced manner with regard to their relative importance in the hospitality industry. Includes the nature of financial statements, front office procedures, and the interpretation of accounts and statements unique to the hospitality industry. 4 (4-0)
- 223 (AHMA 220) Supervisory Development** **Four credits**  
Examines supervisory concepts and practice, the mutual expectations of workers and management, hiring, training, coaching, counseling and other qualities important in providing the necessary leadership and guidance of workers. 4 (4-0)
- 225 (AHMA 324) Tourism** **Three credits**  
Gives an insight into future growth potential and economic benefits of tourism. Techniques of analyzing tourism demand and supply are included. 3 (3-0)
- 231 Nutrition and Man** **Four credits**  
A study of the physical, chemical and biological characteristics of food. Helps the student become a translator who interprets scientific nutrition evidence into meaningful facts a layman can understand and apply to food selection. Course objectives are to determine human nutrient needs, the role of nutrients in various foods people eat, and the meanings of foods to different cultures. 4 (4-0)
- 232 (AHMA 410) Food and Labor Cost Control** **Three credits**  
Covers essential principles and procedures of effective food, beverage, and labor cost control and their adaptations to any food and beverage operation. 3 (3-0)
- 233 Food Service Sanitation** **Three credits**  
Subject matter and demonstrations pertain to responsibilities to oneself, employer, and the general public. Training in sanitation, hygiene, food controls, and equipment, with emphasis on service of food and beverages for both individual table and banquets. Especially designed for new employees in food service as well as in the kitchen area. 3 (3-0)



- 234 Catering and Beverage Operations** **Three credits**  
Presents duties and responsibilities of the manager in restaurant and catering operations; management methods in goal setting, forecasting, controlling quality and cost; establishing prices and policies to create favorable acceptance and profitable operation. 3 (3-0)
- 251 Wine Appreciation** **Three credits**  
To familiarize the student with the five basic types of wine: red, white, rose, sparkling, and fortified. Includes a short history of wines and their making; a mastery of the presentation and serving of wines; judging wines on appearance, bouquet, and taste; selecting and storing wines for restaurant or retail use; and learning the relationship between wines and foods. 3 (3-0)
- 252 Wines of America** **Two credits**  
A survey of the wine growing areas of the United States with emphasis on the varietal selections of California, New York, Michigan and Ohio. A study of wine making and comparative tastings and field trips acquaint the student with the wine industry in America. Prerequisite: HMF major or departmental approval. 2 (2-0)
- 253 Mixology/Domestic** **Three credits**  
An exposure to the six basic categories of mixed drinks (appetizer, highballs, sweet and sours, cream drinks, desserts, exotics). Training in the art of mixology in a manner both practical and economical for home use. Presents the serving of international wines as related to meals or social gatherings, and the tasting of these wines. Also, establishing a preventive maintenance program for one's guests. 3 (3-0)
- 254 Mixology** **Five credits**  
Provides an opportunity to master more than 100 mixed beverages and the proper serving of wines. Develops the skilled bartender by combining the arts of mixology and hospitality with control systems involving alcoholic beverages. 5 (5-0)
- 255 Practical Bar Management** **Four credits**  
An exposure to all aspects of the bar business on a management level. Includes merchandising, controls, purchasing, labor, etc. Recommended: HMF 254. 4 (4-0)
- 260 Food Preparation I: Basic Cookery** **Three credits**  
Presents techniques in pre-planning, preparation, service, and clean up involved in a meal. Includes buying lists, menus, recipes, costs, measuring units, and basic nutritional information. Lecture and laboratory combination. 3 (3-0)
- 261 Food Preparation II: Gourmet Foods/Basic** **Three credits**  
Shows basic cookery using sauces and wines. Includes the preparation of hors d'oeuvres, canapes, fondue, party foods, and meat cookery. Lecture and laboratory combination. 3 (3-0)
- 262 Food Preparation III: Gourmet/Foreign** **Three credits**  
Foreign foods from around the world are prepared and tasted. Includes uses of wines and cheeses. Lecture and laboratory combination. 3 (3-0)

- 263 Food Preparation IV: Gourmet/American** **Three credits**  
Introduces regional American cuisine. Involves preparing and serving gourmet meals. Menus will include garnishes, soups, sauces, entrees, vegetables, and desserts. Lecture and laboratory combination. 3 (3-0)
- 264 Food Preparation V: Gourmet/Barbecue** **Three credits**  
A spring and summer oriented course with most preparations occurring out-of-doors. Meat, vegetables, hors d'oeuvres, salads and desserts are prepared. Lecture and laboratory combination. 3 (3-0)
- 265 Food Preparation VI: Gourmet/Potpourri** **Three credits**  
A combination of all other courses, this class offers a variety of foods and ideas for your role as chef. Lecture and laboratory combination. 3 (3-0)
- 266 Food Preparation VII: Chinese Cookery** **Three credits**  
Chinese cooking is noted for its diversity of taste, texture, and aroma. Chinese dishes will be prepared; i.e. sweet and sour pork, chicken almondine, and egg rolls, through the use of techniques such as sauteing and red cooking. Lecture and laboratory combination. 3 (3-0)
- 267 Food Preparation VIII: Advanced Chinese Cookery** **Three credits**  
Students prepare some of the more elegant Chinese dishes, and learn the use of traditional Chinese spices and ingredients. Lecture and laboratory combination. 3 (3-0)
- 270 Food Preparation I: Microwave Cookery** **Three credits**  
Production of various types of food with the microwave oven. Microwave oven capabilities. Lecture and laboratory combination. 3 (3-0)
- 271 Food Preparation II: Advanced Microwave Cookery** **Three credits**  
Expands on basic microwave cookery, using recipes from the Microwave Cookbook, as well as adapting the student's own recipes to microwave use. The technical and theoretical principles of microwave cookery will be taught. Lecture and laboratory combination. 3 (3-0)
- 275 Bakery Products** **Three credits**  
A study of baked products and cake and pastry decoration. A professional baker will demonstrate various types of baked goods and products from the kitchen and supervise student preparation. Lecture and laboratory combination. 3 (3-0)
- 280 Food Specialities I** **Four credits**  
Advanced Garde-Manger techniques, such as aspic-patés, chaud-froid, terrines, gelatines and sauces are studied. The manipulation of the tools which are used is stressed. Buffet table arrangement and organization will be shown. Lecture and laboratory combination. 4 (4-0)

**285 Food Specialties II****Four credits**

Special Garde-Manger techniques, such as ice and tallow sculpturing, are studied, and the manipulation of the tools which are used is stressed. Buffet showpieces such as watermelon baskets, table arrangement of fresh fruits and vegetables and similar accent decorative showpieces will be completed. Students will be introduced to the art of pulled sugar. Lecture and laboratory combination. 4 (4-0)

**321 (AHMA) Food Facilities Design and Layout****Four credits**

Reviews conceptualization, design, layout and specification of food service industry facilities. 4 (4-0)

**322 (AHMA) Work Study Analysis in Food Operations****Four credits**

Covers work methods and layout, and includes flow analysis, time and motion study, work simplification, data processing and setting of standards. 4 (4-0)

**323 (AHMA) OSHA—MIOSHA/Food****Three credits**

An in-depth analysis of the Occupational Safety Health Act and the Michigan Occupational Safety Health Act as they relate to the hospitality industry, with emphasis on safety standards, equipment and operations. 3 (3-0)

**Law Enforcement (LE)****101 Introduction to Law Enforcement and Criminal Justice** **Four credits**

An orientation course designed to acquaint the student with the fields of law enforcement. Municipal, County, State and Federal police organizations studied. Includes the history, philosophy and administration of justice. 4 (4-0)

**102 Crime: Causes and Conditions****Three credits**

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

**103 Criminal Law and Procedures****Four credits**

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

**104 Basic Elements of Criminal Investigation****Four credits**

Includes crime scene search; collection and preservation of evidence, identification, firearms identification; casting. Prerequisite: LE 103 or departmental approval. 4 (4-0)

**105 Criminal Offense Investigation  
Techniques and Procedures****Four credits**

To investigate specific crimes, prepare cases for prosecution. Courtroom testimony. Prerequisite: LE 104 or departmental approval. 4 (4-0)

**106 Juvenile Problems/Control and Prevention****Four credits**

Shows the role of the law enforcement officer in dealing with all aspects of juvenile offenses, providing the legal basis of the police officer's work with juveniles, and an understanding of the process involved when contact is made with persons under the age of 17. 4 (4-0)

**107 Juvenile Problems: Control and Prevention Part II****Four credits**

Expands and presents new and additional materials on the legal and procedural methods of dealing with persons under the age of seventeen when official contact is made with the law enforcement agency. Prerequisite: LE 106 or departmental approval. 4 (4-0)

**110 Police/Crisis Intervention****Three credits**

Examines behavioral dynamics that exist in a crisis situation as viewed from three perspectives: the citizen/victim, the police officer, and the resultant interaction that occurs when the officer actually intervenes. Utilization of this approach will not only provide the officer with the appropriate verbal skills but with an increased awareness of how and why this situation has come to exist. 3 (3-0)

**111 Stress and Law Enforcement****Three credits**

Explores the tension producing conditions of police work and their negative impact upon the officer's health, personality and family. Solutions to problem areas and coping methods such as conflict resolution, communication skills, problem solving models, and relaxation techniques will be examined. 3 (3-0)

**120 Basic Police Science****Five credits**

An introductory course provides the new police officer or student with the fundamental requirements of the patrol officer. Includes subjects covering human relations, history and philosophy of law enforcement, sex crimes, communications skills, organized crime, news media relations, custodial and rehabilitative facilities. Prerequisite: Approval of Law Enforcement Coordinator. 5 (5-0)

**124 Advance Police Science****Four credits**

Provides the student with an advanced level of presentation and scope, based on learning experience, in order to acquire more detailed technical and comprehensive insights into patrol function. 4 (4-0)

**161 Fraudulent Check Seminar****One credit**

Topics include: fraudulent check identification, personal identification, identification documents, victim and victim's dilemma, and things people do with checks. 1 (1-0)

**201 Police Organization and Administration****Four credits**

An analysis and study of functional divisions of the modern police department. Includes coordination of activities, communications, recruiting, training, public relations and a look at the future of law enforcement. Prerequisite: 15 hours of Law Enforcement or departmental approval. 4 (4-0)

**202 Police Management and Supervision** **Three credits**

To recognize the dynamic nature of the middle manager's work, and develop and refine the skills of the middle manager. To update the knowledge of managerial concepts and techniques, and the skills in supervision and human relations. The skills in quantitative aspects of modern management are included as the managerial functions are examined. Prerequisite: LE 201 or departmental approval. 3 (3-0)

**203 Theory of Patrol** **Three credits**

Study of patrol as a basic operation of the police function, the responsibilities of the uniform and patrol officers, purposes, methods, types and means of police patrol. Covers determination of patrol strength layout, beats, areas and deployment. Prerequisite: 15 hours of Law Enforcement or departmental approval. 3 (3-0)

**204 Highway Traffic Administration** **Four credits**

Covers the Michigan Vehicle Code, effective traffic control procedures, elements of "selective" enforcement, parking and intersection control, procedures and policies for vehicle accident investigation, investigation of fatalities, causes, prevention and scope of accident investigation. Prerequisite: 15 hours of Law Enforcement or departmental approval. 4 (4-0)

**205 Current Issues in Criminal Justice** **Three credits**

A seminar to study and analyze current criminal justice problems, utilizing social research as one means of problem solution. Prerequisite: Departmental approval. 3 (3-0)

**206 Police Interviewing and Interrogation** **Three credits**

A study of the techniques and tactics that can be successfully used in police interviewing and interrogation. Major emphasis is on the interview process as a method of gathering information. Includes constitutional law and court decisions regulating interviewing of suspects and criminal offenders. Prerequisite: Departmental approval. 3 (3-0)

**207 Narcotic Drug Seminar** **Three credits**

Offers basic information relative to narcotics and drugs. Provides factual objective information upon which the students may build further beliefs and opinions. Prerequisite: LE 104 and departmental approval. 3 (3-0)

**208 Organization of Criminal Activities** **Three credits**

The study of the development and history of organized crime throughout the world and the development of organized crime in Sicily and Italy with its transition to the United States.

The invisible government of crime is incomprehensible to the average American, and this economic entity, a government within a government, will be studied, including its funding and operations. Prerequisite: 15 hours of Law Enforcement and departmental approval. 3 (3-0)

**231 Directed Independent Study** **One credit**

Prerequisite: Coordinator approval. 1 (0-1)

**232 Directed Independent Study** **Two credits**

Prerequisite: Coordinator approval. 2 (0-2)

**233 Directed Independent Study** **Three credits**

Prerequisite: Coordinate approval. 3 (0-3)

**234 Directed Independent Study** **Four credits**

Prerequisite: Coordinator approval. 4 (0-4)

*NOTE: Minimum of ten hours work required per credit.*

**235 Basic Firearms** **Four credits**

Reviews safety rules and regulations, range procedures, nomenclature and function of the various types of weapons and types of ammunitions. To provide the basic courses in firing to attain at least the basic marksmanship qualification. Prerequisite: Second year LE major and Law Enforcement Coordinator approval. 4 (4-0)

**236 Basic Combat Firearms** **Four credits**

An intermediate firearms course designed as a transition from bull's-eye to field and combat shooting. Prerequisite: LE 235 and Law Enforcement Coordinator approval or Law Enforcement officer. 4 (4-0)

**237 Advanced Combat Shooting** **Four credits**

A program of advanced combat shooting which includes Michigan Law Enforcement Officers Training Council and additional combat firing needs, primarily of the types used by practitioners. Prerequisite: LE 236 and Law Enforcement Coordinator approval or Law Enforcement officer. 4 (4-0)

**241 Unarmed Defense** **Two credits**

(May be taken three times for a total of six credits)

**242 Unarmed Defense** **Four credits**

(May be taken three times for a total of twelve credits)

Designed to teach law enforcement and related criminal justice personnel the correct and effective methods of pistol, knife and club disarming; ways to apply come-along techniques; how to use riot sticks, handcuffs or nunchaku. Search techniques, including legal aspects of a search, are also included. 2 (2-0), 4 (4-0)

**247 Law Enforcement Internship** **Three credits**

May be elected after successful completion of basic Law Enforcement courses. Allows the student to be placed in an approved training section and earn credits for satisfactory work performance. A practical training program is developed in agreement with the training station supervisors and the College. The teacher conducts an arranged seminar once each week with the internship students to accomplish course objectives and to maintain constant evaluation in conjunction with coordinated visits to training stations. Prerequisite: Departmental approval. 3 (0-3)

- 248 Department of Natural Resources Officer Internship** **Fifteen credits**  
Eight weeks assigned to a supervising Senior Conservation Officer. During the internship the candidate will: study the organization and staffing of the State Department of Natural Resources, study State Conservation Law, review game and fish identification, and, when feasible, visit and become familiar with the functions and services of all Divisions of the State Department of Natural Resources such as Fire, Game, Fish, Lands and Water Resources. Prerequisite: Departmental approval. 15 (0-15)
- 255 Jail Operations** **Two credits**  
An introduction and understanding of the basic procedures involved in the operations of local correctional facilities. 2 (2-0)
- 256 Jail Management** **Two credits**  
An introduction and understanding of the basic procedures involved in the management of local correctional facilities.  
Designed for majors, non-majors, and pre-service students; structured to allow individual students to progress at their own rate. 2 (2-0)
- 260 Introduction to Corrections** **Four credits**  
An introduction and analysis of agencies and processes within the correctional system. An examination of correctional officer behavior and correctional legislation; the courts; rehabilitation; and correctional institutions and their operation and administration. 4 (4-0)
- 261 Corrections Organization** **Four credits**  
An introduction and analysis of the correctional systems and processes of the United States, Great Britain, Canada, France, Sweden, and the Soviet Union. 4 (4-0)
- 262 Correctional Security** **Three credits**  
A survey of the correctional process with primary emphasis on correctional security at the county jail and city lockup level. 3 (3-0)
- 263 Correctional Research** **Three credits**  
Provides an opportunity for those whose primary interest is in the field of corrections to pursue an area of research that is of particular relevance. Also provides an opportunity for working students to participate in a program that under more structured conditions would not be available or accessible to them. 3 (3-0)
- 267 Advanced Correctional Operations** **Three credits**  
An overview of major issues related to the operations of correctional facilities at the county jail. 3 (3-0)
- 268 Advanced Correctional Management** **Four credits**  
This course is intended to be an overview of major issues related to the management of correctional facilities at the county jail. 4 (4-0)

- 269 Seminar in Correctional Problems** **Three credits**  
An open seminar forum to discuss and analyze current problems in Michigan, the United States, and internationally. Students will be expected to question, discuss, analyze, and take positions on current correctional problems raised in the news media, publications, and by the instructor. 3 (3-0)
- 270 Probation/Parole** **Three credits**  
Covers the duties of parole and probation officers. Emphasis will be placed on specific problems in treating the offender in the community. 3 (3-0)
- 271 Probation/Volunteer** **One credit**  
Introduces the student to the volunteer-in-probation concept. The major objective is the dissemination of information dealing with successful volunteer programs around the nation as well as locally. Information presented includes: volunteers-in-probation, nationally and locally; a police department's approach to delinquency; and volunteers-in-probation as they relate to the professional probation officer. Seminar. 1 (1-0)
- 272 Corrections in Michigan** **Three credits**  
Examines the physical plant, operations, and inmate populations of the various City, County, and State correctional institutions in Michigan. Includes the various types of work release and work study programs offered, and the types of training utilized by these departments for their correctional staffs. 3 (3-0)
- 280 Security Administration** **Four credits**  
Introduction to the historical, philosophical and legal framework for security operations, as well as detailed presentations of specific security processes and programs utilized in providing security. Provides an overview of the protection of governmental and proprietary systems and installations; a survey of the personnel, physical, informational processes and specialized programs for plants, railroads, retail stores, security education and training; and the total environmental, political, financial, and legal ramifications of security and the individual in society. 4 (4-0)
- 281 Loss Prevention** **Four credits**  
Encompasses the functional operational areas of security, set in a framework of theoretical relevance, (risk management, risk control and risk accountability are defined and placed in a usable framework.) 4 (4-0)
- 283 Security Officer Training** **Variable credit**  
An advanced course designed primarily for school security personnel. Provides an adequate amount of training and education for security employees to enable them to function efficiently, effectively and professionally. Seminar.
- 287 Security Training-S** **Four credits**  
Designed primarily for school security personnel. The major objective is the provision of an adequate amount of training and education for security employees to enable them to function efficiently, effectively and professionally in their jobs. 4 (4-0)

- 301 Criminal Investigation and Procedure** **Five credits**  
Includes crime-scene search, collection and preservation of evidence; identification; firearms identification; casting; investigation of specific crimes; preparing cases for prosecution; court room testimony, plus some hands-on work. Seminar. Prerequisite: Departmental/Law Enforcement Coordinator approval. 5 (5-0)
- 302 Michigan Criminal Law and Procedure** **Five credits**  
Study of elements of criminal law including its purposes and functions. Covers law of arrest, search and seizure, rights and duties of officers and citizens, elements necessary to establish crime and criminal intent. Other topics include general court procedure. Seminar. Prerequisite: Departmental/Law Enforcement Coordinator approval. 5 (5-0)
- 303 Theory of Patrol** **Five credits**  
Study of patrol as a basic operation of the police function, the responsibilities of the uniform and patrol officers, purposes, methods, types and means of police patrol. Covers determination of patrol strength layout, beats, areas, and deployment. Hands-on work in seminar form. Prerequisite: Departmental/Law Enforcement Coordinator approval. 5 (5-0)
- 304 Field Investigation** **Three credits**  
A course covering the Michigan Vehicle Code, effective traffic control procedures, elements of "selective" enforcement, parking and intersection control, procedures and policies for vehicle accident investigation, investigation of fatalities, causes, prevention, and scope of accident investigation. Hands-on work in seminar form. Prerequisite: Departmental/Law Enforcement Coordinator approval. 3 (3-0)
- 305 Search Warrant Procedure** **Two credits**  
Shows the process of requesting, developing and servicing search warrants; when and when not to use search warrants; what evidence search warrants are needed for; probable cause for search warrants, and execution of the search warrant. Seminar. 2 (2-0)
- 306 Highway Traffic Operations** **Five credits**  
Reviews Michigan Motor Vehicle Code, effective traffic control procedure, vehicle stops and occupant control, accident investigation and DUI Enforcement. Seminar 5 (5-0)
- 307 D.U.I.L. Enforcement** **Three credits**  
Basic alcohol countermeasure concepts are examined through carefully tested teaching strategies that challenge the student to maximum performance, both during and after the course. Provides training to make officers aware of their role, relevant detection clues, and recommended techniques for sound alcohol enforcement. Prerequisite: Law enforcement officer. 3 (3-0)

- 311 First Aid I** **One credit**  
Examines the proper procedures for situations such as traffic accidents, home accidents, gunshot wounds, heart attacks, and drug overdose. Presents the basic techniques in control of bleeding and care for fractures. All first aid courses will be presented by certified American Red Cross First Aid instructors. Upon successful completion of this course the student will be eligible to receive the American Red Cross First Aid and Emergency Care Certification card. Prerequisite: Departmental approval. 1 (1-0)
- 312 First Aid II** **One credit**  
A brief review of the materials from LE 311, offering additional practice work in the skills of bandaging and splinting, and the lifesaving technique of cardiopulmonary resuscitation as presented by the Michigan Heart Association. Prerequisite: LE 311. 1 (1-0)
- 313 First Aid III** **One credit**  
A brief review of the materials from LE 312 with special emphasis placed on the technique of cardio-pulmonary resuscitation. The advanced first aid topics of emergency childbirth, drug overdose, and auto-extrication will also be presented. Upon successful completion of this course, the student will be eligible to receive the American Red Cross Advanced First Aid and Emergency Care Certification. Prerequisite: LE 312. 1 (1-0)
- 314 Advanced First Aid** **Four credits**  
A complete course of emergency first aid techniques for law enforcement personnel. Materials presented will be a combination of those described in LE 311, 312 and 313, and considerable time will be allotted for practical application of these skills. Upon completion of the course, presented by Certified American Red Cross First Aid instructors, the student will be eligible to receive the American Red Cross Advanced First Aid and Emergency Care Certification. Students who have completed any or all of the series: LE 311, 312, and 313, will not be eligible to enroll in LE 314. 4 (4-0)
- 900 Interpersonal Communication and Awareness (IPCA)** **One credit**  
A course emphasizing personal awareness and interpersonal communication for the spouses of police personnel. LE 900 is a condensed version of LE 903. Prerequisite: Departmental approval. 1 (1-0)
- 902 IPCA for Spouses** **Two credits**  
A two-day course for spouses of police personnel who have attended LE 903. The course emphasizes personal awareness and interpersonal communication. Prerequisite: Departmental approval. 2 (2-0)
- 903 Interpersonal Communication and Awareness (IPCA)** **Three credits**  
A course emphasizing personal awareness and interpersonal communication for police personnel, focusing on the individual police officer's relationship with other police personnel, the community, family and friends, and elements of the criminal justice system. Prerequisite: Departmental approval. 3 (3-0)

**906 Traffic Accident Investigation I****Four credits**

This program is designed to be a hands-on course. Reviews legal aspects of accident investigation, elements of traffic accidents, measuring and recording, roadway evaluation, vehicle evaluation, determination of pre-collision speed, and practical problems. Seminar. 4 (4-0)

**923 Supervisory Improvement Program****Three credits**

Same course as LE 202, presented in seminar form. Prerequisite: Departmental approval. 3 (3-0)

**926 Command Level****Five credits**

To enable command level officers, as part of a distinct management team, to prove their ability to lead, plan, organize, direct, coordinate, control and evaluate functions for which they have responsibility. This course will incorporate the system of MBO-Management by Objectives. Prerequisite: Law Enforcement Coordinator approval. Seminar. 5 (5-0)

**Labor Relations (LR)****200 Introduction to Labor Relations****Four credits**

A survey of the historical and legal frameworks of the labor movement in the United States. Examination of major labor laws, causes and purposes of the labor movement and union structure and behavior. Provides a historical perspective to a view of labor-management approaches to solving employment disputes. 4 (4-0)

**201 Labor Relations/Collective Bargaining****Four credits**

An investigation of collective bargaining as the mechanism used to establish wages, hours, and conditions of employment. Major emphasis is on the study of the collective bargaining process, the administration of a collective bargaining agreement and wage-benefit issues of employment. Prerequisite: LR 200 or departmental approval. 4 (4-0)

**202 Labor Relations/Grievances and Arbitration****Four credits**

Administration of the grievance procedure is central to the enforcement of a collective bargaining agreement and the resolution of employer-employee disputes. The grievance procedure (including employee discharge and discipline) is examined in-depth with a review of pertinent legislation. Opportunity to obtain the basic knowledge and skill necessary for grievance handling. Prerequisite: LR 201 or departmental approval. 4 (4-0)

**203 Labor Law****Four credits**

An in-depth study of major laws affecting labor relations and examination of the principle U.S. Supreme Court cases and National Labor Relations Board decisions that have given shape and direction to the law. Provides a functional picture of the National Labor Relations Board. Prerequisite: LR 200 or departmental approval. 4 (4-0)

**208 Labor Relations in Government****Four credits**

Labor relations in public employment are undergoing tremendous growth and change. The course outlines the structure and practice of labor relations and collective bargaining in the public sector. Recommended for government employees. 4 (4-0)

**276 Manager's Role in Labor Relations****Three credits**

Primarily designed for line and staff managers who have some responsibility for labor-management relations and are involved in any aspect of collective bargaining, preparation for bargaining, or administration of the contract at any level. Includes preparing for negotiations, top management's attitude and objectives, selecting the negotiating team, defining objectives within the framework of top management's objectives, gathering information including review of grievances, arbitrations, productivity data, internal and external surveys. 3 (3-0)

**Management (MGT)****111 Management Information Processing****Three credits**

Examines methods which increase flexibility and ease in rapidly processing large amounts of business and financial information that managers must examine. 3 (3-0)

**113 Leadership/Parliamentary Procedure****Three credits**

Includes the principles of group leadership and discussion; how to run a meeting and act as chairman and conference leader. Parliamentary procedure will be a focal point, discussing motions, amendments, point of order, point of information, appeals, and debating. 3 (3-0)

**121 Beginning Management/Small Business****One credit**

A one-day seminar to present basic management concepts to small businesses of the community, as well as disseminate information about the Small Business Administration and the ways it can assist small businessmen. 1 (1-0)

**250 Safety Standards****One credit**

An approach to developing safety attitudes and focusing attention chiefly upon the physical environment and its proper administration and supervision. Primarily directed toward first-line supervisors, operators, and safety specialists at all levels. Applies mainly to fork-lift operation. 1 (1-0)

**251 Introduction to Safety****Three credits**

An introduction to the basic principles of accident prevention. In examining the basis and philosophy of accident prevention, the student will develop an understanding of the theory of multiple causation; i.e., those factors which combine in random fashion to cause accidents. 3 (3-0)

**252 Safety Inspection & Accident Investigation****Four credits**

A procedure for collecting, analyzing and recording data as a principal function for locating accident causes. Helps determine what safeguarding is necessary to protect against hazards, and recommends countermeasures which prevent or reduce the number of accidents and injuries. 4 (4-0)

- 253 Human Factors Engineering** **Three credits**  
A practical approach to the systematic application of relevant information about human characteristics and behavior to the design of things people use, the methods for their use, and the composition of the environments in which people work and live. 3 (3-0)
- 254 Supervision and Safety** **Three credits**  
Explains the fundamentals and responsibilities of an industrial supervisor for safety on the job. Covers such facets as cost of accidents, the human element in safety, maintaining employee interest, training for safety, protective equipment, guarding, housekeeping, material handling, and fire control. 3 (3-0)
- 255 Job Safety Analysis** **Three credits**  
Examines the procedure used to review job methods and uncover hazards that may have been overlooked in the layout of the building and the design of the machinery and equipment; or to uncover hazards that may have developed after production started. 3 (3-0)
- 256 Occupational Safety Laws** **Three credits**  
Designed for those individuals who must keep abreast of the Federal and State Occupational Safety and Health rules and regulations. Provides the necessary tools for understanding the responsibilities of the employer and employee in complying with safety and health laws. 3 (3-0)
- 257 Techniques of Safety Instruction** **Three credits**  
Examines the various methods and procedures used in safety training based on clearly defined objectives that determine the scope of the training and guide the selection and preparation of the training material. Topics include: training needs, program objectives, training methods, and the lesson plan. 3 (3-0)
- 258 Safety Management** **Four credits**  
An approach to provide management and safety personnel with greater understanding and appreciation of their roles as managers, dedicated to the recognition, avoidance, and prevention of accidents. Explores the concept of "total loss control"; i.e., the elimination of all factors that contribute to downgrading the effectiveness of a business enterprise. Prerequisite: Management 350. 4 (4-0)
- 259 Human Relations in Safety** **Three credits**  
Safety attitudes must be developed within people if there is to be any progress in on-the-job safety. Human relations and safety mindedness must be practiced by all personnel at all levels, but safety is the responsibility of first-line supervision. This course provides step-by-step procedures for sound principles of management, and for solving actual job related problems. 3 (3-0)

- 274 Eupsychian Management** **Four credits**  
Eupsychian management as developed by the late Dr. Abraham Maslow is an example of human organization in a health society populated by healthy people. Embraces several disciplines; primarily, organizational behavior, philosophy and social psychology. Eupsychia is a synthesis of several individual contributions to the field of human behavior and a massive application of the insight of Professor Maslow. Therefore a maximum yield from the course presupposes a significant level of student preparation, and a systematic approach to scientific inquiry. 4 (4-0)
- 300 Introduction to Management** **Four credits**  
An analysis of the basic managerial functions, theories, and techniques in the areas of production, social-environment influences, organizational structure, interpersonal relationships, control, and motivational systems. 4 (4-0)
- 301 Management Analysis and Behavior** **Three credits**  
Provides a basic understanding of behavioral dynamics and interpersonal relations as they apply to decisions and actions of management. This is done through a series of cases that build upon one another to give the student an in-depth understanding of managerial relationships and responsibilities. 3 (3-0)
- 304 Organizational Development** **Four credits**  
A pragmatic approach to understanding and effectively dealing with the diverse personalities of people and the performance problems faced by a manager. Examines the skills needed to determine the real problem and then select an appropriate plan of action. 4 (4-0)
- 305 Introduction to Purchasing Management** **Four credits**  
A survey of purchasing activities as related to the manufacturing and service industries. Includes such topics as purchasing organization, principles and practices, and relationship of purchasing department with other departments in a business. 4 (4-0)
- 306 Management by Objectives** **Three credits**  
An advanced course in management considering the proper principles, concepts and practices of the management by objectives system. 3 (3-0)
- 307 Organizational Goal Setting** **Four credits**  
An in-depth study of the goal setting process as applied to a realistic situation. Emphasis will be on the total organizational approach to goal setting using a task team model for information gathering and decision making. 4 (4-0)
- 308 Organizational Performance Analysis** **Four credits**  
An in-depth analysis of organizational operations and performance measurement as applied to a realistic situation. Specific emphasis will be placed on measurement of organizational, managerial, and individual performance measurement. 4 (4-0)
- 309 Advanced Communications in Business** **Four credits**  
Designed to develop a more sophisticated forum for students who have had basic communication training for business and industry. Detailed practice and experience will be given to group dynamics, leadership and interviewing techniques. 4 (4-0)

**310 Production Management****Four credits**

Explains what a production function is and how it applies to all business and service organizations. Each component of production will be analyzed from a functional viewpoint to establish a theoretical base. The student will receive a complete overview of the production function with an awareness of the modern techniques and procedures used in management. 4 (4-0)

**312 Managerial Relationships****Three credits**

Consists of workshops in management by objectives and conflict resolution. Methods for bringing organizational manager-employee relations into close alignment are examined with emphasis on attaining objectives mutually agreed upon, and reckoning with dissonance. Seminar. 3 (3-0)

**313 Manager Awareness****Three credits**

Consists of workshops in models for managers and transactional analysis. A study of management styles and a continuous self-analysis theme will increase the individual's awareness of personal tendencies, strengths and weaknesses. Seminar. 3 (3-0)

**314 Effective Managerial Communication****Three credits**

Consists of workshops in manager effectiveness training and communication techniques. Extensive study is made in the dynamics of effective manager-employee communications. Seminar. 3 (3-0)

**315 Work Group Processes****Three credits**

Consists of workshops in group dynamics, problem solving, decision making, and meeting techniques. Facilitation of the work group and both inter- and intra-group processes are examined with emphasis on effective synergistic functioning. Seminar 3 (3-0)

**318 Organizational Policy****Four credits**

Examines the various aspects of the formulation of organizational policy, how it is communicated to the people who make up the organization, and how policy change occurs. 4 (4-0)

**323 CAM Internship****Four credits**

An advanced internship project toward earning a Certificate in Advanced Management. This project must be outside and beyond the student's regular area of responsibility and have an employer's approval. Prerequisite: Departmental approval. 4 (4-0)

**324 CAM Internship****Four credits**

A detailed quality report in the student's area of interest, applicable toward earning a Certificate in Advanced Management. To be selected jointly by the student and department coordinator. Prerequisite: Departmental approval. 4 (0-4)

**328 Interaction-Interpersonal Relations****Four credits**

An exploration of the interpersonal relationships that develop between individuals, between individuals and groups, between groups, and between management and the foregoing. The course will be presented in four parts: understanding the individual self, understanding group dynamics, understanding managerial philosophy, and modus operandi (putting it all together). 4 (4-0)

**330 Time Management****Four credits**

Emphasizes developing action plans which constitute a roadmap for reaching personal as well as organizational goals. Behaviorally oriented through self-analysis and actual cases and laboratory exercises. 4 (4-0)

**332 Managerial Ethics****Four credits**

Covers concepts of fairness, straight-forwardness and integrity as applied to the manager's relationships. The course will sensitize participants to relevant ethical values and ways in which they can be brought to bear on concrete problems. 4 (4-0)

**338 Topics in Management****Four credits**

An examination of advanced topical problems in management to develop skill in analysis, resolution, and solutions to operating problems. All are contemporary and relevant problems. 4 (4-0)

**345 Leadership: Attitudes and Motivation****Four credits**

Through total personal involvement in group interaction projects, the participant will experience an effective "whole person" approach to self-discovery, growth and self-realization, and find enriching new dimensions in assessing personal leadership aptitudes. 4 (4-0)

**346 Managerial Finance****Four credits**

Many managers within an organization do not have a financial background, yet are required to deal with financial matters and to communicate with those people who specialize in finance. The course is designed to provide the necessary skills to perform these tasks. 4 (4-0)

**347 Management Law****Three credits**

Reviews legal elements that affect managers and other employees within the organization. Topics include the background and recent developments in Equal Employment Opportunity (EEO); Occupational Safety and Health Act (OSHA); the Federal Trade Commission (FTC); other governmental agencies and regulations; antitrust; competitive pricing; and distribution policies and practices. 3 (3-0)

**350 Computer Basics for Management****Two credits**

A conceptual basis for understanding data handling systems, particularly electronic data processing. Topics such as computer memory, machine language programming, techniques, analysis of data, and creating data files are explored. 2 (0-20)



- 351 Computer Fundamentals for Managers** **Two credits**  
A survey of computer and data processing concepts of value to managers in non-data processing areas. Similar to MGT 350, although an overview approach of the field for beginning data processing students is provided. Utilizes audio tapes. 2 (0-20)
- 352 Management Information Systems** **Two credits**  
Shows the basic structure of Management Information Systems. Emphasis will be on communication with analysts, evaluation of potential effectiveness of systems, data collection and report generation. 2 (0-20)
- 354 Effective Selling** **Two credits**  
Shows how to develop the ability to close sales successfully and to plan selling activities to further the company's objectives. Covers topics such as: buying and selling process, understanding customers, tactics, sales planning, and effective presentations. 2 (0-20)
- 355 Purchasing Management** **Two credits**  
Examines the purchasing functions of a company. Provides insight into negotiation management, value analysis, goal setting, planning, human relations and the psychology of management. 2 (0-20)
- 356 Marketing Research** **Two credits**  
Topics such as marketing information systems, market potential, market share, customer behavior, cost analysis and sales analysis are explored. The course discusses the advantages/disadvantages associated with using psychological information on attitudes, traits, and motivations in marketing. 2 (0-20)
- 358 Marketing** **Two credits**  
Covers fundamentals of marketing. Especially suited to those working in a small business environment or with responsibilities in the marketing and sales area. The course is managerial in scope and reviews the operational aspects of marketing. 2 (0-20)
- 360 Communications for Results** **Two credits**  
Provides insight into understanding the communication process in modern business. Covers areas of practical application such as speaking, listening, interaction, and various channels for communication. The course takes communication and breaks it down into its various component parts and then relates it back into the organization. It illustrates how managers receive and interpret feedback produced in the business organization, thus enabling far more effective communication within an organization. 2 (0-20)
- 361 A Manager's Guide to Human Behavior** **Two credits**  
Explains the complex area of human behavior as it applies to the management of productive organizations. Major areas of emphasis include psychological concepts, interpersonal relations, and group behavior. 2 (0-20)

- 362 Transactional Analysis for Managers** **Two credits**  
Presents the principles and language of Transactional Analysis. The course then moves from the theoretical approach of TA to direct application of the principles in a variety of business situations. 2 (0-20)
- 364 Supervisory Management** **Two credits**  
Designed to help managers at all levels to develop, enhance, and update their skills. Major areas of emphasis include: planning, operating, controlling, and personnel functions within the department. 2 (0-20)
- 365 Supervisory Effectiveness** **Two credits**  
An introduction to supervisory techniques and concepts for new or prospective supervisors. Topics are job scheduling, planning, production, productivity, PERT network, critical path, communication within the organization, supervisor-subordinate relationships and group management. The course utilizes audio tapes. 2 (0-20)
- 366 How to Manage People at Work** **Two credits**  
Identifies the major areas of employees' needs that a manager should strive to satisfy and identifies the basic reasons for individual needs changing and how these needs differ from one group of workers to another. Topics such as human relations, formal and informal organizations, the American work force, being a leader, motivating behavior, communications, disciplining workers, and coping with problem employees are explored. 2 (0-20)
- 368 What Managers Do** **Three credits**  
To clarify the perceptions of the manager's job. Emphasis will be placed on relationships, contribution, hierarchy structure, supervisor-subordinate relations, and social interactions. The student gains insight into the managerial situations, rules, and the regulations that affect them. Prerequisite: Recommend some management background. 3 (0-30)
- 369 Management 18** **Two credits**  
Presents eighteen chapters containing management skills. Each chapter examines different concepts and activities involved in management. Helps managers at all levels to develop, enhance, and update their management skills. The course is designed for newly promoted managers who have not received formal business training, yet who need to learn new management techniques and to acquire the basic skills to manage effectively. It is also designed for experienced managers who require an effective refresher course. 2 (0-20)
- 370 Effective Business Presentations** **Two credits**  
Presents setups necessary for making effective oral business presentations. After completing the course of study, the learner should have developed the following attitudes and skills: a knowledge of the specific principles and techniques for any oral business presentation if it is to be effective; an increased capability to use and apply the principles and techniques learned. 2 (0-20)

**372 Getting Results Through MBO****Two credits**

Shows basic concepts of Management by Objectives in the business organization. Organizational goals are determined and objectives are established and implemented. The system of MBO is explained and evaluated. 2 (0-20)

**373 How to Manage by Objectives****Two credits**

To provide an understanding of the fundamentals, principles, and procedures of managing by objectives, its benefits, and its various applications. Serves as a practical operating guide for those who wish to introduce and develop the concept as a management system in their organization. Gives additional insight and alternative techniques to those individuals already practicing managing by objectives but who wish to refine their skill. 2 (0-20)

**374 Personnel Management****Two credits**

Shows how to identify and correct common misconceptions about what personnel work involves. Topics such as human resource, planning, staffing, appraisals, training, development, benefits, wage and salary administration, labor relations and safety policies are explored. 2 (0-20)

**376 Performing the Operations Analysis****Two credits**

To provide the student with a comprehensive understanding of the various aspects of operations analysis. Special emphasis is placed on specific applications in areas such as management, marketing, personnel, manufacturing, purchasing, and engineering. The course takes the student within the organization and uses a problem solving approach to determine if the unit is functioning properly. 2 (0-20)

**377 Finance and Control for Nonfinancial Managers****Two credits**

Offers a manager the needed information to obtain an understanding of managerial finance, and provides a practical way for the manager to become more effective and valuable. After completing the course, the non-financial manager can apply useful accounting principles. The course utilizes audio tapes. 2 (0-20)

**378 Project Management****Two credits**

Basics of Project Management. Defines authority, responsibility, accountability, quality assurance, quality control, PERT, line of balance, and input-output charts. The ideal flow of power within an organization, the why and when of planning, the need for project control documentation, the benefits of in-contract service, the step-by-step approach to decision making, steps for budgeting, nature and scope of systems engineering on a project, contracts and the production of sections are explored. 2 (0-20)

**380 Decision Making for Managers****Two credits**

Information for effective problem-solving and decision-making skills; placing emphasis on six elements which are: environment, organization, decision-making, relationships, alternatives, and choices. The mathematical approach to decision-making uses diagrams and computational rules. 2 (0-20)

**381 Quantitative Aids to Decision Making****Two credits**

Mathematical and statistical methods of analysis and decision making in business. The emphasis is on how data is used in the management of the business, including statistical techniques and mathematical models. The types of problems appropriate for quantitative methods are also covered. 2 (0-20)

**382 Decision Making****Two credits**

Basic differences between the satisfying and optimizing decision model, measurement scales, effects of environmental factors when forecasting possible alternative futures. Topics such as decision processes, recognizing the need for change, translating outcome scores into value scores, and making the decision and living with it are explored. 2 (0-20)

**384 Modern Production Management I****Two credits**

Reviews the principles and techniques required for making short-term decisions necessary to operations control. Gives an orientation to analytical methods for application to planning and control. Topics such as capital costs and investment criteria, product and process design, plant location, facilities design, production standards, and man-machine systems are explored. 2 (0-20)

**385 Modern Production Management II****Two credits****Planning and Designing Productive Systems**

An overview of the advantages and disadvantages of the four types of production systems: distribution, high-volume production-distribution, intermittent, and large-scale project systems. Topics such as production-inventory systems, forecasting, "systems concepts," quality control and machine maintenance are also explored. 2 (0-20)

**386 Getting Results with Time Management****Two credits**

Underlying causes of poor time utilization are explored. Emphasis is on situational analysis, identification of problem areas, and action steps to be taken in correcting the problem. 2 (0-20)

**388 Total Time Management****Two credits**

Focuses on finding time-wasting activities, then learning the step-by-step procedure for creating a time log and a time comparison chart to eliminate these activities and make maximum use of your best resources. The course utilizes audio tapes. 2 (0-20)

**389 Training and Developing Today's Work Force****Two credits**

To provide an understanding of training and development in the modern work environment. Emphasis is placed on the history and psychology of training and development, determination of needs, methodology, and evaluation methods. Shows how training needs are determined and implemented. Good in-depth study of the training and development field. 2 (0-20)

**390 Winning with Leadership Skills****Two credits**

To help improve management performance and develop a winning attitude toward leadership skills. Topics such as assessing leadership style, approach to managing, human behavior, change and improvement are explored. The course utilizes audio tapes. 2 (0-20)

**392 How to Develop Dynamic Leadership** **Two credits**

To provide a knowledge of organizational dynamic development; how to identify specific personal action patterns, and understand present management style (posture), personal defensive system (sets) and actions as a manager (modes). 2 (0-20)

**393 Labor Relations for Supervisors** **Two credits**

Presents the administration of a labor contract. Topics such as arbitration procedure, preparation, appearing as company witness, effective disciplinary procedures, and contract provisions are explored. Provides a complete step-by-step analysis of grievance procedure with emphasis on why and how grievances should be handled. The course utilizes audio tapes. 2 (0-20)

**394 Managing Labor Relations** **Two credits**

To provide an understanding of labor/management relationships. Emphasis is on labor relations today, negotiations, bargaining power and advance planning. The course will cover every aspect of dealing with a union. Audio tapes are utilized. 2 (0-20)

**917 Advanced Management Series I** **(Each) One credit**

This series includes eight management courses in current topic areas of interest to the management community. Guest speakers conduct these seminars in an effort to bridge the gap between theory and practice. Possible topics include: Meeting Techniques, Transactional Analysis, Management by Objectives, Organizational Communications, Individual Communications, Conflict Resolution, Problem Solving, and Decision Making. These courses may be taken independently or as a series. Seminars. (Each) 1 (1-0)

**918 Advanced Management Series II** **(Each) One credit**

This series includes eight management courses in current topic areas of interest to the management community. Guest speakers conduct these seminars in an effort to bridge the gap between theory and practice. Possible topics include: Time Management, Leadership, Assertiveness Training, Manager Effectiveness Training, Stress Management, Motivation, Handling the Problem Employee, and Making Effective Presentations. These courses may be taken independently or as a series. Seminars. (Each) 1 (1-0)

**922 Middle Management** **Three credits**

Examines the unique skills required of a manager with subordinate managers who must report to a higher level manager. This position requires more time spent in the planning and organizing functions than does a first level managerial position. 3 (3-0)

**930 Women in Management** **Three credits**

For women who are interested in understanding and analyzing effective management. The program addresses itself specifically to the challenges and barriers that women are faced with when placed in managerial positions. Seminar. 3 (3-0)

**Marketing (MKT)****120 Sales** **Three credits**

An analysis of the fundamentals of salesmanship and their role in the marketing mix. Emphasis is on developing skills in behavioral sciences and those needed to enter or understand the field of sales. Deals with customer buying habits, the sales process, product demonstration techniques, and analysis of the human relations aspects of sales. 3 (3-0)

**121 Advanced Sales** **Three credits**

An analysis of the sales interview. Deals with video taping sessions where each facet of the sale is dissected and analyzed individually. 3 (3-0)

**122 Field Sales** **Three credits**

An in-depth analysis of salesmanship and marketing, offering an opportunity for practical field sales experience in consumer and industrial sales. The student joins a business, is trained, and then performs actual sales in the community. Class time will be in the field, learning advanced techniques of selling and further refining individual selling skills. Prerequisite: MKT 120. 3 (0-3)

**130 Retailing** **Three credits**

A comprehensive consideration of the activities involved by retailers in selling goods to ultimate consumers. Emphasis is placed on areas relating to the needs and interests of the class. 3 (3-0)

**131 Fashion Merchandising** **Three credits**

Examines fashion merchandising functions, policies, what, when, where, how much, how to, and from whom to buy. Includes an introduction to fashion history, textile construction, design, color, figure types and fashion trends. Career opportunities are also explored. 3 (3-0)

**140 Basic Advertising** **Three credits**

Presents methods and techniques used in modern advertising, providing instruction in doing the entire advertising job. Copywriting, selection of media and how the advertiser can approach relevant problems most effectively are included. 3 (3-0)

**141 Retail Advertising** **Three credits**

Shows planning, development, and execution of retail advertising for greater effectiveness. Each method of advertising is examined for strengths and weaknesses as feasibility is determined. The advertising budget is carefully analyzed. 3 (3-0)

**142 Advertising Copy/Layout** **Four credits**

Intended primarily for persons who have responsibility for advertising a business or organization, and for those considering a career in advertising. Through readings, individual practice, and class discussions of examples from the media, students will be shown the basic principles of and techniques involved in the creation of advertising messages. 4 (4-0)

**200 Introduction to Marketing I** **Four credits**

A general study of the problems and policies of manufacturers, wholesalers, and retailers in the marketing of goods and services. Channels of marketing, customer relations, functions of sales departments, price policies and communications are included. For the student wanting a basic marketing orientation. 4 (4-0)

**201 Introduction to Marketing II** **Four credits**

A continuation of Marketing 200 for marketing majors. More detailed in all marketing functions. Prerequisite: MKT 200. 4 (4-0)

**202 Managerial Marketing** **Four credits**

A study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Concerns allocation of funds to various means of market cultivation, development of promotional strategy, price policy, and management of field selling efforts. The case will be used extensively. Prerequisite: MKT 201. 4 (4-0)

**220 Sales Management** **Three credits**

A study from the viewpoint of management, dealing with the organization and operation of the sales division within the business enterprise. Planning, organizing and controlling the total sales effort is emphasized. The case method of learning is employed extensively. Prerequisite: MKT 120 or departmental approval. 3 (3-0)

**221 Consumer Behavior** **Three credits**

Designed as an overall view of some of the basic perspectives of consumer motivation and behavior. The model specifies relevant variables that shape consumer action. 3 (3-)

**225 Written Communications for Business** **Three credits**

Designed to provide instruction in how to develop written communications pertaining to business. Students learn the basic fundamentals of business letter writing and report writing based on the principles of clarity, speed and image. 3 (3-0)

**230, 231, 232, 233 Independent Study—Marketing** **(Each) Three credits**

Offers advanced marketing students an opportunity to design, implement and draw conclusions about an area of interest in the marketing field. Minimum of ten hours work per credit is required. Prerequisite: Departmental approval. 3 (3-0)

**235, 236, 237, 238 Marketing Internship-Seminar** **(Each) Three credits**

After successful completion of basic courses, students may elect internship. Allows students to be placed in approved training stations, earn credits for satisfactory work performance, and earn wages for hours of work. To participate in this program, students must be qualified to receive approval from their department and enroll with the coordinator. Prerequisite: Coordinator approval. 3 (0-3)

**240, 241, 242 Sales Internship** **(Each) Three credits**

Students who successfully complete the basic sales courses may elect to take an internship. These courses allow the students to be placed in an approved training station, earn credits for satisfactory work performance, and earn wages for hours of work. Those who wish to participate in this program must receive approval from their department and enroll with the coordinator. 3 (3-3)

**Real Estate (RE)****270 Real Estate Business Math** **Two credits**

Comprehensive review of all math involved in real estate transactions, including interest, percentages, amortization, and commission. 2 (2-0)

**271 Real Estate Business I** **Three credits**

A practical approach to problems arising in day-to-day real estate transactions, introducing all facets of the real estate business. Primary objective of the course is to present points of law and real estate principles useful to the salesperson and broker alike. The first course toward GRI designation. 3 (3-0)

**272 Real Estate Business II** **Three credits**

Covers material of interest and value to the established broker as well as to those who are planning to become brokers. Introduces real estate closings and taxation, and expands on subjects such as appraisal, management, investment and finance. Prerequisite: RE 271 or coordinator approval. 3 (3-0)

**273 Real Estate Business III** **Three credits**

Provides advanced material for brokers and salespersons. An introduction to the real estate investment market with emphasis on taxation, investment analysis, depreciation, income appraising, investment, finance, exchanging, and property management. Prerequisite: RE 271 and 272. 3 (3-0)

**274 Real Estate License Examination** **Three credits**

Intense study in preparation for passing the state examination required for real estate licensing. 3 (3-0)

**275 Real Estate Finance** **Three credits**

Planned for those who have limited experience in home financing. Instruction includes both mortgage lending and the use of the Michigan Land Contract. Specific attention is directed to the legal instruments used and the methods of foreclosure available in the case of default. 3 (3-0)

**276 Real Estate Law** **Three credits**

Reviews legal problems of salespersons and brokers. Topics include introduction to real estate law, land and its elements, land titles and interests in land, abstracts and title insurance, deeds, easements, liens, escrows, brokers and salespersons and the law. 3 (3-0)

**277 Property Management****Three credits**

Covers management responsibilities to owners of income producing properties. Topics include: management and the market, monetary influences on real estate, management plan, merchandising residential space, tenant negotiations, rent, leases, collections, managing apartments and retail stores, store rentals and percentage leases, special purpose management, tenant-owner relations, records accounting and insurance. 3 (3-0)

**278 Multiple Listing Service****One credit**

Designed for newly licensed salespersons. One-day seminar introduces participants to the various advantages of organized real estate and multiple listing services. 1 (1-0)

**279 Buying and Selling a Home****Two credits**

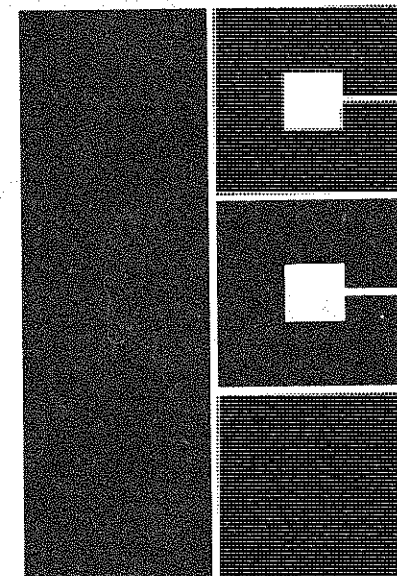
For persons who have little or no experience in purchasing or selling residential property. The objective is to acquaint the participant with the mechanics of buying and selling a home. The course will cover the steps necessary to transfer title from a seller to a buyer, including the steps involved in a "closing." 2 (2-0)

**287 Real Estate Internship****Three credits****288 Real Estate Internship****Three credits****289 Real Estate Internship****Three credits**

Placement of student with a licensed Real Estate Broker (designated by the local real estate board) to earn credit while participating in real estate activities. Areas of specialization can be selected and individual programs developed which best combine the needs and interests of the student and the broker, in affiliation with the real estate coordinator. Prerequisite: Licensed real estate salesperson. 3 (3-0)

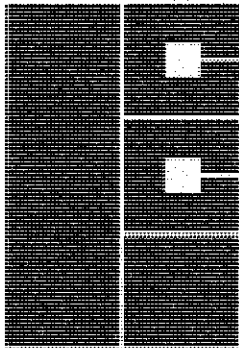
# DIVISION OF APPLIED ARTS AND SCIENCES

Department of  
Engineering Technology  
Department of  
Applied Technology  
Department of  
Health Careers  
Department of  
Performing and  
Creative Arts



# DIVISION OF APPLIED ARTS AND SCIENCES

Dean William Monroe



The Division of Applied Arts and Sciences attempts to include in the catalog a listing of all courses offered by the Division. However, from time to time, courses are added to satisfy changing student needs. For this reason, anyone desiring a course not listed in the catalog should contact a department chairperson or the Dean for further information.

## Objectives

Programs in the Division of Applied Arts and Sciences are developed to serve a diversity of needs across the community. These include particular needs of labor, industry, business and government, and of other groups wishing to participate in seminars, courses, or other service educational activities. With the exception of a few continuing education courses in the Department of Health Careers, all courses offered by the Division can be applied to a certificate or degree program. However, students who wish to take individual courses may do so without being required to enroll in either a certificate or degree program.

## Career Training . . .

- to meet specific individual needs through single courses, combinations of selected courses, one-year Certificate Programs, and Associate Degree Career Programs.
- to provide an opportunity for students to prepare for one of today's increasingly complex jobs, to become qualified for a more advanced position, or to perform better in their present job.
- to provide an opportunity for industries, governmental agencies, hospitals, or other organizations wishing special courses intended to help their employees perform better in their assigned tasks or to become qualified for advancement to better positions.
- to provide an opportunity for apprentices who wish to enroll in joint "on-the-job" training in cooperation with local employers and related training at the Community College.

In addition to the College staff or full-time faculty, the career programs feature a team of part-time faculty who are working full time in careers related to their teaching specialties. This group includes not only technical specialists but company executives and other experienced personnel.

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

### Applied Technology (Building and Service Trades Apprenticeships)

Asbestos Worker	Electrical Residential
Auto Body Man	Machine Repair (Business)
Auto Mechanic	Painting & Decorating JATC
Bricklaying J.A.C. (Joint Apprenticeship Committee)	Photo Engraver
Carpenter	Plumber-Pipefitter JATC
Carpenter J.A.C.	Plumber-Pipefitter Maintenance
Diesel Mechanic	Sheet Metal
Drywall Taping	Sheet Metal (Residential)
Electrical Construction JATC (Joint Apprenticeship Training Committee)	Silk Screen Processor
Electrical Maintenance	Stone Cutter
	Technical-Dental
	Technical-Optical

**Certificate and Associate Degree**

Alternate Sources of Energy  
 Appliance Servicing  
 Auto Body & Paint  
 Auto Parts Counterman  
 Automotive Apprentice  
 Automotive Servicing  
 Construction Electrician  
 Custodial Maintenance  
 Die Maker (Tool and Die Maker)  
 Diesel Engine Technology  
 General Technology  
 Glassblowing  
 Graphics  
 Heating, Air Conditioning  
 & Refrigeration  
 Industrial Management

**Industrial Apprenticeships**

Auto, Truck and Trailer Repair  
 Die Design  
 Die Engraver  
 Die Maker  
 Die Sinking  
 Die Trimmer Maker  
 Draftsman  
 Electrical, Industrial  
 Engraver  
 Machine Builder  
 Machine Repair  
 Machinist

Industrial Technology  
 Labor Studies  
 Labor Studies, Consumer Awareness  
 Labor Studies, Labor Law  
 Machine Repair  
 Machine Tool Careers  
 Machinist, Toolmaker  
 Millwright  
 Numerical Control Programmer  
 Plastic Technology  
 Residential Builder  
 Sheet Metal  
 Small Engines  
 Tool Maker  
 Vocational-Technical-General  
 Weldor

Maintenance Machinist  
 Millwright  
 Mold Maker  
 Model & Patternmaker  
 Plumber-Pipefitter, Industrial  
 Sheet Metal, Industrial  
 Structural Steel  
 Tool Designer  
 Tool & Die Maker  
 Tool Inspector  
 Tool Maker  
 Weldor, Tool & Die

**Employee-In-Training Oldsmobile & Fisher Body**

Assembler/Experimental Auto  
 Blacksmith  
 Boring Mill Operator  
 Bricklayer-Furnace Building  
 Building Repair-General  
 Carpenter  
 Cutter Grinder  
 Die Tryout  
 Draftsman-Layout Sr.  
 Dynamometer Operator-Engineer  
 Electrician  
 Elevator Maintenance & Repair  
 Garage Mechanic & Repair  
 Gear Cutter-Experimental  
 Grinder Operator  
 Hardener-Tool and Die  
 Inspector-Layout Gages or Tech.  
 Inspector-Standard Tool  
 Inspector-Gage Check & Repair  
 Jig Borer Operator  
 Lab Pyrometer Man  
 Lathe Operator  
 Machine Repair

**Engineering Technology**

Architectural Technology  
 Avionics Technology  
 Civil Technology, Highway  
 Civil Technology, Sanitary  
 Civil Technology, Structural  
 Civil Technology, Construction  
 Civil Technology, Surveying  
 Civil Technology, Traffic  
 Engineering

**Health Careers**

Adaptive Physical Rehabilitation  
 Continuing Health Education  
 Cytotechnology  
 Dental Assistant  
 Dental Hygiene  
 Emergency Medical Services  
 Technician

Machinist-Forge Plant  
 Metal Finisher-Hand Form  
 Milling Machine Operator  
 Millwright  
 Painter  
 Pipefitter  
 Planer Operator  
 Pneumatic Tool Repair  
 Power House-Substation Operator  
 Refrigeration and Air Conditioning  
 Maintenance  
 Safety Appliance Maker  
 Shaper Operator  
 Sheet Metal Worker  
 Template Maker  
 Tinsmith  
 Tool Gage and Fixture Repair  
 Tool Maker  
 Truck Repair-Gas and Electric  
 Weldor-Arc, Gas and Layout  
 Weldor-Die  
 Weldor-Maintenance-Gas and Arc  
 Woodworker or Modelmaker

Industrial Drafting Technology  
 Electro-Mechanical Technology  
 Electronics Technology  
 Fire Science Technology  
 Industrial Safety Management  
 Mechanical Technology  
 Quality Control & Reliability Technology  
 Technical-General  
 Truck Driver Training

Nursing, Associate Degree  
 Operating Room Technician  
 Practical Nursing  
 Radiologic Technology  
 Respiratory Therapist  
 Respiratory Therapy Technician

**Performing and Creative Arts****Art**

Artist/Tradesman  
Commercial Art  
Interior Decorating and Design

**Dance**

Modern or Ballet Emphasis

**Music**

Commercial  
Instrumental  
Vocal

**Applied Lessons**

Instrumental  
Vocal

**Piano Tuning****Transfer Programs**

Although many students transfer to a professional school or into a four-year university program after receiving an Associate Degree, it should be recognized that most individual courses are transferable even though the student does not participate in a degree program.

Universities and colleges throughout the United States differ widely in courses they accept for transfer. Transferability depends upon the university or college and the program into which the student wishes to transfer. Students planning to transfer to other universities or colleges should consult with the LCC Office of Transfer Applications in the Department of Student Development Services (Tel. 517—373 7076) in order to achieve maximum transferability.

**Associate Degree Programs**

Criteria for the Associate Degrees in Applied Arts & Sciences Division of Applied Arts & Sciences

These requirements pertain to the following degrees:

- Associate—Applied Arts
- Associate—Applied Science
- Associate—Applied Science, General Technology
- Associate—Applied Arts, Performing & Creative Arts—General

To receive one of the Associate Degrees listed above, a student must meet the following requirements:

1. Completion of course requirements of specific programs for specialized study areas outlined in the curriculum guides of each department or the requirements of the Associate Degree in General Technology as outlined in the 830 curriculum guide. For the Associate Degree in Performing & Creative Arts-General see the 990 curriculum guide.
2. Completion of a minimum of 90 credits
3. G.P.A. of 2.0 or better
4. 30 credits in attendance at LCC
5. Completion of four credits of American Government or State and Local Government (SS 104 or SS 105)

**Theatre**

Acting  
Costume Design  
Directing  
Lighting and Sound  
Set Design and Construction

**Certificate Programs**

Certificate programs are designed to meet specialized needs of students in certain fields. A Certificate program duration can vary from a few days for an intensive workshop to an extensive program requiring additional work beyond the Associate Degree programs. These Certificates programs are described in detail in the departmental sections of this catalog.

**Community Service Programs**

- Individually designed to satisfy broad segments of the community served
- Ranging from industrial service to production of Broadway musicals
- With locations arranged to suit the needs of the community. This may include offerings within industry or in other locations within the college service area. Recently, the Division of Applied Arts and Sciences has offered a variety of seminars as part of this community service. These and other seminars can be offered upon request through the office of the Dean of the Division of Applied Arts and Sciences.

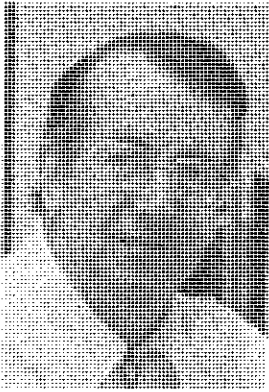
Recent seminars have included the following:

Advanced-Electrical Controls  
Advanced Special Burner  
Apprentice  
Automotive Body  
Automotive Mechanics  
Automotive Service  
Drafting  
Electronics  
Fire Science  
Heating and Air Conditioning  
Industrial Management (Basic Skills)  
Industrial Management  
(Front Line Foreman)  
Michigan Dept. of State Highway  
Oil Burner  
OSHA-MIOSHA (Occupational Safety &  
Health Act—Mich. Occupational  
Safety & Health Act)  
Safety  
Truck Driver  
Waste Water (State Health Dept.)  
Welding (In-plant)  
Welding  
Art Lecture  
Art Lecture-Art and Industry  
Band and LanSymphonic Choir  
Dental Radiology



### Department of Engineering Technology

Chairperson: Edwin C. Bergmann



The world of technology has been progressing very rapidly in the last half of this century. The technological challenges of providing housing, pollution-free living space, clean water, power, light, transportation and new industrial advances yet unheard of, present great employment opportunities to those who are technically competent and prepared to work in these fields.

The supply of engineers and scientists is keeping pace with the necessary technological leadership, but the number of technicians, skilled service personnel and related workers lags far behind the number needed. Technicians perform a necessary part in research, production, sales and service work. They combine both "know how" and "know why" as they perform their skilled and responsible duties.

The Engineering Technology Department has as its primary objective the responsibility for providing educational opportunities for individuals who desire to become technicians or want to acquire the skills of a technician.

A program of instruction for a technician normally includes the study of the underlying sciences and supporting mathematics inherent in a technology. This is a planned sequence of study that can be customized to meet the needs of a student in a field of specialization, methods, materials, processes, competency in the basic communication skills and related general education courses.

Two-year Associate Degree programs (90 credit hours) offered by the Engineering Technology Department in Architecture, Industrial Drafting, Avionics, Fire Science, Occupational Safety and Health, Aviation, Solar Energy, Electro-Mechanical, Electronics, Civil Technology, Landscape Architecture, and Quality Control are structured to prepare the individual to enter a specialized technical position and to be productive with a minimum of additional training after employment.

The Engineering Technology Department has also assumed the responsibility for providing opportunities for individuals to upgrade themselves in their present positions, or for offering guidance in the selection of a new career.

Administrators and faculty are available to assist students in the selection of courses and in the planning of programs to meet individual needs: transfer of credit for formal courses to be taken at other schools, including military schools, or work experience that is pertinent to occupational programs.

Curricular guides are available for all Associate Degree programs. A full year schedule and promotional flyers for special courses are published each term. Individual programs and courses are described on the following pages:

### Architectural Technology Associate Degree (AT)

The College offers a two-year Associate Degree program designed to help prepare students as technicians in architecture, solar design, energy efficient design, and landscape architecture. An architectural technician is a highly trained semiprofessional who works in direct support of a professional architect, engineer or builder. Courses emphasize the preparation of architectural working drawings, the ability to think, communicate, calculate and illustrate. *Curriculum Code 540*

#### Architectural Technology—Landscape Architecture Option

A Landscape Architectural Technician is a highly skilled semiprofessional who works directly with professional landscape architects, architects, engineers, nursery-workers and urban planners. Course work centers on verbal and graphic presentation skills, and stresses working knowledge of site grading, planting design, site layout, construction materials and methods, contract documents, office practices and land design. *Curriculum Code 541*

#### Architectural Technology—Solar Technician Option

A Solar Technician is a highly skilled semiprofessional who works directly with professional engineers, heating, ventilating and air conditioning contractors and electrical engineers. Course work centers on the design of structures which are compatible with the natural environment, making use of direct solar radiation as well as efficient use of conventional fossil fuel back-up systems. Such structures will be designed for energy efficiency, utilizing insulation, solar glazing, thermal shuttering, Trombe walls, massive heat sinks and thermal fly wheels. *Curriculum Code 542*



**Aviation Technology (AFT) (APA) (APG) (APP)  
Aviation Flight Technology (AFT) Associate Degree**

This program provides training for students who aspire to become professional pilots. The degree includes all flight training and associated ground schools to help prepare students for Private, Commercial and Instrument Pilot license examinations. The student is encouraged to take electives in Business, Marketing, and Management to fulfill the Associate Degree requirement of 90 credits. The curriculums are fully approved by the Federal Aviation Administration. *Curriculum Code 531*

**Aviation Maintenance Technology (APA) (APG) (APP)  
Associate Degree**

This 30-month (144-credit) program is designed to help to prepare the student for a career in the Aviation Maintenance field. Students in this program also work toward the qualifications required to pass the Federal Aviation Administration Examinations and acquire an Air Frame and Powerplant Mechanic License.

During the program, students will cover a wide variety of subjects dealing with airplanes, reciprocating engines, turbine and jet engines, propellers, ignition, electrical systems, and hydraulic systems.

Approximately 1900 hours of required classroom, shop and laboratory instruction are divided into: Airframe and Powerplant Mechanic General, 400 hours; Powerplant Mechanic, 750 hours; and Airframe Mechanic, 750 hours. A waiting list is maintained for admission. *Curriculum Code 532*

**Avionics Technology (AFT,ET) Associate Degree**

Avionics Technicians install and maintain electronic equipment used aboard aircraft, such as communications and navigation equipment, weather radar, transponders and autopilots. The program consists of fundamentals of electronics, orientation to avionics, study of digital and communication systems, and many specialized courses in avionics systems. In the laboratory, the student works with high-quality electronic test instruments and avionics equipment of the same kind found in a typical avionics shop. Included in this curriculum is preparation for the FCC Second Class License Examination which is required for work on the transmitting portion of avionics equipment. *Curriculum Code 567*

**Civil Technology—Construction Option**

The objective of the Construction Technology Option is to provide basic training in the design and construction of buildings and structures. The aim is not to train skilled draftspersons or professional designers, but to train technicians who will work with both of these groups. Persons so trained may qualify, with additional work experience, as estimators, engineering aides, construction superintendents, contractors, building inspectors, or for other related fields of work. *Curriculum Code 516*

**Civil Technology—Highway Option**

The two-year Highway Option is designed to provide the background and skills for an engineering draftsman, survey instrument person, traffic technician, construction inspector, materials testing laboratory technician, materials research laboratory technician, specification writer, estimator, construction equipment salesperson, or construction equipment salesperson. *Curriculum Code 515*

**Civil Technology—Traffic Option**

The two-year Traffic Option prepares a technician to assist the traffic engineer who is responsible for the development of a complete traffic system in a community; the planning and implementation of programs, and the administration of the traffic engineering functions.

The traffic engineering technician is concerned with data collection, the analysis of data, and the preparation of recommendations for the correction of roadway systems problems. *Curriculum Code 517*

**Civil Technology (CT)**

Civil Engineering Technology is one of the broadest fields in the overall practice of engineering since its work is coordinated with so many other branches of the science. Civil Engineering deals with the planning, design, and construction of fixed structures and ground facilities for land, sea and air transportation, for control of the flow and uses of water.

On the job, the technician works with engineers to find practical uses for scientific discoveries and serves as the link between an engineer and the skilled worker.

A Civil Engineering Technician is trained to draw up plans and specifications, estimate costs and materials needed, use the transit, level and other surveying instruments, prepare maps, inspect jobs, and supervise construction.

**Civil Technology—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 and to make calculations. Theory, field work and field problems are a large part of course work. *Curriculum Code 522*

**Civil Technology—Structural Option**

This two-year structural option curriculum allows the student to prepare for employment as a structural draftsman, construction estimator, construction inspector, materials laboratory technician, technical specification writer, or building materials and supplies salesperson. *Curriculum Code 522*

**Civil Technology—Sanitary Option**

A two-year Sanitary Option prepares technicians to assist industrial and municipal wastewater treatment plant operators. The option also serves to help to upgrade workers in the environmental field. Like the field of environmental regulation, the field of Civil Technology—Sanitary Option is dynamic and ever-changing. *Curriculum Code 520*

**Transportation Training**

Edward D. Jenkins, Program Director

The Transportation Training Program provides driver training for a career in the transportation industry.

The program includes studies of the following subjects:

- Accident Prevention and Reporting
- Air Brake System
- Communications
- Customer and Public Relations
- Defensive Driving Course
- Driver's Daily Logs
- Driver's Responsibility & Maintenance
- Driver Situations
- Fire Fighting
- Highway Regulations & Laws
- D.O.T. Safety Regulations
- Orientation
- Psycho-Physical
- Registration
- State Code

Range instruction consists of 120 hours actual driving time in diesel rigs and 40 hours of classroom instruction. An extended road trip is taken during the final week of training. The four-week training course is conducted five days a week from 8:00 a.m. to 5:00 p.m.

The range program consists of exercises on the College driving range combined with actual road training on public highways.

Because this program is designed for qualifying for licensing, and in order to assure maximum safety practices in truck driver training, specific admission requirements have been established. Applicants must be 18 years of age before admission.

Enrollment requirements for this program include a Department of Transportation physical exam, ability to communicate in the English language, both spoken and written, and a good driving record.

Students are placed on a waiting list. Admission is first-come, first-qualified, first-served. *Curriculum Code 580*

**Electro-Mechanical Technology Associate Degree (EM)**

Electro-Mechanical technicians are employed in a liaison capacity with skilled electrical mechanics, electrical engineers, and industrial electricians. They perform such duties as setting up preventive electrical maintenance programs, maintaining electrical apparatus, troubleshooting malfunctioning machinery, installing replacement equipment. These technicians are also able to advise on the selection of equipment.

Completion of the Associate Degree entitles the student to claim two years credit toward the work experience required to apply for a State of Michigan journeyman electrician's license. *Curriculum Code 572*

**Electronics Technology Associate Degree (ET)**

Jobs performed by Electronic Technicians include analytical experimental and testing work, and repair and maintenance of electronic equipment and instrumentation. Electronic Technicians may be employed in virtually any segment of business and industry including business machines and digital computers, biomedical instruments and patient monitoring equipment, automotive instruments and communication equipment, two-way radio, television, audio entertainment and broadcasting. The Associate Degree Program stresses the fundamental areas of circuit analysis and semiconductor devices, and applies them to digital equipment, radio frequency circuitry, and troubleshooting and repair. The student can build on this background as new devices, processes and instruments become available. *Curriculum Code 565*

**Bio-Medical Option (BIO) Curriculum Code 566****Fire Science Technology Associate Degree (FST)**

Fire science personnel must be trained to function in a team effort with a variety of technical equipment. Accuracy, timing and good judgment also are demanded if human life is to be preserved, property protected and insurance rates held down.

New products, offered in the market place, and the transportation of hazardous materials have increased the field's complexity, and require more knowledge on the part of fire fighters than ever before. The Fire Science Program is designed to assist those now in the field. *Curriculum Code 590*

**Industrial Drafting Technology Associate Degree (DT)**

The College offers a two-year Associate Degree Program in Industrial Drafting. This program enables the industrial drafting student to prepare for employment in production design, tool design, or die design in a wide range of industries.

Emphasis is placed on the application of principles involved in product drafting and the procedures and techniques in the use of jigs, fixtures, cutting, forming and assembly.

The program provides drafting room experience supplemented by related shop and laboratory experiences, as well as general courses designed to enable the student to enter an industrial drafting room as a qualified draftsman. *Curriculum Code 545*

**Mechanical Technology Associate Degree (MT)**

The Mechanical Technology Program allows students to develop a program of study based on individual needs. Course work is determined by occupational goals. Emphasis is typically devoted to machine shop, metallurgy, drafting, math, quality control, safety and management. A core of five Mechanical Technology courses comprises the only required technical subjects. Interested students should consult with their employer and then the Chairperson of the Engineering Technology Department to draw up an educational plan. *Curriculum Code 570*

**Occupational Safety and Health Associate Degree (SAF)**

Increasing emphasis on safety inspection, training, and record keeping is due largely to federal and state laws and regulations on safety and health standards. Many federal, state, Occupational Safety Health Act-Michigan Occupational Safety and Health Act, and local government agencies need professionally trained people to carry out the functions of these standards. Industry also needs trained people to implement safety practices within companies and departments. *Curriculum Code 574*

**Quality Control and Reliability Technology (QC)**

Modern Civilization moves forward on a dynamic technology which generates products and services that contribute to the well-being of mankind. As technology advances, the demands for better quality and reliability become increasingly challenging.

The task of controlling the quality and reliability of goods and services for industry and government is approaching the status of a professional discipline. Control concepts and techniques have been devised and proven effective during the past twenty years.

Quality Control and Reliability Engineers and Managers need inspectors, technicians and analysts to assist them in their task of controlling the quality and reliability of goods and services. The performance of these semiprofessional tasks requires specialized training in the concepts and techniques of quality control and reliability.

The Quality Control and Reliability Program at Lansing Community College is designed to provide the training to meet industry and government needs for competent persons in this field. Courses may be taken individually. Students desiring Certificates or Associate Degrees may develop programs to fit their individual needs. *Curriculum Code 573*

**Avionics Technology Associate Degree (AFT, ET)**

Avionics Technicians install and maintain electronic equipment used aboard aircraft, such as communications and navigation equipment, weather radar, transponders and autopilots. The program consists of fundamentals of electronics, orientation to avionics, study of digital and communication systems, and many specialized courses in avionics systems. In the laboratory the student works with high-quality electronic test instruments and avionics equipment of the same kind found in a typical avionics shop. Included in this curriculum is preparation for the FCC Second Class License Examination which is required for work on the transmitting portion of avionics equipment. *Curriculum Code 567*

**Aviation Technology (AFT) (APA) (APG) (APP)  
Aviation Flight Technology Associate Degree (AFT)**

This program provides training for students who aspire to become professional pilots. The degree includes all flight training, flight simulator training and associated ground schools to help prepare students for Private, Commercial and Instrument pilot license examinations. The student is encouraged to take electives in Business, Marketing, and Management to fulfill the Associate Degree requirement of 90 credits. The curriculums are fully approved by the Federal Aviation Administration. *Curriculum Code 531*

**Aviation Maintenance Technology Associate Degree (APA) (APG) (APP)**

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During the program, students will cover a wide variety of subjects dealing with airplanes, reciprocating engines, turbine and jet engines, propellers, ignition, electrical systems, and hydraulic systems.

Approximately 1900 hours of required classroom, shop and laboratory instruction are divided into: Airframe and Powerplant Mechanic General, 400 hours; Powerplant Mechanic, 750 hours; and Airframe Mechanic, 750 hours. A waiting list is maintained for admission. *Curriculum Code 532*

**Architectural Technology (AT)****100 Beginning Architectural Drawing Three credits**

Stresses drafting and lettering techniques for students without previous drafting courses or experience. Includes orthographic projection, types of pictorial drawings and sketching. A residential floor plan is developed as an integral part of this course. Designed for persons who have never had a drafting course. 3 (2-2)

**131 Residential Planning Three credits**

Covers fundamental information for buying, building, or remodeling a house. Topics include construction details, architectural styles and planning concepts. Some reading of blueprints and use of working drawings is included. 3 (3-0)

**135 Architectural Pictorial Illustration Four credits**

Covers principles of axiometric projection, one and two point perspective, shading and shadows. The use of rendering media is also included. Prerequisite: AT 100 or equivalent. 4 (2-4)

**136 Advanced Pictorial Illustration Four credits**

Includes advanced rendering techniques including pencil, color pencil, pen and ink, pastels, felt marker and air brush. Prerequisite: AT 135 or equivalent. 4 (2-4)

**230 Architectural Drawing I Four credits**

Details proper selection of building materials and the preparation of architectural details using these materials. Emphasizes using reference material and developing working drawings from architectural sketches. Prerequisite: AT 100 or drafting background. 4 (2-4)

**231 Architectural Drawing II Four credits**

Offers essentials of designing and drawing floor plans. Students select a structure to develop. This includes the selection of proper materials, and preparation of working drawings. Prerequisite: AT 230. 4 (2-4)

**232 Architectural Drawing III****Four credits**

Preparation in making final working drawings (primarily elevations) and completing a set of specifications covering the project designed in AT 231. Prerequisite: AT 231. 4 (2-4)

**233 Architectural Drawing IV****Four credits**

Stresses commercial and industrial construction. Covers both low-rise and high-rise buildings. Prerequisite: AT 232. 4 (2-4)

**235 Structural Drawing****Four credits**

Acquaints the student with standard graphic representation of structural designs using concrete, steel and wood. Emphasis on structural components and structural detail drawing. Prerequisite: AT 230 4 (2-4)

**241 Office Practices and Procedures****Four credits**

Covers general specifications, supplemental or job specifications, material specifications, building codes, use of reference material, shop drawings, bidding practices, office reduction of field data, and field inspection procedures. 4 (4-0)

**242 Building Utility Systems****Four credits**

Investigates components and arrangement of residential and commercial plumbing and electrical systems. Heating and cooling systems introduced. Emphasizes code and specification requirements. 4 (4-0)

**246 Heating and Air Conditioning****Three credits**

Explores components and arrangement of residential and commercial heating and air conditioning systems. This is a calculations course. Emphasizes environmental factors, specification requirements, and code provisions. 3 (3-0)

**247 Architectural Trends****Four credits**

Views development of architecture as an art form in each of the major civilizations or architectural periods from antiquity to today. Gives students background for incorporating past styles in modern structures. 4 (4-0)

**251 Uniform Building Code I****Three credits**

Emphasizes the use, interpretation and application of the Uniform Building Code. Areas of instruction include occupancy requirements based on types of construction, engineering regulations, fire standards, excavation, and material requirements. 3 (3-0)

**252 Uniform Building Code II****Three credits**

Offers depth in occupancy requirements based on types of construction such as exitway requirements, protection of corridors and multiple dwellings, standards for apartment houses six stories and higher, fire standards and materials requirements. Prerequisite: AT 251. 3 (3-0)

**253 Mechanical Building Code****Three credits**

Aims to serve mechanical dealers, salespeople, estimators, field employees, structural and mechanical designers, job foremen and supervisors and others connected with alteration, repair and renovation of buildings. Covers applications to and within buildings of different types and occupancies. Designed to provide students with a knowledge of mechanical designing in order to penetrate a structure throughout and still maintain the building's integrity. 3 (3-0)

**254 BOCA Building Code****Three credits**

Gives students information on the background of the state laws, construction codes, code enforcement processes, Sanderson's and O'Bannon's books, code of ethics and philosophy. 3 (3-0)

**256 Barrier Free Design****Three credits**

Introduces students to design, construction and inspection aspects of facilities required to be accessible to the physically handicapped. Applicable Michigan laws and codes are explained. Design practice problems are included. No drafting experience necessary. 3 (3-0)

**258 Plumbing Code (BOCA)****Three credits**

Presents minimum plumbing standards that protect the public against hazards of inadequate, defective or unsanitary installations. Topics include administration and enforcement, definitions, general regulations, materials, vents and venting, and disposal systems. 3 (3-0)

**271 Structural Design****Four credits**

Introduces statics with the application of these physical forces to structural elements of steel, wood, and concrete. Develops an awareness of the physical forces which must be resisted through the selection of building materials and their effect upon architectural design. 4 (4-0)

**281 Materials of Construction****Four credits**

Studies the usual construction materials used for enclosure and structural support of buildings. Emphasizes masonry, steel, concrete, and wood as materials and the customary methods of building with them. Develops a sensitivity to the use of building products based on a knowledge of their properties, limitation and availability. 4 (4-0)

**285 Residential Cost Estimating****Four credits**

Covers estimating amount of material (lumber, brick, concrete) required for residential construction. Also involves the cost of the material and labor for carpentry, plumbing, excavating. Calculations are a major part of this course. 4 (4-0)

**286 Advanced Construction Cost Estimating****Four credits**

Emphasizes an in-depth study of more complex residential construction and small commercial instruction, comparisons of labor costs, methods and materials to insure minimum costs with high standards of quality. 4 (4-0)

**293 Project Laboratory (Architectural)****Three credits**

Offers opportunity to research, design and construct a project with the guidance of an instructor. For students who have completed basic architectural courses and desire an in-depth project in a particular area of architectural technology. Prerequisite: Instructor approval. 3 (0-6)

**296 Project Laboratory (Architectural)****Six credits**

Offers opportunity to research, design and construct a project with the guidance of an instructor. For students who have completed basic architectural courses and desire an in-depth project in a particular area of architectural technology. Prerequisite: Instructor approval. 6 (0-12)

**205 Solar System Installation and Operation****Four credits**

Teaches students to select, maintain, and operate a solar heating system. The characteristics of system components will be discussed. Presents legal considerations, standards, building codes, and certification and labeling information. Prerequisite: AT 203. 4 (4-0)

**206 School Energy Conservation****Four credits**

Prepares architectural technicians to assist school superintendents, board members, maintenance directors, custodial staff and physical plant personnel to perform an energy audit. Topics include heating equipment efficiency, principles of gas, oil and electric heating, insulation materials, lighting, and conservation program. 4 (4-0)

**208 Solar Site Seminar****Four credits**

Consists of field trips to study applications of solar energy for water heating, space heating, space cooling, and direct conversion of radiation into electricity. Sites will be visited in central and south Michigan. Prerequisite: AT 200. 4 (4-0)

**210 Solar Housing Applications****Four credits**

Includes solar orientation and site planning, passive solar design, active air and liquid solar collector systems, energy efficient shell design, and economic analysis. About half of class time will be spent in the field, studying solar projects. Emphasis will be on systems in the home, and other less expensive active and passive solar systems. 4 (3-2)

**211 Passive Solar Design****Four credits**

Uses fundamentals of efficient thermal design to study techniques and materials that can be implemented to build solar assisted energy efficient houses and buildings. Prerequisite: AT 200 and AT 202. 4 (3-2)

**212 Solar-Assisted Heat Pump Design****Four credits**

Highlights both air-to-air and water-to-air heat pumps and guidelines formulated to select, size, and analyze the use of electric driven reverse cycle heat pumps for residential use. Special attention will be directed toward calculations for solar assisting heat pumps with hot air and hot water storage systems. Prerequisite: AT 203, AT 205, HAC 231. 4 (3-2)

**Architectural Technology—Solar Technician Option****200 Solar Housing****Three credits**

Presents a survey of solar energy use for water and space heating. Both active and passive air and hydronic systems will be discussed. Designed to train technicians to assist architects and contractors in residential building and other structures, taking advantage of solar radiation. 3 (3-0)

- 201 Principles of Solar Energy Collection** **Four credits**  
Provides a working knowledge of fundamentals of solar radiation calculations and flat-plate collection, design, and performance. Availability of radiation due to season, time-of-day, and surface orientation is presented. The transmission of incident solar radiation through covers, the absorption in the collector, thermal losses and the removal of heat from collectors are discussed. Methods of testing and rating solar collectors and thermal storage devices are presented. Prerequisite: AT 200 and a working knowledge of trigonometry. 4 (4-0)
- 202 Energy Efficient Design** **Four credits**  
Looks at the latest methods and materials for improving the energy efficiency of residential construction and other structures. Life-cycle costs, high insulation values, energy storing devices, 2" x 6" walls, solar energy input, triple glaze windows and futuristic architectural concepts are presented. 4 (4-0)
- 203 Residential Solar Heating Design** **Four credits**  
Uses fundamentals learned in AT 201 to design and predict the performance of solar hot water and space heating systems. Students will be organized into groups to work on a class project. An economic analysis will be made to find the optimum collector size. Prerequisite: AT 201. 4 (4-0)
- 204 Business Energy Conservation** **Four credits**  
Prepares architectural technicians to assist business and industry to perform an energy audit. Applies energy conservation principles to daily operation. Based on information developed by the U.S. Department of Commerce, Bureau of Standards. Supplemented with local and state experience in implementing an energy conservation program. 4 (4-0)
- 213 Solar Project Laboratory I** **Four credits**  
Uses skills to design a passive solar house, an active solar air liquid heating system, or to develop a special project on energy efficient design or solar application selected by the student. Scale models of final project may be made along with blue prints, specifications, cost estimates, economic analysis and system description and operation. Prerequisite: AT 202, AT 203, AT 211. 4 (1-4)
- 214 Commercial Solar Applications** **Four credits**  
Covers information directed toward the advanced student or practicing architect or engineer who is interested in applying solar energy for heating and cooling of larger buildings servicing institutions and industry. Both active and passive air, water, concrete and eutectic material energy systems will be investigated. Special consideration given to integrating conventional fossil fuel systems and heat pumps with solar systems. Prerequisites: AT 202, AT 203, AT 211. 4 (3-2)
- 215 Passive Solar Design II** **Four credits**  
Advances on facts of AT 211 to design, draw prints, prepare presentation model of energy-efficient solar oriented residential construction. Buildings will be planned to use passive solar gain as primary heating and cooling energy. Students will team up to investigate new areas of solar energy design such as underground housing, green house or solarium component and eutectic salts for thermal storage, control and heating. Prerequisite: AT 211. 4 (3-2)

**Architectural Technology—Landscaping Option**

- 130 Interior Landscaping** **Two credits**  
Integrates landscape architectural design principles with indoor landscaping. Acquaints the student with basic identification, culture, placement, and use of foliage and flowering plants in the interior environment. Basic physiological plant requirements are stressed. 2 (1-2)
- 132 Residential Landscaping** **Two credits**  
Highlights a basic planning approach for individuals interested in improving residential landscaping. Involves solving elementary landscape problems based on proven design, implementation and maintenance techniques. Aspects of residential landscape construction and planting design are emphasized. 2 (1-2)
- 150 Introduction to Landscape Architecture** **Four credits**  
Previews the broad scale concepts of landscape architecture. Lectures, readings, and practical problem-solving exercises provide a basic overview of the historical, philosophical, and technical aspects of the landscape architecture profession. 4 (2-4)
- 152 Landscape Graphic Communication I** **Four credits**  
Explores a wide variety of media and illustration techniques relative to the field of landscape architecture. Both the formal and informal applications of mechanical and freehand drafting communication are emphasized to include basic reproduction printing methods. 4 (1-6)
- 153 Landscape Graphic Communication II** **Four credits**  
Explores the basic principles of perspective layout, acceptable landscape sketching techniques, preparation of graphic presentations. Primarily stresses black and white value drawing techniques. Prerequisite: AT 152. 4 (1-6)
- 160 Planting Design I** **Four credits**  
Provides a practical approach for developing elementary planting plan solutions for site planning problems. Stresses basic drafting skills and design techniques and emphasizes the use of indigenous plant materials in problem solving. 4 (2-4)
- 161 Planting Design II** **Four credits**  
Stresses the functional aspects of plants as major design considerations. Familiarization and use of indigenous plant material is expanded and basic on-site analysis skills are developed. Emphasis is placed on graphic techniques for delineating planting plans. Prerequisite: AT 160. 4 (2-4)
- 164 Landscape Design I** **Four credits**  
Emphasizes use of the design process to solve a variety of elementary urban and non-urban site planning problems. Project design solutions require graphic delineation primarily stressing plan view presentations. Prerequisite: AT 152. 4 (1-6)

- 165 Landscape Design II** **Four credits**  
Focuses on advanced landscape design problem solving. Comprehensive design and analysis techniques are explored. Graphic problem solutions include the use of auxiliary elevational and detail plan views. Specialized design problems emphasize environmental design factors. Prerequisite: AT 164. 4 (1-6)
- 170 Site Grading I** **Four credits**  
Stresses the basic principles, methods, and procedures for grading a site. Provides familiarization with the use of contour lines, the interpretation of landform features, and computation of earthwork cut and fill manipulations. 4 (2-4)
- 171 Site Grading II** **Four credits**  
Explores advanced principles, methods, and procedures for grading a site. Emphasis is placed on the Michigan Soil Erosion and Sedimentation Control Act with respect to earth change plans and the specialized requirements related to grading recreational and utility facilities. Prerequisite: AT 170. 4 (2-4)
- 234 Architectural Site Planning I** **Four credits**  
Introduces elementary site planning concepts including basic principles of contour lines, contour interpolation, horizontal circulation layout, site grading, exterior scale, and design. Graphic problem solving stresses the use of a variety of media and encompasses both schematic and refined presentation techniques. 4 (2-4)
- 245 Architectural Site Planning II** **Four credits**  
Focuses on advanced site planning and problem-solving concepts. Employs comprehensive research, analysis, and designing techniques aimed at uniting and integrating architectural design with the exterior site. Project presentations include both graphic and verbal expression. Prerequisite: AT 234. 4 (2-4)
- 250 Landscape Construction Methods** **Four credits**  
Analyzes the comparative uses and methods of installing masonry, asphalt, wood, concrete, and other landscape materials. Physical properties of landscape materials are studied. 4 (4-0)
- 260 Planting Design III** **Four credits**  
Covers the implementation aspects of planting design dealing with cost estimating, project phasing, planting plan detail development, and specialized planting situations and conditions. Acceptable nursery standards are previewed and planting plan specifications are examined. Prerequisite: AT 161. 4 (2-4)
- 261 Planting Design IV** **Four credits**  
Outlines the basic principles and considerations for maintenance efficiency in developing planting design proposals. Provides information concerning all aspects of landscape planting care, plant installation techniques, fertilizing, disease and pest control and pruning. Low maintenance indigenous plant species are highlighted. Prerequisite: AT 161. 4 (2-4)

- 264 Landscape Design III** **Four credits**  
Emphasizes specialized design problem solving both on an individual and team approach. Environmental impact considerations are examined and alternative design solutions are explored. Previews large scale regional design techniques. Prerequisite: AT 165. 4 (1-6)
- 265 Landscape Construction Details I** **Four credits**  
Focuses on the acceptable graphic approach for drawing landscape construction details. Includes detailed examination of various landscape features, pedestrian and vehicular circulations systems, utilities, light construction elements, and recreation facilities. Stresses detail coordination with site plan layout. Prerequisite: AT 250. 4 (3-2)
- 266 Landscape Construction Details II** **Four credits**  
Emphasizes the design and build aspects of detail landscape planning. Practical design problem-solving exercises coordinate project design with detail development, material tabulation, and cost estimating factors. Includes detail considerations of irrigation systems, general site appertanances, and additional light construction features. Prerequisite: AT 265. 4 (1-6)
- 276 Landscape Documents and Specifications** **Four credits**  
Elaborates the principles and relationships between specifications and working drawings. Stresses familiarization with bidding procedures and general contract conditions. Involves practical landscape specification writing. Prerequisite: AT 250. 4 (3-2)
- 277 Landscape Office Practice** **Four credits**  
Introduces the elements of office business practice and organization, record-keeping, on-the-job inspection and close out, and initial proposal writing and contract formulation. Prerequisite: AT 276. 4 (4-0)
- 287 Site Layout I** **Four credits**  
Provides exposure to plan dimensioning and basic techniques for laying out a variety of landscape elements, such as parking lots, roadway development, sidewalks, patios and building locations. Graphic techniques are stressed. Layout and design orientation for sports and recreation facilities will be highlighted. Prerequisite: AT 271. 4 (2-4)
- 288 Site Layout II** **Four credits**  
Features layout of horizontal and vertical alignment of pedestrian and vehicular circulation systems as well as the layout and design of utilities, irrigation, and outdoor electrical systems. Proficiency in graphic delineation is stressed. Prerequisite: AT 287. 4 (2-4)



**Aviation Technology Associate Degree (AFT)  
Ground Schools (AFT)**

**100 Private Pilot Ground School**

**Six credits**

Develops knowledge, skills, and techniques for successful completion of the FAA Private Pilot written examination. In addition to the sixty hours of classroom work, an audio-visual tutorial system is available for supplemental study. This course is first in a required series of ground school courses leading to an Associate Degree. 6 (6-0). Lab fee

**150 Instrument Pilot Ground School**

**Six credits**

Prepares students for the FAA Instrument Rating written examination. Designed to provide instrument ground school training in instrument flying practices and procedures. Prerequisite: AFT 100 or private pilot license. 6 (6-0). Lab fee

**220 Commercial Pilot Ground School**

**Four credits**

Prepares students for successful completion of the FAA Commercial Pilot written examination. Includes review of instrument regulations and procedures. Prerequisite: AFT 100 and AFT 150 or private pilot's license with an instrument rating. 4 (4-0). Lab fee

**255 Flight Instructor Ground School**

**Four credits**

Provides theoretical skills and knowledge necessary to pass the FAA Flight Instructor and FAA Flight Instructor Fundamentals written examination. May also be used to prepare for the FAA Advanced Ground School instructor's license. Prerequisites: AFT 204, AFT 214, AFT 220 or commercial pilot license with instrument rating. 4 (4-0). Lab fee

**256 Instrument Flight and Instrument Ground Instructor**

**Four credits**

Prepares student for FAA Instrument Ground Instructor written examination and FAA Instrument Flight Instructor written examinations. Prerequisites: AFT 255 or Certified Flight Instructor Certificate. 4 (4-0) Lab Fee

**260 Airline Transport Pilot**

**Five credits**

Covers areas necessary for the FAA Airline Transport Pilot written examination. Subjects include subsonic, transonic, and supersonic aerodynamics, jet engine theory, jet engine operation and performance, high altitude weather, weight and balance calculations, high altitude flight planning, and Federal Aviation Regulations. Prerequisite: Commercial Pilot license with instrument rating. 5 (5-0) Lab Fee

**Flight Training (AFT)**

Flight Training I through IX progressively trains the student in maneuvers, navigation, and instrument flying skills required of a commercially licensed, instrument-rated professional pilot. Each flight training course provides at least 30 hours of concentrated flight training. Ground school and flight simulator courses are required for all flight training. Prerequisite: Departmental approval, ability to pass FAA Class II medical exam. Minimum age: 15½ years.

**201 Flight Training I**

**Six credits**

Provides students with training to develop the skills and knowledge to fly an aircraft on solo cross-country flights. Prerequisite: AFT 100, departmental approval. Co-requisite: AFT 211. Lab Fee

**202 Flight Training II**

**Six credits**

Preparation for the Private Pilot license flight test. Prerequisite: AFT 201, successful completion of FAA Private Pilot written exam, and departmental approval. Co-requisite: AFT 212. Lab Fee

**203 Flight Training III**

**Six credits**

Builds experience required for the Commercial Pilot license. Involves cross-country flying and instrument skills. Prerequisite: AFT 202, AFT 212, and departmental approval. Co-requisite: AFT 213 and AFT 150. Lab Fee

**204 Flight Training IV**

**Six credits**

Involves cross-country flying and skills in commercial pilot maneuvers. Prerequisites: AFT 203, AFT 213, AFT 150 and departmental approval. Co-requisite: AFT 213 and AFT 220. Lab Fee

**205 Flight Training V**

**Six credits**

Trains the Commercial Pilot applicants in complex aircraft and IFR procedures. Prerequisite: AFT 204, AFT 214, AFT 220, successful completion of FAA Commercial Pilot or Instrument Rating written exam, and departmental approval. Co-requisites: AFT 215. Lab Fee

**206 Flight Training VI**

**Six credits**

Provides the student with training in preparation for the FAA Commercial Pilot Flight Test and Instrument Rating flight tests. Prerequisite: AFT 205, AFT 215, passing grades on FAA Commercial Pilot and Instrument Rating written exams, and departmental approval. Lab Fee

**207 Flight Training VII**

**Six credits**

Prepares the Commercial Pilot for the FAA Flight Instructor Rating. A highly concentrated flight training course designed to provide the confidence, skill, knowledge, precision, and professional attitudes required of a licensed flight instructor. Prerequisite: Commercial license with an Instrument Rating, AFT 255, successful completion of FAA flight instructor written exams, and departmental approval.

**208 Flight Training VIII**

**Two credits**

Offers the Certified Flight Instructor (CFI) the training to achieve the Instrument Flight Instructor rating. Prerequisites: CFI rating, passage of CFI/AI (Airplanes and Instruments) written exam and departmental approval. Lab Fee

**209 Flight Training IX****Two credits**

Provides the commercially licensed instrument pilot with the opportunity to obtain a Multi-Engine Pilot Rating. It may also be tailored to provide pilot refresher or Airline Transport Pilot Rating training. Prerequisite: Commercial license with Instrument Rating, departmental approval. Co-requisite: AFT 217. Lab fee

**Flight Simulator (AFT)**

Flight simulator courses are held in conjunction with flight training courses. Each flight training course has a co-requisite of flight simulator courses. Lab fee subject to change each term. Prerequisite: In sequence or with departmental approval. Lab fee

**211 Flight Simulator I****Two credits**

Provides five hours of dual instruction in the GAT-1 Link ground trainer and 610 Analog Training Computer, along with 15 hours of associated ground instruction. The first three hours of Flight Simulator I provide instruction in the four basics: straight and level, turns, climbs, and descents. The remaining two hours of flight simulator training teach basic VOR navigational procedures.

**212 Flight Simulator II****Two credits**

Emphasizes VOR and ADF navigational procedures. Includes review of applicable private pilot maneuvers. Prerequisite: AFT 211 or departmental approval. Lab fee

**213 Flight Simulator III****Two credits**

Provides a concentrated series of training in the maneuvers and procedures necessary for an Instrument Rating. Emphasizes basic instrument flying including turns, climbs, descents, partial panel, steep turns, stalls, unusual attitudes and VOR navigational procedures. Prerequisite: AFT 212 or Private Pilot License. Lab fee

**214 Flight Simulator IV****Two credits**

Includes VOR and ADF orientation; tracking and intercepts; VOR and ADF holding patterns at station and intersections; VOR and ADF approaches. Prerequisite: AFT 212 or Private Pilot License. Lab fee

**215 Flight Simulator V****Two credits**

Reviews VOR and ADF holding, ILS front and back course approaches, ASR and no gyro approaches, and lot communication procedures. Prerequisite: AFT 214 or departmental approval. Lab fee

**216 Flight Simulator VI****Two credits**

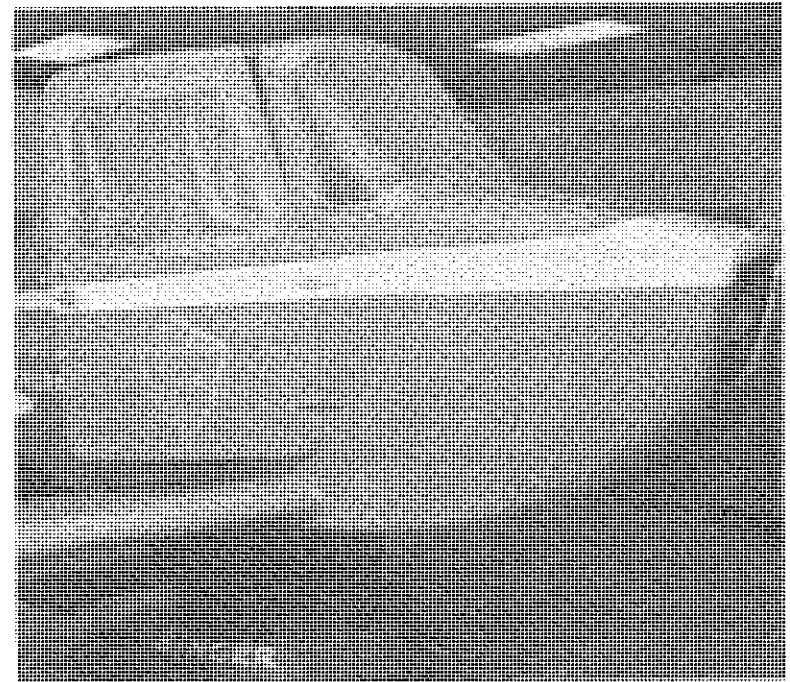
Includes an in-depth study of all instrument maneuvers and procedures. Prerequisite: AFT 215 or departmental approval. Lab Fee

**217 Multi-Engine Flight Simulator****Two credits**

Offers ten hours of instruction in the Flightmatic multi-engine simulator and ten hours of related ground instruction. A two-credit introductory course for the Instrument Rated Commercial Pilot (airplane) who desires to obtain the knowledge and skills necessary in preparation to pass a six-month instrument proficiency check in multi-engine aircraft. Prerequisite: Instrument Rating and Commercial Pilot Certificate (airplane). Lab fee

**218 DC-3 Ground Trainer**

Uses the Flightmatic multi-engine ground trainer to develop the procedures used in DC-3 aircraft. Five instruction periods will be scheduled on an arranged basis. Each period will consist of one-hour dual instruction and one hour of supplementary ground instruction. Prerequisite: Commercial license with instrument and multi-engine ratings and departmental approval. Co-requisite: AFT 210. Lab fee



## Engineering Technology

Aviation Maintenance Associate Degree (APG) (APA) (APP)  
Aviation Mechanics (APG)

- 100 Aviation Mathematics** **Two credits**  
Reviews basic mathematics, fractions, decimals, ratio and proportion, basic algebra, formulas in algebra and geometry, trigonometry, slide rule, and mathematics related to the aircraft maintenance trades. 2 (2-0)
- 101 Aircraft Drawing** **Three credits**  
Covers basic installation drawings of aircraft components, blueprint reading, drawing techniques and symbols for aircraft. 3 (2-2)
- 102 Aviation Physics** **One credit**  
Studies physics as applied to the aircraft maintenance career field, covering fluids, light, heat, and electrical applications. 1 (1-0)
- 103 Aviation Electricity** **Six credits**  
Offers a study of basic electrical theory and its application to the aircraft maintenance career field. Includes AC, DC, magnetism, generators, motors, capacitors, relays, transformers, circuit breakers. 6 (4-4)
- 104 Ground Operations and Servicing** **Two credits**  
Highlights practical application and study of aircraft ground operations, servicing techniques and safety applications. 2 (1-2)
- 105 Maintenance Publications, Forms and Records and Mechanics Privileges** **Three credits**  
Explores various aircraft maintenance publications, forms and records and the rights and limitations of the mechanic according to regulations and laws. 3 (2-2)
- 106 Fluid Lines and Fittings** **Two credits**  
Investigates fluid lines and fittings, their identification, use and applied demonstrations in typical aircraft fluid systems. 2 (1-2)
- 107 Materials and Processes** **Six credits**  
Examines the materials and processes of aircraft construction. Includes materials analysis and processes for mechanically and chemically changing the characteristics of metals, plastic, wood, and fabric processes. 6 (4-4)
- 108 Cleaning and Corrosion Control** **Three credits**  
Studies methods and chemicals used in treating aircraft materials and surfaces, and cleaning and corrosion control purposes. 3 (2-2)
- 109 Weight and Balance** **Three credits**  
Deals with practical solution of aircraft weight, balance, loading principles and practices. 3 (2-2)
- 110 Basic Hand Tools** **Two credits**  
Offers practical training in the use and care of basic hand tools associated with aircraft maintenance. 2 (1-2)

## Engineering Technology

## Airframe Mechanic (APA)

- 200 Aircraft Wood and Fabric** **Two credits**  
Covers theory and practical applications of wood and fabric aircraft construction and repair methods. 2 (1-2)
- 201 Aircraft Finishes** **Two credits**  
Explores theory and practical applications of various aircraft finishes to metals, wood, fabric and plastic surfaces. 2 (1-2)
- 202 Aircraft Metal Structures** **Nine credits**  
Studies the practical application of sheet metals: aluminum, titanium, steel, and other metal compositions to aircraft structural manufacture and repair. 9 (4-10)
- 204 Assembly and Rigging** **Four credits**  
Covers the assembly and rigging of aircraft for flight and certification. 4 (2-4)
- 205 Aircraft Electrical Systems** **Seven credits**  
Involves analysis, troubleshooting, and repair of aircraft electrical systems and components. 7 (4-6)
- 206 Hydraulic and Pneumatic Systems** **Five credits**  
Investigates the study, analysis, and repair of aircraft, hydraulic and pneumatic systems and components. 5 (3-4)
- 207 Gear and Warning Systems** **Seven credits**  
Deals with study, analysis, troubleshooting and repair of aircraft landing gear and its various malfunction warning systems. 7 (4-6)
- 208 Aircraft Fuel System** **Three credits**  
Covers the study, analysis, troubleshooting and repair of various aircraft fuel systems and their components. 3 (2-2)
- 209 Aircraft Instrument Systems** **One credit**  
Studies application of various instruments to the measurement of heat, pressure, suction, fluid flow or quantity and mechanical measurements as they apply to aircraft. 1 (.5-1)
- 210 Communications and Navigation Systems** **One credit**  
Covers various communications and navigation systems installed in modern aircraft. 1 (.5-1)
- 211 Environmental Systems** **Two credits**  
Explores aircraft environmental modification and control systems. 2 (1-2)
- 212 Ice, Rain, and Fire Systems** **Two credits**  
Studies aircraft systems used to control ice accumulation and rain dispersal, and detect and eliminate fires in aircraft systems and components. 2 (1-2)

**213 Airframe Inspection** **One credit**  
Examines the system of inspection and preventive detection of airframe malfunction, contamination, and fatigue. 1 (.5-1)

**214 Aircraft Welding** **Three credits**  
Explores welding applications and practice on aircraft structures, load bearing members and surfaces. 3 (2-2)

**215 Air Frame Test Preparation** **Two credits**  
Reviews all airframe subjects in preparation for taking the Federal Aviation Agency written and practical tests for Airframe Mechanic's License and Certification. 2 (2-0)

### Powerplant (APP)

**200 Reciprocating Engine Overhaul** **Six credits**  
Explores theory, application, and practice of reciprocating aircraft engine overhaul. A variety of radial and horizontally opposed engines will be overhauled by students in closely supervised conditions. 6 (2-8)

**201 Inspect and Repair Reciprocating Engines** **Four credits**  
Covers troubleshooting, inspection and repair of reciprocating aircraft piston engines. 4 (2-4)

**202 Inspect, Check, Service and Repair All Reciprocating Engine Installation** **Four credits**  
Covers inspection, operational checking, servicing, and repairing reciprocating piston aircraft engine installations on various aircraft. Students use FAA publication and directive and manufacturers' specifications to service aircraft engines. 4 (2-4)

**203 Install, Troubleshoot and Remove Reciprocating Engines** **Three credits**  
Covers practical installation, troubleshooting and removal of typical aircraft engine installation. 3 (2-2)

**204 Overhaul Turbine Engines** **Four credits**  
Investigates theory and practice of turbine aircraft engines. 4 (3-2)

**205 Inspect, Check, Service, and Repair Turbine Engine Installations** **One credit**  
Covers theory and practical application of turbine engine service and repair. 1 (.5-1)

**206 Remove, Install, and Troubleshoot Turbine Engines** **One credit**  
Offers continuation of APP 205. 1 (.5-1)

**207 Perform Powerplant Conformity and Airworthiness Inspection** **One credit**  
Performs inspection per FAA specifications. 1 (15-1)

**208 Engine Lubrication Systems** **Six credits**  
Studies aircraft engine lubrication systems and components. 6 (4-4)

**209 Engine Fuel Systems** **Five credits**  
Studies and analyzes aircraft engine fuel systems and components. 5 (3-4)

**210 Carburetors and Carburetor System** **Two credits**  
Covers a study of aircraft carburetion requirements, applications, and the service and repair of carburetors. 2 (1-2)

**211 Engine Cooling and Exhaust Systems** **Three credits**  
Covers study and analysis of aircraft engine liquid and air cooling systems. 3 (1.5-3)

**212 Aircraft Ignition Systems** **Seven credits**  
Covers study, analysis, service and repair of aircraft ignition systems and components. 7 (4-6)

**213 Engine Electrical Systems** **Five credits**  
Features study, analysis, service and repair of aircraft electrical systems and components. 5 (3-4)

**214 Engine Operating, Control and Protection Systems** **Three credits**  
Covers study, analysis, service and repair of various aircraft engine operating, control and protection systems. 3 (2-2)

**215 Aircraft Propellers, Systems, and Controls** **Six credits**  
Covers study, analysis, service and repair of aircraft propellers, systems, and controls. 6 (4-4)

**216 Powerplant Test Preparation** **Two credits**  
Reviews all powerplant subjects in preparation for the FAA Powerplant Mechanic written and practical tests. 2 (2-0)

### Avionics Technology Associate Degree (AFT, ET)

**AFT 103 Avionics Orientation** **Four credits**  
Acquaints future technicians with communication systems, ADF, VOR, ILS, glide slope, marker beacon, DME, ATC weather radar, radio or radar altimeter, autopilot, flight director and gyro systems. Students will experience some of these systems in a ground trainer to become familiar with their function from the pilot's point of view. Prerequisite: AFT 100. 4 (3-2). Spring term.

**ET 290 Aircraft Electrical Systems** **Five credits**  
Explores properties and characteristics of electric and magnetic circuit elements as applied to aircraft DC components and systems. Familiarizes students with Federal Aviation Regulations governing proper installation and inspection of electrical systems, batteries, DC power systems and instruments. Basic properties and characteristics of 400 HZ. alternating voltage systems are also discussed. Prerequisite: ET 112. 5 (3-4). Spring term.

**ET 291 Avionics Navigation and Communication I** **Ten credits**  
 Studies communication and navigation systems used in aircraft. Topics include communication receivers and transmitters; ADF, VOR, ILS, glide slope and marker beacon receivers; antennas; transmission lines; audio systems, instrument panel orientation, and noise suppression. The student will operate, make performance checks on, and troubleshoot the systems under study using appropriate test equipment and manufacturer's manuals. Prerequisite: ET 290 and AFT 103. 10 (5-10). Fall term.

**ET 292 Avionics Navigation and Communications II** **Ten credits**  
 Emphasizes troubleshooting and installation of equipment. Prerequisite: ET 291. 10 (5-10). Winter term.

**ET 293 Avionics Pulse Systems** **Eight credits**  
 Studies distance measuring equipment (DME), transponders (ATC), weather radar, and radio or radar altimeters. Students will become familiar with these devices through using and troubleshooting the equipment. Noise suppression, techniques, antennas, transmission lines, and placement within the aircraft will also be covered. Prerequisite: ET 231, ET 232, and ET 292. 8 (5-6). Spring term.

**ET 294 Avionics Control Systems** **Eight credits**  
 Examines aviation control systems including autopilots, flight directors, area navigation, gyros and servos. Covers installing, trouble-shooting and repairing these systems. Prerequisite: ET 292. 8 (5-6). Spring term.

### Mechanical Technology (MT)

**108 Materials and Processes in Manufacture** **Four credits**  
 Covers a wide field of manufacturing including casting, powdered metallurgy, hot and cold working processes, plastic molding, welding, machining, and related techniques. Contrasts advantages of mass, moderate and job lot production, and classifies materials. Topics include cast iron, arc furnaces, lathes, drills, abrasive jet machining.

**201 Processing and Plant Layout** **Three credits**  
 Explores machine-part processing techniques, process engineering cost analysis and plant layout methods. A knowledge of basic manufacturing processes is recommended. 3 (2-2)

**209 Strength of Materials** **Four credits**  
 Involves calculating to determine stress, strain torsion, pure bending, compound stresses, failure theories, beam deflection, columns, and connections. Applies basic beam theory equations to simple shafts, beams and columns to determine stress, deflection and/or buckling strength. Prerequisite: TEC 151. 4 (4-0)

**210 Kinematics and Machine Elements** **Four credits**  
 Investigates motion analysis of linkages, cams and gears. Study of machine components such as camshafts, slides, brakes, and clutches. Prerequisite: DT 101 and MT 209. 4 (4-0)

**211 Machine Design** **Four credits**  
 Examines practical design fundamentals. Strength of materials and kinematics are applied to solve basic machine design problems. Prerequisite: MT 210 and TEC 153 or equivalent. 4 (4-0)

### Civil Technology (CT)

#### Construction Technology

**101 Construction Materials I** **Four credits**  
 Deals with the determination of properties of aggregates and concrete. Teaches methods of designing concrete mixes for different uses and methods of sampling and testing. Co-requisite: TEC 151. 4 (2-4)

**102 Construction Materials II/Four credits**  
 Covers determination of properties of bituminous materials. Teaches methods of designing bituminous mixes for different uses and methods of sampling and testing. Prerequisite: CT 101 and TEC 151. 4 (2-4)

**103 Construction Methods** **Four credits**  
 Studies techniques and equipment used in constructing bridges, building, highways and pipelines. Comparison of building codes and construction specifications. Prerequisite: TEC 151. 4 (4-0)

**201 Construction Costs** **Four credits**  
 Gives methods of preparing material takeoffs and labor estimates and applying current unit prices to estimate construction project costs. Covers definitions of cost, reviews construction bidding and specifications, and construction cost estimating. Prerequisite: CT 103. 4 (4-0)

**202 Construction Contracts** **Four credits**  
 Explores fundamentals of contract law liability and Worker's Compensation with various contract documents. Prerequisite: CT 201. 4 (4-0)

**203 Project Lab** **Four credits**  
 Gives student the opportunity to undertake and complete an independent study project in construction technology. A minimum of 80 hours work must be performed on the project. Students will be advised by a civil technology instructor. Prerequisite: Graduation term. 4 (arranged)

**Civil Drafting Technology (CT)****107 Civil Drafting I** **Four credits**

Helps students prepare a clear, readable, graphic representation of data from survey notes. Emphasizes traverse and topographical drawing problems. Co-requisite: DT 100 or equivalent. 4 (2-4)

**108 Civil Drafting II** **Four credits**

Focuses on plan development procedures in preparing a final set of construction drawings for various types of civil engineering projects. Prerequisite: CT 107. 4 (2-4)

**109 Civil Drafting III** **Four credits**

Offers further emphasis on plan development procedures in preparing a final set of construction drawings for various types of civil engineering projects. Prerequisite: CT 108. 4 (2-4)

**Highway Technology****III Soils**

Teaches testing and classification of soils. Also includes discussion of basic geologic principles related to soils. Co-requisite: TEC 151. 4 (2-4)

**112 Hydraulics** **Four credits**

Covers hydrostatics, laminar and turbulent flow in pipes and fittings, pump characteristics, venturi meters, cavitation, flow in open channels, orifices, weirs, critical depths, subcritical and critical flow, and channel transitions. Prerequisite: TEC 151. 4 (3-2)

**113 Hydrology** **Four credits**

Studies the analysis of storm water runoff and design of control devices. Includes discussion of drainage, culverts, stream flow, open channel flow, Bernoulli's theorem, storm water, ground water and water tables. Prerequisite: TEC 151. 4 (3-2)

**115 Soil Erosion I** **Three credits**

Assists local public officials in the development, implementation and enforcement of soil erosion and sedimentation control regulations. Benefits builders, architects, contractors, planners, developers, environmentalists and conservationists, giving them information about the Soil Erosion and Sedimentation Control Act, conformance, enforcement, remedies and implementations. 3 (3-0)

**116 Soil Erosion II** **Three credits**

Covers permit issuance, map interpretation, soil classification systems, project analysis, rainfall patterns, runoff calculations, channels, energy dissipators, sedimentation, and uses of vegetation for sedimentation control. Prerequisite: CT 113. 3 (3-0)

**211 Highway Technology I** **Four credits**

Covers plan and profile drawing, highway inventory planning, financing, organization, geometrical design and traffic studies. Prerequisite: TEC 153, CT 111. 4 (2-4)

**212 Highway Technology II** **Four credits**

Explores use of planimeter, site earthwork calculations, route earthwork calculations, earthwork studies, rainfall, runoff, culverts, channels, subgrade, cross-section development, rigid pavements, flexible pavements and stage construction. Prerequisite: CT 211. 4 (2-4)

**213 Project Lab** **Four credits**

Gives student the opportunity to undertake and complete an independent study project in highway technology. Minimum of 80 hours work on project required of student. A civil technology instructor will guide the student. Prerequisite: Graduation term. 4 (arranged)

**Structural Technology (CT)****121 Structural Concepts** **Four credits**

Introduces structural terminology and concepts. Balsa wood models are used to demonstrate the general behavior of structural members in compression, tension, shear and bending due to different loading conditions. Framing for bridges and building will be discussed. 4 (4-0)

**122 Statics** **Four credits**

Studies loads and forces due to loads; conditions of stability and equilibrium in structural frames; and free body analysis for reactions and member forces. Prerequisite: CT 121, TEC 151. 4 (4-0)

**123 Strength of Materials** **Four credits**

Covers stress, strain, creep, fatigue, yield, tension, compression, shear, bending, torsion, combined stresses and deflections. Prerequisite: CT 122. 4 (4-0)

**221 Structural Technology I** **Four credits**

Deals with the basic analysis and design techniques related to structural steel bridges and buildings. Emphasizes standard detailing practices. Prerequisite: CT 123. 4 (3-2)

**222 Structural Technology II** **Four credits**

Stresses basic analysis, design and detailing methods related to reinforced concrete structures. Prerequisite: CT 211. 4 (3-2)

**223 Project Lab** **Four credits**

Gives student opportunity to undertake and complete an independent study project in structural technology. A minimum of 80 hours work must be performed during the term on the project. A civil technology program instructor will guide project work. Prerequisite: Graduation term. 4 (arranged)

**Surveying Technology (CT)****131 Basic Surveying I** **Four credits**

Covers surveying; study of terminology; use of tape, level and transit for measuring distances, elevations and angles; analysis and use of verniers. Co-requisite: TEC 151. 4 (2-4)

**132 Basic Surveying II** **Four credits**

Explores field notes and the reducing of notes for office use, error analysis, taping, leveling and transit problem calculations. Prerequisite: CT 131. 4 (3-2)

**133 Basic Surveying III** **Four credits**

Stresses field work for bench mark circuits, profiles, cross-sections, traverses, topography and mapping. Prerequisite: CT 132. 4 (2-4)

**231 Advanced Surveying I** **Four credits**

Covers stake-out for various construction projects, for horizontal and vertical control. Inaccessible distance problems. Prerequisite CT 133. 4 (2-4)

**232 Advanced Surveying II** **Four credits**

Outlines precise surveying principles, ground and aerial photogrammetry, astronomy, and geodetic surveying, use of tilting levels, theodolites and other precise instruments. Prerequisite: CT 231. 4 (3-2)

**233 Project Lab** **Four credits**

Gives student the opportunity to undertake and complete an independent study project in surveying technology. A minimum of 70 hours work must be performed during the term on the project. A civil technology instructor will guide work on the project. Prerequisite: Graduation term. 4 (arranged)

**Traffic Technology (CT)****260 Introduction to Traffic Engineering** **Three credits**

Gives a general overview of field of traffic engineering technology and provides insight into related career opportunities. Relates human factors and driver characteristics to the vehicle, roadway and environment. 3 (3-0)

**261 Principles of Traffic Administration** **Three credits**

Explains how to budget, public relations, interagency problems and other systems' operations that affect traffic engineering. Studies traffic administration and safety. 3 (3-0)

**262 Field Traffic Surveys** **Four credits**

Details problem solving related to accident reporting, collision diagramming, intersection surveys, pedestrian volumes, and parking studies related to control, financing, design, demand characteristics, meters, signs and vehicle dimensions. 4 (3-2)

**263 Traffic Control Devices** **Three credits**

Covers signs: types, design, lettering, illumination and response time; signals: cycle length, phases, offsets, equipment and maintenance; marking and lighting: highways, intersections and special areas, and delineation. 3 (2-2)

**264 Traffic Geometrics** **Four credits**

Deals with cross section, curvature, sight distance, and clearance. Geometric design involves planning the visible elements of highways and depends directly on traffic flow characteristics. 4 (2-4)

**265 Traffic Studies** **Four credits**

Uses actual field problems to plan and execute traffic engineering studies concerned with origin and destination, speed and volume, and illumination. Emphasizes data processing and statistics. 4 (2-4)

**266 Traffic Laws and Regulations** **Three credits**

A thorough study of federal, state, and local laws and regulations to provide the legal background used in geometric design. Covers vehicle characteristics, wheel loads, bus stops, parking, signs, signals, markings, pedestrians, drivers, warrants, and general law enforcement. 3 (3-0)

**267 Urban Transportation Planning** **Four credits**

Combines new concepts in benefit, cost economic analysis, traffic forecasting and needs studies with fundamental concepts learned in previous courses to plan large scale transportation systems. 4 (3-2)

**Wastewater Technology (CT)****270 Certification, Rules and Regulations** **Three credits**

Deals with state and federal laws, rules and regulations which govern the certified wastewater treatment plant operator. 3 (3-0)

**271 Wastewater Analysis I** **Three credits**

Covers basic wastewater analyses, including chlorine residuals, solids determination, biochemical oxygen demand, coliforms, and phosphorous analyses. All analyses included meet the requirements for NPDES permits. Prerequisite: CEM 132 or departmental approval. 3 (2-2)

**272 Wastewater Analysis II** **Four credits**

Details more sophisticated wastewater analyses which require digestion, concentration and/or separation techniques, and instrumental analysis. Sampling and quality assurance techniques are included. Prerequisite: CT 271. 4 (3-2)

**273 Wastewater Treatment I** **Three credits**

Covers wastewater treatment from collection system through primary and secondary treatment. 3 (3-0)

**274 Wastewater Treatment II** **Three credits**

Covers further wastewater treatment from collection system through primary and secondary treatment. Topics include components, digesters and solids handling, disinfect, operations, maintenance and plant safety. Prerequisite: CT 273. 3 (3-0)

**275 Spill Prevention and Cleanup** **Three credits**

Provides knowledge concerning the prevention of loss of hazardous and/or polluting materials and the best methods of containment and cleanup of such materials in the event of loss or spill. 3 (3-0)

**276 Industrial Wastewater Treatment** **Three credits**

Covers methods of treating industrial wastewater. Topics include water segregation, collection, treatment of heavy metals, phenolics. 3 (3-0)

**277 Waste Water Project Lab****Four credits**

Gives students the opportunity to undertake and complete an independent study project in Wastewater Technology. Minimum of 80 hours work must be performed during the term. Prerequisite: Graduation term. 4 (0-8)

**Professional Registration (CT)****144 Professional Engineer Exam—Engineering Mechanics** **Two credits**

Provides a background in statics, kinematics and dynamics as a review to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**145 Professional Engineer Exam—Hydraulics** **Two credits**

Offers a background in hydraulics as a review to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**146 Professional Engineer Exam—Strength of Materials** **Two credits**

Provides background in strength of materials as a review to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**147 Professional Engineer Exam—Thermodynamics** **Two credits**

Reviews a background in thermodynamics to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**148 Professional Engineer Exam—Electricity and Electronics** **Two credits**

Offers background in electricity and electronics as a review to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**149 Professional Engineer Exam—Engineering Economics** **Two credits**

Provides a background in engineering economics as a review to prepare individuals for the Registered Professional Engineer Examination. 2 (2-0)

**Electronics Technology (ET)****100 Basic Electronics** **Four credits**

Covers the fundamental concepts of electricity to electronic amplification, using transistors. Major emphasis of this survey course is on laboratory work. Prerequisite: High school algebra. 4 (2-4)

**Courses leading to the Electronic Technology Associate Degree:****102 Electronics Drawing** **Two credits**

Describes a wide variety of electronic components and their characteristics. Schematic diagrams are drawn and practice is given in relating the schematic diagram to the electronic equipment it represents. Focus is on identification of electronic equipment components and how to relate component interconnection to the schematic diagram for the instrument. 2 (1-2)

**111 Electrical Circuits I** **Five credits**

Introduces students to basic electrical circuits with emphasis on direct current. The first of a sequence of courses taken to obtain an Associate Degree covers electrical units, resistor color code, Ohm's law, Kirchhoff's laws, network theorems, inductance, capacitance and R.C. time constants. Laboratory work includes measurement of voltage, current and resistance in D.C. circuits using the VOM and VTVM, constructing and testing simple meters, and using the oscilloscope to measure the period and amplitude of an A.C. signal. Co-requisite: TEC 151 or equivalent. 5 (4-2)

**112 Electrical Circuits II** **Five credits**

Emphasizes sinusoidal voltage and current and vacuum tubes. Topics include analysis of RC, RL and RLC circuits, both series and parallel; series and parallel resonance; coupled circuits; and vacuum tubes. Load line and equivalent circuit analysis of simple vacuum tube circuits is 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 tube circuits. Prerequisite: ET 111. Co-requisite: TEC 152. 5 (4-2)

**113 Electrical Circuits III** **Five credits**

Focuses on semiconductor devices. Topics include PN diodes, Zener diodes and bipolar transistors; small signal and large signal characteristics and biasing of bipolar transistors; classes of amplifiers and stability. Laboratory work includes construction and testing of solid state circuits including transistor amplifiers of various kinds. Prerequisite: ET 112. Co-requisite: TEC 152. 5 (4-2)

**131 Digital Basics** **Three credits**

Introduces the student to digital electronics and associated circuitry. A one-term course to be taken in the first year. Introduces binary number systems, basic logic gates, flip flops, counters, Boolean algebra, the basics of TTL integrated circuits, and fundamentals of computer operation. Laboratory work involves building and analysis of digital circuitry using TTL integrated circuits. Prerequisite: ET 112. 3 (2-2)

**206 Project Laboratory** **One credit**

Allows student to select a project compatible with chosen field of work, construct and test electronic devices under instructor guidance and through research. Project approval must be granted by supervising instructor before registration. Prerequisite: ET 113 and instructor approval. 1 (0-2)

**207 Project Laboratory** **Two credits**

Allows student to select a project compatible with chosen field of work and construct and test electronic devices under instructor guidance and through research. Project approval must be granted by supervising instructor before registration. Prerequisite: ET 113 and instructor approval. 2 (0-4)



**208 Project Laboratory****Three credits**

Allows student to select a project compatible with chosen field of work and construct and test electronic devices under instructor guidance and through research. Project approval must be granted by supervising instructor before registration. Prerequisite: ET 113. 3 (0-6)

**211 Electronic Applications I****Four credits**

Deals with specific applications of electronics. Topics in this sophomore-level course include rectifiers, filters, Zener diode and VR tube regulators and active regulators, junction and MOS field effect transistors and applications. Prerequisite: ET 113. 4 (3-2)

**212 Electronic Applications II****Four credits**

Covers linear integrated circuits, operational amplifiers, and optoelectric devices. Prerequisite: ET 113. 4 (3-2)

**213 Electronic Applications III****Four credits**

Explores thyristors, thyristor triggering devices and circuits and servomechanisms. Prerequisite: ET 113. 4 (3-2)

**231 Digital Electronics I****Four credits**

Introduces student to digital circuitry. Topics include number systems, Boolean algebra, basic logic gate operation, truth tables, combinational logic and gate minimization. Laboratory work includes breadboarding TTL digital integrated circuits. Prerequisites: ET 113 or departmental approval. 4 (3-2)

**232 Digital Electronics II****Four credits**

Focuses on multivibrators, flip flops, binary and decade counters, registers, magnetic memories and three-state logic. Laboratory work includes breadboarding and troubleshooting of digital circuits. Prerequisite: ET 231. 4 (3-2)

**233 Digital Electronics III****Four credits**

Deals mainly with large scale integrated circuits including read/write memories, read only memories, microprocessors and other associated circuits. The course work emphasizes practical use of the microprocessor and microcomputer. Lab work includes operation and programming of a microcomputer. Prerequisite: ET 232. 4 (3-2)

**261 Radio Servicing****Five credits**

Stresses theoretical and practical troubleshooting techniques. A laboratory oriented course during which AM, FM-MPX radio operation is discussed. A block diagram of a superheterodyne receiver introduces the student to radio concepts. Vacuum tube and transistor radio topics are discussed. Students must provide their own hand tools and are required to bring in radios to repair. Prerequisite: ET 113 or equivalent. 5 (3-4)

**262 Television Servicing****Five credits**

Explores the principles of operation of black and white television receivers. A laboratory oriented course. Block diagram introduction to television is used as a foundation for troubleshooting techniques. Students must bring their own black and white TV sets to class and provide their own sets of small hand tools. Prerequisite: ET 261. 5 (3-4)

**263 Advanced Television Servicing****Five credits**

Uses the principles of black and white television operation as a basis for discussing color television receivers. Laboratory emphasis will be placed on troubleshooting and alignment of color circuits. Students will have the opportunity to repair their own color sets or repair other color sets that may be available/provided. Students are to provide their own sets of small hand tools. Prerequisite: ET 262. 5 (3-4)

**264 Audio Systems Servicing****Five credits**

Stresses theoretical and practical troubleshooting techniques. This laboratory oriented course covers both vacuum tube and transistor audio circuits. Topics covered will include monaural and stereo amplifiers, speaker systems, and program sources. Emphasis is on troubleshooting audio amplifiers, measuring power output, distortion and other characteristics of audio systems. 5 (3-4)

**265 Stereo Fundamentals****Two credits**

Introduces stereo fundamentals and making valid cost versus performance judgments based on manufacturers' technical specifications. Includes an investigation of specifications normally used to describe speakers, turntables, cartridges, preamps, power amps, tape devices, FM stereo and quad. 2 (2-0)

**271 Communications I****Four credits**

Explores electronic communication principles and devices. The purpose of this series of three courses (Communications I, II & III) is to investigate the principles of communication theory and prepare to take the FCC exams for a commercial radiotelephone license. Includes the topics of FCC rules and regulations, power sources and audio amplifiers. Prerequisite: ET 113 or departmental approval. 4 (3-2)

**272 Communications II****Four credits**

Covers RF amplifiers, oscillators, amplitude modulation and single sideband. A continuation of ET 271. Prerequisite: ET 271. 4 (3-2)

**273 Communications III****Four credits**

Investigates frequency modulation, antenna, transmission lines and basic two-way servicing. Prerequisite: ET 272. 4 (3-2)

**280 Bio-Medical Instrumentation I****Four credits**

Covers electronic instrumentation and measurements in biology and medicine pertaining to the cardio vascular system, electrocardiography, transduction of physiological signals to electrical signals, the nervous and respiratory systems. Prerequisite: ET 113 and ANT 212 or equivalent.

**281 Bio-Medical Instrumentation II****Four credits**

Deals with instruction in ultrasound applications in medicine, lab or clinical instrumentation, x-ray and radiology techniques, and laser applications. Prerequisite: ET 280. 4 (4-0)

**Electro-Mechanical Technology (EM)****101 Basic Electricity****Four credits**

Introduces modern electrical technology, and helps students to explain electrical flow, draw simple circuit diagrams and use hand tools and electrical materials to wire duplex receptacles, switches and other apparatuses. Includes instruction in how to read and use simple meters and application of National Electrical Code rules to wiring systems. Prerequisite: High school algebra. 4 (3-2)

**102 DC Theory****Four credits**

Covers an analytical approach to solve direct current circuit and magnetic circuit problems. Explains Kirchoff's Law, Thevenin's Theorem, and other network theorems. Lab work emphasizes careful measuring and recording skills. Prerequisite: EM 101 and EM 121. 4 (3-2). Winter and spring terms

**103 AC Theory****Four credits**

Describes characteristics and advantages of alternating current, including its generation, transformation, control and measurement. Uses vector analysis to describe the effects of inductance, capacitance, reactance, and impedance. Prerequisite: EM 101 and EM 122. 4 (3-2). Winter and spring terms

**111 Electrical Blueprint Reading I****Three credits**

Focuses on drawing, recognizing, explaining the operation of, and describing common applications for a wide variety of industrial, electrical and electronic components. Includes instruction in how to recognize, describe the characteristics of, and understand the common uses for several types of electrical prints. Includes study of schematic diagrams, ladder diagrams, wiring and connection diagrams, and architectural electrical prints. 3 (2-2)

**112 Electrical Blueprint Reading II****Three credits**

Teaches students to locate electrical components on electrical architectural prints for residential, commercial and industrial buildings. Develops skills in recognizing installed wiring methods from prints. Includes instruction in locating and applying National Electrical Code rules pertaining to wiring methods in various occupancies. Prerequisite: EM 111. 3 (2-2). Winter and spring terms.

**113 Electrical Blueprint Reading III****Three credits**

Emphasizes print reading for industrial machine processes. Students learn to analyze mechanical, hydraulic, pneumatic, and electrical functions of industrial machinery in detail. Joint Industrial Council (JIC) Standards will be used. Prerequisite: EM 111. 3 (2-2). Spring and summer terms

**121 Math for Electricians I****Four credits**

Covers fractions, decimals, scientific notation, unit conversion, percentages and basic algebra, including simultaneous equations. Develops math skills for use in solving electrical problems. Prerequisite: High school algebra recommended. 4 (4-0)

**122 Math for Electricians II****Four credits**

Delineates how to define a vector quantity, translate a written set of conditions into a vector diagram, and apply vector analysis to the solution of alternating current series, and parallel and combination circuits using right-triangle trigonometry. Prerequisite: EM 121. 4 (4-0). Winter and spring terms

**123 Math For Electricians III****Four credits**

Explores the use of binary math and other number systems, applying vector analysis to three-phase systems, drawing a logic diagram from a set of given conditions, operating within the Boolean algebra logic system, and reducing logic circuits using Boolean algebra and Karnaugh mapping. Prerequisite: EM 122. 4 (4-0). Spring and summer terms

**211 DC Motors and Generators****Four credits**

Covers observing and recording the operating characteristics of DC motor types in lab, measuring torque, RPM, current draw, power and efficiency for each. First in a series of four courses. Prerequisite: EM 102 and EM 121. 4 (3-2). Fall term

**212 Single Phase Motors and Transformers****Four credits**

Covers construction, theory, and operating characteristics of single phase AC motors and transformers. Helps students to learn to recognize and draw wiring diagrams for various types of single phase motors and transformers. Prerequisite: EM 211 and EM 122. 4 (3-2). Winter term

**213 Three Phase Motors and Alternators****Four credits**

Explores construction theory and operating characteristics of three-phase motors, generators, and transformers. Helps students to learn to connect delta and wye transformer hook-ups, use a three-phase wattmeter and a power factor meter. Prerequisite: EM 212 and EM 123. 4 (3-2). Spring term

**221 Industrial Electrical Controls I****Four credits**

Focuses on the techniques of industrial electric motor and process control. Helps students to learn to read machine schematic and ladder diagrams, and develop a ladder diagram from a set of given operating conditions. Provides practice in the maintenance and troubleshooting of relay logic control systems. Prerequisite: EM 101 and EM 113. 4 (3-2). Fall term

**222 Industrial Electrical Controls II****Four credits**

Covers the basic operation of NOR and English logic control systems. Helps students to learn to design logic circuits and check their operation on logic simulators. Prerequisite: EM 221 and EM 123. 4 (3-2). Winter term

**223 Industrial Electrical Controls III****Four credits**

Stresses machine control by programmable controller. Explains control circuit design for programmable controllers, special terminology, theory of operation and troubleshooting techniques. Helps students learn to program, modify and maintain the Automate 33 programmable controller in the lab. Prerequisite: EM 222 and EM 123. 4 (3-2). Spring term

**224 Industrial Electrical Controls IV****Two credits**

Introduces students to control techniques of DC motors and their unique characteristics. Students receive instruction in reading schematic and ladder diagrams, control circuit design and learn accepted techniques of start-stop, emergency stop, jogging, plugging, and reversing DC motors. Prerequisite: EM 211 and EM 221. 2 (1-2). Spring and summer terms

**231 Wiring Systems Maintenance****Three credits**

Acquaints students with electric wiring systems maintenance and how to install wiring systems in wood-frame and masonry construction. Practice given in the installation of non-metallic sheathed cable, flexible metal clad cable, electrical metallic tubing and rigid conduit. Prerequisite: EM 101 or departmental approval. 3 (2-2). Fall term

**232 Industrial Control Maintenance****Three credits**

Explains how to set up and run a preventive maintenance program for electrical controls in an industrial environment. Helps students to learn to identify and repair malfunctions in electrical control equipment, including switches, relays, times, motor starters, combination starters, motor control centers and other specialized items. Prerequisite: EM 231 or departmental approval. 3 (2-2). Winter term

**233 Motor Maintenance****Three credits**

Provides instruction in how to test motors for operating characteristics, make minor repairs, and set up preventive maintenance schedules and check lists for common types of motors. Prerequisite: EM 232 or departmental approval. 3 (2-2). Spring term

**240 Electrical Estimating****Three credits**

Describes basics of preparing accurate, competitive, electrical estimates for the building trades. Helps students to learn fundamental take-off procedure by using electrical, mechanical and architectural prints provided in class. Labor and materials cost, evaluation techniques, and proper use of specifications will be covered. Students should have practical wiring experience, considerable practice in the use of National Electrical Code rules, and be able to read electrical construction prints before enrolling in the course. Prerequisite: EM 101 and EM 112 or departmental approval. 3 (2-2). Fall and winter term

**250 Electric Heat****Three credits**

Helps students learn to assist a professional electrical engineer, design electric space heating systems. Considers basic physics of heating, the effects of proper installation, heat loss calculations, and operating costs estimation. Prerequisite: EM 101 or departmental approval. 3 (2-2). Winter and spring terms

**261 Electric Vehicles I****Four credits**

Introduces students to the operation of electric vehicles. Covers the advantages and disadvantages of electric vehicles, technological problems and the chronology of electric vehicle development. Students will draw a block diagram of simple electric vehicle operation, and explain the theory, operation, and maintenance of batteries. Lab practice given. Prerequisite: EM 101 or departmental approval. 4 (3-2). Fall term

**262 Electric Vehicles II****Four credits**

Covers the setup theory, and operation of battery charging systems and theory and operation of SCR control of DC motors. Helps students to learn the basics of mechanical, hydraulic and electrical systems and apply them to larger electric vehicles such as industrial trucks. Prerequisite: EM 261. 4 (3-2) Winter term

**263 Electric Vehicles III****Four credits**

Introduces students to more complicated control systems and troubleshooting techniques. Students will work to design a complete operating and maintenance schedule for electric vehicles. Prerequisite: EM 262. 4 (3-2). Spring term

**Fire Science Technology (FST)****130 Fire Protection Historical Overview****Three credits**

Examines fire prevention and control in a historical and philosophical context. Role of fire service in society and input from various municipal and private fire protection agencies are studied. Offers an overview of the nation's fire problems. Provides information about job opportunities and necessary qualifications for opportunity in fire science. (3 (3-0))

**160 Fire Fighting Strategy and Tactics I****Three credits**

Focuses on fire fighting strategy and tactics, planning methods of attack and preplanning fire problems. 3 (3-0)

**161 Basic Fire Protection****Three credits**

Investigates organization and function of local, county, state, federal and private fire protection agencies. Studies history of loss of life and protection by fire, and the history and philosophy of fire protection. 3 (3-0)

**164 Fire Protection Systems and Equipment I****Three credits**

Covers fire detection and alarm systems, special hazard protection systems, sprinkler systems and fire extinguishing equipment. 3 (3-0)

**165 Hazardous Materials I****Three credits**

Explores fire fighting methods related to hazardous materials; to include solids, liquids and bases, and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials. Prerequisite: TEC 202. 3 (3-0)

- 167 Fire Hydraulics** **Three credits**  
 Outlines fundamentals of fire hydraulics. Includes study of water supply problems, standards on pump requirements, formulas, test criteria and physical laws relating to hydraulics, and practical application of fire fighting problems. Prerequisite: FST 170. 3 (3-0)
- 168 Math for Firefighters** **Four credits**  
 Focuses on basic arithmetic operations and algebraic equations as they relate to fire science of operations and equipment. 4 (4-0)
- 170 Physics for Firefighters** **Three credits**  
 Highlights several basic principals of physics. The divisions included are solids and their characteristics, liquids in motion, gas laws and applications. 3 (3-0)
- 177 Fire Hydraulics II** **Three credits**  
 Emphasizes applications of hydraulic circuitry in pumping operations of fire fighting equipment. Prerequisite: FST 167. 3 (3-0)
- 180 Fire Fighting Strategy and Tactics II** **Three credits**  
 Studies manpower assignments for stations and apparatus in communities of various sizes. Designed to assist officers in making proper decision in organizing and operating fire fighting forces. Prerequisite: FST 160. 3 (3-0)
- 204 Fire Protection Systems and Equipment II** **Three credits**  
 Covers the proper installation and need for standpipe systems, pressure tank installations, hydraulic calculations and water supplies, and study of actual installation shop drawings. Prerequisite: FST 164. 3 (3-0)
- 263 Building Construction for Fire Security I** **Three credits**  
 Involves essentials of building design and construction. Special features and considerations related to fire security are included. 3 (3-0)
- 264 Fire Investigation I** **Three credits**  
 Investigates fire behavior, importance of determining origin, and procedures used in identifying accidental, incendiary or arson type fires. Covers methods of recognizing and identifying motivation for arson and the laws that are relative to the intentional setting of fires. 3 (3-0)
- 266 Fire Investigation II** **Three credits**  
 Studies preservation of evidence and photographic coverage of fire, methods of interrogation related to fire investigation and conduct for investigators. Examines libel, slander and court procedures related to evidence and statements, and the importance of cooperation between investigative agencies. Records, reports and case histories are covered. Prerequisite: FST 264. 3 (3-0)
- 268 Hazardous Materials II** **Three credits**  
 Covers methods of fire detection, control and extinguishing, and the problems which are likely to arise whenever chemicals, explosives or radioactive materials are used, stored, or transported. Prerequisite: FST 165. 3 (3-0)

- 283 Building Construction for Fire Security II** **Three credits**  
 Studies building construction; protection of openings in floors, walls and partitions; exits; smoke and heat venting protection against exposures; life safety codes; sprinkler systems; and special structures. Prerequisite: FST 263. 3 (3-0)
- 290 Fire Administration** **Three credits**  
 Provides chief officers with a better understanding of motivation with proper direction from management, and presents modern approaches to the challenges which face today's fire executives. 3 (3-0)
- 293 Project Laboratory** **Three credits**  
 Affords the student the opportunity to undertake and complete an independent study or project under staff supervision. Students should consult with faculty advisor before enrolling. 3 (0-6)
- 296 Project Laboratory** **Six credits**  
 Gives advanced opportunity to undertake and complete an independent study or project under staff supervision. Students should consult with faculty advisor before enrolling. 6 (0-12)

### Industrial Drafting Technology (DT)

- 100 Basic Drafting** **Three credits**  
 Focuses on basic concepts in orthographic projection, auxiliary projections, sketching, both orthographic and pictorial. Designed for students without previous drafting experience or those who need a refresher course. Lettering techniques will be stressed and a brief approach to industrial dimensioning practices will be presented. DT 100 is a prerequisite to DT 101 for students who do not have previous drafting experience. 3 (2-2)
- 101 Industrial Drafting I** **Four credits**  
 Concentrates on the interpretation of and drawing of industrial blueprints. Stresses orthographic projection, sectioning, auxiliary views, and dimensioning according to industrial standards. Various problems in each area are to be developed by the student. Prerequisite: DT 100 or previous drafting experience. 4 (2-4)
- 102 Industrial Drafting II** **Four credits**  
 Emphasizes advanced techniques correlated to demands of industry. Beginning layout practices are covered, and advanced detailing and assembly type drawing is to be completed by each student. Prerequisite: DT 101. 4 (2-4)
- 103 Descriptive Geometry** **Four credits**  
 Covers graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic projection. Includes study of point, lines and planes, primary and successive auxiliary views, parallelism, perpendicularity, developments and intersections. Civil and mechanical engineering problems are studied. Prerequisite: DT 101. 4 (2-4)

## Engineering Technology

**104 Jigs and Fixtures I**

Explores drawing problems in designing various types of jigs and fixtures. Prerequisite: DT 101. 4 (2-4)

**Four credits****105 Jigs and Fixtures II**

Details the study and design of advanced jigs and fixtures. Prerequisite: DT 104. 4 (2-4)

**Four credits****106 Industrial Drafting III**

Stresses layout and design concepts, and practical design projects in problem solving and creativity. Assignments prepare the student for DT 306 and DT 307. Prerequisite: DT 102. 4 (2-4)

**Four credits****110 Blueprint Reading I**

Covers orthographic projection, linear and angular measurement, and reading of prints, with three views given in the three principal planes of projection. Deals mainly with part prints. 4 (4-0)

**Four credits****111 Blueprint Reading II**

Covers application of orthographic projection principles in more detailed blueprints than DT 110. Deals with part prints and assembly drawings. Prerequisite: DT 110. 4 (3-2)

**Four credits****135 Technical Illustration I**

Introduces student to methods of illustration currently used in industry. Includes use of sketches, photographs, axonometric construction and introduction to the perspective grid. Use of line weights is stressed in this fundamental course to achieve desired finished drawing effects. Prerequisite: DT 101 or equivalent. 4 (2-4)

**Four credits****136 Technical Illustration II**

Emphasizes applying practical concepts used in industrial pictorial communications. Preparation of layouts from layout and part prints and photographs will be explored. Design considerations in layout preparation, acetate overlays, paste-up, keylining techniques, and graphic reproductive processes will be utilized. Prerequisite: DT 135. 4 (2-4)

**Four credits****202 Die Design and Construction I**

Covers detailing of blanking and piercing dies, basic forming dies, and basic trim dies, material types, heat treat requirements, and press requirements as applied to the design. Prerequisite: DT 101. 4 (2-4)

**Four credits****203 Die Design and Construction II**

Stresses the design of blanking and piercing dies, forming dies, and trim dies. Studies metals as applied to the type of die. Related study in electro discharge machine, processes, and estimating. Prerequisite: DT 202. 4 (2-4)

**Four credits**

## Engineering Technology

**204 Auto Body Design I**

Acquaints student with the techniques and drafting procedures used in automotive industrial drafting rooms. The preponderance of curved lines and surfaces in body design is the focus of the course.

**Four credits****205 Auto Body Design II**

Reviews basic descriptive geometry as applied to automotive true view problems. Includes basic study of simple and compound surface development; and surface development and true view practice applied to current automotive design problems. Prerequisite: DT 204. 4 (2-4)

**Four credits****208 Plant Layout**

Focuses on drafting procedures as related to plant layout, including building construction and manufacturing processes. Prerequisite: DT 101 and MT 108 or equivalent. 4 (2-4)

**Four credits****209 Industrial Drafting Lab**

Gives additional lab time to advanced students. Students who are taking DT 101 or advanced courses are eligible. Prerequisite: Instructor approval. 2 (0-4)

**Two credits****210 Industrial Dimensioning Practices**

Establishing the rules, principles and methods of dimensioning and tolerancing for specific design requirements on engineering drawings. Also establishes uniform practices for stating and interpreting these requirements. Considerable coverage will be given to geometric tolerances and introducing the symbolic method of specification. Prerequisite: DT 102 or equivalent. 3 (3-0)

**Three credits****294 Project Laboratory (Industrial)**

Gives student opportunity to further drafting skills with emphasis on beginning layout and advanced detailing. Each student will be given or may suggest an advanced problem to pursue and complete in one term and will be responsible for some research in design application. Recommended for students enrolled in drafting technology. Prerequisite: Instructor approval. 4 (0-8)

**Four credits****296 Project Laboratory (Industrial)**

Advances design ability. Each student spends a minimum of 12 hours per week on layout procedures. Class requirements include the design of a mechanical device and making a complete design drawing. Prerequisite: DT 306 and instructor approval. 6 (0-12)

**Six credits**

**Occupational Safety and Health Associate Degree (SAF)****203 Industrial Safety Standards****Four credits**

Develops safety attitudes and focuses chiefly on physical environment and its proper administration. Primarily directed at first line supervisors, operators, and safety personnel on all levels. Prerequisite: MGT 356. 4 (4-0)

**204 Industrial Hygiene****Four credits**

Introduces students to the fundamentals of industrial hygiene, a science devoted to the recognition, evaluation and control of environmental factors or stresses from the work place that may cause sickness, impaired health or significant discomfort to employees or community residents. Prerequisite: TEC 202 or departmental approval. 4 (4-0)

**205 Safe Practices and First Aid****Three credits**

Acquaints students with first aid and treatment through lectures, demonstrations, and practice as outlined by the American Red Cross or equivalent. Safe working practices with hand tools and around machines are stressed. Also covers information about the safety devices of machines and how to identify and use them. 3 (3-0)

**206 Handling Hazardous Materials****Three credits**

Acquaints accident prevention personnel with the fundamental information to judge the degree of hazard and the problems likely to arise whenever hazardous materials are used, stored or transported. Prerequisite: TEC 202 or departmental approval. 3 (3-0)

**210 Public Safety and Fire Codes****Three credits**

Points out the elements involved in developing a basic emergency preparedness plan to promote safety for employees, visitors, and customers, as well as to protect property and operation. Topics include chain of command, medical treatment plans, communication systems, shutdown and evacuation procedures. 3 (3-0)

**211 Material Handling Safety****Three credits**

Examines the problems and safe handling techniques involved in the manual and mechanical handling of materials. 3 (3-0)

**212 Accident Prevention for Motor Vehicle Fleets****Four credits**

Deals with all important aspects of preventing accidents in motor fleet operations: driver selection, training and supervision, vehicle safety, record-keeping, and transport of hazardous material. 4 (4-0)

**213 Construction Safety Standards****Three credits**

Covers Occupational Safety and Health Act Requirements, recognizing, avoiding and preventing environmental hazards and developing overall safety awareness to prevent accidents in the construction industry. Prerequisite: MGT 356. 3 (3-0)

**251 Machine Guarding****Three credits**

Includes the fundamentals of guarding procedures, illustrates methods of application to the basic types of mechanical action or motion. Topics include: guarding at point of operation, guarding power transmission, guarding hoists and cranes, and guarding trucks and heavy equipment. 3 (3-0)

**254 Power Press Safety****Three credits**

Concentrates on techniques of power press safety. Covers design problems which could result in a safety hazard, operational dangers and hazards to maintenance workers. 3 (3-0)

**291 OSHA/MIOSHA Safety Seminar****One credit**

Provides individuals with a variety of slide-tape units from which to select to build a program of ten hours of instruction. Students use AVT (audio-visual tutorial) facility in room 210 of the Vocational-Technical building on an arranged basis. Topics include: construction safety, powered industrial trucks, metal working machinery, fixed and portable ladders, abrasive wheels, fire exits, face and eye protection, and many more. 1 (1-0)

**292 Safety Seminar****Two credits**

Designed to acquaint students with methods used in the development of an Occupational Safety Program. The "doing" of the independent project will provide the student with a factual learning exercise. Meetings with a faculty member during the term are arranged. 2 (2-0)

**Technology General (TEC)****102 Industrial Communications I****Four credits**

Reviews basics of written communication, including a review of high school grammar and spelling. Weekly writing assignments are typical of those needed in industry. Especially helpful to those now employed, and others preparing for industrial occupations, such as technicians, supervisors, and skilled trade apprentices. 4 (4-0)

**103 Industrial Communications II****Four credits**

Stresses sentence structure, paragraph structure and a more intensified review of high school grammar and spelling, with applications to writing technical material, particularly for industry. Prerequisite: TEC 102. 4 (4-0)

**110 Technical Occupations and Personal Finance****Three credits**

Encourages technical workers to design a personal finance plan to reflect change in earning power. Advises on the need for more education to hold a technical position, and emphasizes the need to take advantage of earning power at peaks in productivity by investments of short and long term nature. 3 (3-0)

**115 Technical Occupation and the American Economy****Three credits**

Informs technical workers of their place in the American economy. Instructs on traditional economic theory relevant to group and individual productivity. Includes a comparative analysis to show advantages and disadvantages of various economic systems from a technical employee's view-point. Concentrates on the system as it exists in the United States today to include multi-national corporations, local corporations, and sole proprietorship technical job shops. 3 (3-0)

**150 Technical Math Introduction****Five credits**

Covers the prerequisite material to the TEC 151, 152, 153 series. Topics include fractions, operations with zero, equations in one unknown and problems in geometry. 5 (5-0)

**151 Mathematics for Technicians I****Five credits**

Applies topics from algebra and trigonometry to civil technology, electronics technology and mechanical technology. Emphasizes practical problems. Covers units of measurement, approximations, linear equations, plane trigonometry, exponents and radicals. Prerequisite: High School algebra and geometry or equivalent. 5 (5-0)

**152 Mathematics for Technicians II****Five credits**

Investigates logarithms, complex numbers, quadratic and higher order equations, variations, vectors, oblique triangles, trigonometric identities, and trigonometric equations. Prerequisite: TEC 151. 5 (5-0)

**153 Mathematics for Technicians III****Five credits**

Covers the application of differential and integral calculus to practical technical problems. Topics include rectilinear and curvilinear motion, related rates, maximum and minimum problems, areas and averages. Prerequisite: TEC 152. 5 (5-0)

**200 Technology and Society****Three credits**

Describes and analyzes the effect of present and past technologies on society and uses this evaluation to predict some consequences of future technologies. 3 (3-0)

**201 Applied Physics****Four credits**

Includes basic principles in mechanical technology, electricity and electronics technology, civil technology, hydraulics, metal working, and heating and air conditioning. Provides basic training in fundamental physical phenomena necessary for the student preparing for a career in technology, and emphasizes practical problems. Topics include mechanics, heat, electricity, light and optics. 4 (4-0)

**202 Industrial Chemistry****Four credits**

Focuses on basics in general chemistry for the technician. Topics include atomic and molecular theory, bonding, properties of elements. Also discussed are oxidation reduction reactions, kinetic-molecular theory, solutions and electrochemistry. Applications are made to the field of fire protection primarily. 4 (4-0)

**203 Technical Report Writing****Four credits**

Covers writing memorandums, letters, employment applications and resumes, work orders, accident reports. Recommended for second year students. Prerequisite: TEC 102. 4 (4-0)

**204-208 Internship Seminar/Engineering Technology Subjects Var. credits**

Allows students to be placed in an approved training site to develop skills. Offered after successful completion of basic courses, usually following the freshman year. The flexibility of developing individual programs for interested students in engineering technology related occupations is accomplished through a practical training program in agreement with local employers and college coordinator. 3 to 3 credits variable. Departmental approval.

**261 Teaching Methods****Four credits**

Considers successful methods, materials, equipment, aids, lesson planning, evaluation, community resources and guidance procedures used in teaching occupational subjects. 4 (4-0)

**262 Course Design****Four credits**

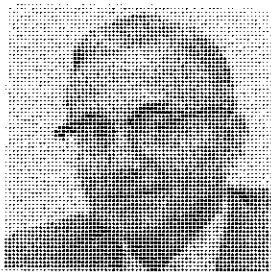
Studies course construction and curriculum planning for the occupations, recognition or objectives, methods of attainment, information resources available, textbook evaluation, and task analysis technique. 4 (4-0)

**263 Media and the Technology Instructor****Four credits**

Explores characteristics of media commonly used in classrooms. Relates media use to learning theory and instructional design. The student-instructor gains basic competencies in preparing materials, equipment operation, utilization techniques and their application to a learning situation. 4 (4-0)

*Department of Applied Technology*

*Chairperson:* Harold J. Walper



The Department of Applied Technology offers programs and courses providing instruction and training which can lead to a career as craftsman or technician in the building trades, industrial trades, or the service trades.

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

**Primary Functions of Department of Applied Technology**

The primary purposes of the Applied Technology Department are to provide: (1) related instruction for all apprentices in skilled trades served by the College area, (2) one-year Certificate Programs to assist individuals to prepare for job entry positions requiring basic knowledge and skills, (3) two-year Associate Degree Programs to give greater breadth and depth, and (4) additional information to allow individuals to promote and update themselves in their present occupations or in new fields.

In keeping with the philosophy of the College, the Applied Technology Department strives to serve broad areas of needs. This vocationally oriented department provides hands-on experience wherever possible.

Recognizing that the social elements of our community require greater attention than ever before, special attention is devoted to aiding disadvantaged and minority persons. The department also develops programs to assist industry, government and local agencies in upgrading their personnel.

**Apprenticeship Training**

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

Apprentice training offers the individual the opportunity to learn a skilled craft or trade while he/she works at the trade for wages and takes related instruction to learn more about the job. A person desiring apprentice training must be employed as an apprentice before entering certain designated classes.

Upon completion of the training program, the apprentice is awarded the status of journeyman, signifying a skilled craftsman or tradesman. Many of the key persons in industry today began as 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/she must have good health, be mentally alert, and genuinely interested in the training. Most apprenticeship trades require a high school diploma. Age limits are, in general, 18 through 25, but exceptions are sometimes made. School records, test results and personal interviews are used by building trades committees in determining the qualifications of an applicant. These guidelines are normally among those recommended by the United States Department of Labor, Bureau of Apprenticeship and Training.

Applications for most building trades apprenticeships are available at the Applied Technology Department office. No common procedure can be outlined here since each trade differs in its selection and placement procedure. An applicant must reside within the jurisdictional area of the joint apprenticeship committee of the building trade for which he/she is making application as required by the various Building Trades Apprenticeship Committees.

Applicants approved for building trades apprenticeship training are assigned a day to report for classes by the appropriate JAC.

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



**Building trades apprenticeships include:**

- Asbestos Worker
- Bricklaying
- Carpentry
- Electrical (Inside)
- Electrical (Residential)
- Painting and Decorating
- Plumbing and Pipefitting

**Industrial trades apprenticeships include:**

- Die Making
- Die Sinking
- Draftsman
- Electrician (Industrial)
- Machine Repair
- Machinist
- Maintenance Machinist
- Millwright
- Model Making
- Plumber-Pipefitter (Industrial)
- Tool Inspection
- Tool Making
- Tool and Die Making
- Welder

**Service trades apprenticeships include those of:**

- Automotive Body Repair
- Automotive Painter
- Automotive Servicing
- Diesel Mechanics

**Seminars**

Lansing Community College develops many seminars in an effort to meet the educational needs of the citizens of our community. These seminars are usually designed for companies or groups of individuals. They are offered on or off campus. In turn, they are intended to help upgrade the individual's working effectiveness and assist in developing new skills. Seminars usually consist of lectures or laboratory experience or a combination of both.

Human relations and technical skills are emphasized. Competence in selecting, preparing, utilizing and evaluating tools and methods are usually stressed according to need. Credits earned can usually be applied to appropriate Certificate or Associate Degree programs.

**ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS****Certificate Programs**

The one-year Certificate Programs offered by the Applied Technology Department are designed for initial job placement. They also should enable many students to enter apprenticeship training programs and receive partial or full pre-credit for the courses taken. These courses may usually be taken on a part-time basis.

Some may wish to enroll in a Certificate Program for the purpose of job advancement or to seek a new field of employment. Others may wish to transfer to an Associate Degree Program after completion.

A minimum of 45 credit-hours is required with a Grade Point Average of 2.00 or above in order to complete the Certificate Program. A certificate is awarded for satisfactory completion of the courses.

Students should bear in mind that the Certificate Programs are informational and instructive in nature but are not equivalent in course work or job experience to the programs of the various Lansing Joint Apprenticeship Committees, and do not of themselves lead to journeyman status.

Students seeking journeyman status should consult with the Apprenticeship and Training Committee of the appropriate Joint Apprenticeship Board, as registered with the Bureau of Apprenticeship and Training, Lansing Office of the U.S. Department of Labor, or the Applied Technology Department.

**The following is a partial list of Applied Technology Certificate Programs:**

- Alternate Sources of Energy
- Appliance Servicing
- Auto Body Repair & Painting
- Auto Parts Counterman
- Construction Electrician
- Custodial Maintenance
- Die Maker—Tool and Die Maker
- Diesel Engine Technology
- Glassblowing
- Graphics
- Heating and Air Conditioning
- Industrial Management
- Industrial Technology
- Labor Studies
- Machine Repair
- Machine Tool Careers
- Machinist, Toolmaker
- Millwright
- Pipefitter
- Plastics
- Residential Builder
- Sheet Metal
- Small Engines
- Welder

**Associate Degree Programs**

Courses completed in Applied Technology Certificate Programs are usually transferable toward an Associate Degree of similar nature within the department.

**All Associate Degree Programs require a minimum of 90 term-hour credits.**

Each student should check with the transfer counselor, to determine the transferability of credits to a particular college or university.

**Applied Technology Associate Degree Programs include:**

- Automotive Technology
- Diesel Engine Technology
- General Technology
- Heating, Air Conditioning and Refrigeration
- Industrial Management
- Industrial Technology
- Labor Studies
- Machine Maintenance Technology
- Numerical Control Programmer
- Welding Technology

**Automotive Technology—Associate in Science Degree**

Minimum of 90 credits required.

The Automotive Associate Degree Program is designed to develop a service technician who will be able to diagnose, repair and service an automobile. This series of courses will provide an individual with job entry skills enabling him to seek employment in the Automotive Service industry. Ecology has placed heavy demands on the auto industry for control of auto emissions, resulting in a need for trained technicians to service emission controls. Students gain practical experience by working on and servicing live units in the laboratory courses.

**Automotive—Certificate Program**

The Automotive Certificate Program is designed to provide the student with job entry skills for employment in the automotive industry. The curriculum consists of practical laboratory courses providing hands-on experience.

**Heating and Air Conditioning—Associate Degree Program**

The Heating and Air Conditioning Associate Degree is designed to teach 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 and enclosed space, such as a home or business.

Students receive necessary background to calculate heat gains and heat losses, and learn layout, planning and design of cooling and heating systems.

In the heating sections, the installation and servicing of oil burners, gas-fired systems and the controls needed for these systems are thoroughly covered. Much time is spent in the cooling sections, building a background knowledge of the combination of motors, pulleys, compressors, valves, coils, piping, ducts, electrical wiring and automatic controls that make up an air conditioning unit.

The student gains a thorough knowledge of the latest tools, gauges and testing equipment used in air conditioning, and a general background in troubleshooting domestic refrigerators.

**Heating and Air Conditioning—Certificate Program**

The Heating and Air Conditioning Certificate Program is designed to equip the student with job entry skills for employment in the air conditioning industry.

The curriculum will provide the student with a basic knowledge of the field. Students will be working with the total heating and air conditioning system including air purity and humidity under laboratory conditions; and diagnosing and servicing units and testing equipment used in air conditioning.

**Industrial Management—Associate in Science Degree Program**

Minimum of 90 credits required.

This program is designed to equip an individual with the necessary background and techniques to qualify for positions in industrial management. It is also valuable for current supervisors who may have been promoted from the ranks of labor, offering pertinent courses to assist their development as professional leaders.

Skills and knowledge in human relations, technical areas, proven management theory and practice, and efficient communication are emphasized in practical and usable ways.

The 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 business management may refer to programs and courses offered by the Department of Management and Marketing.

A typical management program may include courses among the following:

ATR 137	Industrial Presses
ATR 142	Applied Metallurgy
ATR 144	Hydraulics and Pneumatics
ATR 165	Employer-Employee Relations
ET 101	Basic Electricity
IM 166	Industrial Supervision I
IM 167	Industrial Supervision II
IM 168	Industrial Supervision III
IM 170	Industrial Labor Management Relations
IM 175	Production and Inventory Control
IM 176	Manufacturing Cost Control
IM 179	Leadership Communications
IM 180	Organizational Communications
IM 185	Chief Executive Officer
SAF 305	Safety Practices and First Aid

### Labor Studies Program

#### Associate in Science Degree or Certificate Program

A new Labor Studies program in the Applied Technology Department has been developed through the efforts of the College and an advisory committee composed of labor representatives.

An Associate Degree in Labor Studies (as well as a one-year Certificate program) will be offered. These programs are designed to meet the needs of organized labor in today's ever-changing society. However, the courses will be open to everyone.

The Labor Studies programs will enable individuals to extend their horizons and apply a rounded view to the solving of the many problems workers face as participants in a technological revolution and as concerned citizens in a changing world.

Some of the course offerings in this area are:

Structure and Administration of Unions

Collective Bargaining: Negotiating in the Private Sector

Collective Bargaining: Negotiating in the Public Sector

For further information regarding Labor Studies programs, contact the Department of Applied Technology.

### 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; he must know exactly what each machine is capable of doing. This curriculum also will provide necessary mathematical skills for computing precision movements. A programmer must become expert at reading blueprints, for they determine the finished machined part.

Many companies include the numerical control program in their engineering department.

The curriculum should provide job entry skills and enough related knowledge to communicate with all personnel in the field.

### COURSE DESCRIPTIONS

#### Applied Technology General (ATG)

##### 110 Custodial Maintenance I

Three credits

Gives individuals a workable knowledge of cleaning techniques and a general knowledge of topics applicable to the trade. 3 (3-0)

##### 111 Custodial Maintenance II

Three credits

Exposes the custodian to minor repairs of the physical plant such as plumbing repair, electrical repairs, boiler, grounds, and swimming pool maintenance. Includes an introduction to first aid. Prerequisite: ATG 110. 3 (3-0)

##### 112 Custodial Maintenance III

Three credits

Emphasis is placed on the role of the custodial supervisor with respect to employer and employee relations. Prerequisite: ATG 110 and 111. 3 (3-0)

##### 121 Glass Blowing I\*

Four credits

The beginning course in the sequence of Glass Blowing will acquaint the student with the basic properties of glass and procedures of glass blowing. Emphasis will be placed on flow control, viscosity, making objects from glass rods in addition to torch and furnace stages of annealing. Lab fee. 4 (2-4)

##### 122 Glass Blowing II\*

Four credits

Instruction will be given in control blowing of glass tubes, methodology of controlling and designing of shapes. Prerequisite: ATG 121, Glass Blowing I. Lab fee. 4 (2-4)

##### 123 Glass Blowing III\*

Four credits

Continuation of glass blowing techniques, manipulation of molten glass rods, complex designs, weaving of rods and the joining of rods to tubes. Prerequisite: ATG 122, Glass Blowing II. Lab fee. 4 (2-4)

## Applied Technology

**124 Glass Blowing IV\***

Continuation of Glass Blowing III. Prerequisite: ATG 123, Glass Blowing III. Lab fee. 4 (2-4)

**Four credits****130 Basic Woodworking**

A project-oriented, hands-on experience that will include the following: wood characteristics, hand and portable power tools, woodworking machinery, joint construction, fastening methods, woodworking techniques and procedures, related technical information, and basic wood finishing. Lab fee. 3 (2-2)

**Three credits****133 Furniture Making\***

Introduction to the basic principles of design and construction of simple furniture. Primarily a lab class with emphasis on selection of materials, options available for joints and fastening methods, laminating, steam bending, construction techniques, assembly procedures, finishing and problem solving. Prerequisite: ATG 130 or equivalent experience. Lab fee. 3 (2-2)

**Three credits****135 Antiquing and Furniture Refinishing\***

Step-by-step procedures for removal of old finishes, minor repairs, selection of new finish, surface preparation techniques and methods of application of the new finish optional approaches and skill development for antiquing. Fabric work and upholstery are not included in this course. Lab fee. 3 (2-2)

**Three credits****140 Gunsmithing\***

A hands-on course designed for the individual who is interested in learning the skills required to repair and restock rifles. Topics covered in the course will include: install sights, scopes, rebarrelling actions and repairs. Also covered in the course is the building of muzzle loading rifles whether from a kit or starting with the basic components. Lab fee. 3 (2-2)

**Three credits****143 Fishing Rod and Lure Making\***

Shows basic skills required to design and fabricate fishing rods and lures. Each student will be required to fabricate one rod during the course. Lab fee. 3 (2-2)

**Three credits****146 Bicycle Repair and Maintenance\***

Shows basic reconditioning techniques for ten-speed bicycles, including wheel respoking, truing wheels, and general maintenance. Lab fee. 2 (1-1)

**Two credits****150 Alternate Sources of Energy**

A hands-on class in which the student will participate in building or assembling a solar or wind powered device. A knowledge of basic physics or basic electricity is helpful but not necessary. Lab fee. 4 (2-4)

**Four credits****151 Building Solar Furnaces**

A hands-on course for the builder, designer, and do-it-yourselfer. The course will have a brief overview of solar energy utilization followed by a practical design solution and actual construction of a useable air-type solar furnace. Lab fee. 2 (1-2)

**Two credits**

## Applied Technology

**152 Building Solar Water Heaters****Two credits**

Intended for the builder, designer, and do-it-yourselfer. Drawing on material from ATG 200 and 201, the course will provide an overview of solar energy applications to those uninitiated while allowing advanced students to get into more detail. Novices and advanced students work together in experimental learning. Lab fee. 2 (1-2)

**160 Creative Tinsmithing\*****Three credits**

Emphasizes design and construction of functional and/or decorative pieces from tin, copper, and brass. Uses basic metal layout procedures, knowledge of malleable qualities of each metal; a combination of old and new tin and copersmithing procedures, such as the "drawing" and "tinning" of metals. Instruction in the use of metal-working experience will be constructing basic, simple items (candlestick holders, tin cups, lanterns etc.) Those with some experience may be able to construct pieces of more advanced design (teakettles, vases, pitchers, etc.) Lab fee. 3 (1-3)

**175 Graphics I\*****Three credits**

The first of a three-term printing graphics series designed for those on apprenticeship programs and for those interested in the field of graphics. The student begins exploring all the basic printing processes and operations. Lab fee. 3 (2-2)

**176 Graphics II\*****Three credits**

Continuation of Graphics I with the student gaining more knowledge of offset techniques, stripping, layout, and composition processes. Lab fee. 3 (2-2)

**177 Graphics III\*\*****Three credits**

The third term offers the student further study in individual interest areas: press operations, process camera, halftones, etc. Lab fee. 3 (2-2)

**199 Customer Relations****Two credits**

A course for individuals in the service trades who will be dealing directly with customers. Covers handling of customer problems and complaints in a satisfactory manner to both parties. 2 (2-0)

\*For those persons contemplating starting their own business it is recommended that you take BUS 118: Introduction to Business.

\*For those persons contemplating starting their own business it is recommended that you take BUS 118: Introduction to Business.

\*For those persons contemplating starting their own business it is recommended that you take BUS 118: Introduction to Business.

\*\*This series of graphics courses may be repeated for a maximum of 36 credits.

## Applied Technology Related (ATR)

**100 Machine Tool Survey****Five credits**

A practical course to familiarize the student with general knowledge of machine tools. The lecture will cover many machine tools used by the machinist. The laboratory will expose students to a variety of hands-on experiences. Excellent for maintenance people, supervisors, mechanical engineers and students of Engineering Technology. Lab fee. 5 (2-6)

**101 Machine Shop I****Five credits**

Theory and practice in the operation and setup of machine tools with emphasis on the lathe, drill press, bench work and measuring instruments. Daytime classes are AVT style (go at your own pace). Evening classes are standard lecture-lab style. Lab fee. 5 (2-6)

**102 Machine Shop II****Five credits**

Continuation of ATR 101 with emphasis on milling machine practice. Some reference to shapers and planers and an introduction to heat treating of steels. Daytime classes are AVT style (go at your own pace). Evening classes are standard lecture-lab style. Prerequisite: ATR 101. Lab fee. 5 (2-6)

**103 Machine Shop III****Five credits**

Continuation of ATR 102 with emphasis on grinding machine practice, metallurgy and cutting fluids with an introduction to Numerically Controlled machines (N/C) and Electric Discharge Machining (EDM). Daytime classes are AVT style (go at your own pace). Evening classes are standard lecture-lab style. Prerequisite: ATR 102. Lab fee. 5 (2-6)

**104 Tool and Cutter Grinding****Four credits**

Operations and setup involved in tool and cutter grinding of the following tools: drills, reamers, single point tools, all types of milling cutters including ball end mills, and concave radius cutters. Can be adapted to the needs of the student from a particular shop. Lab fee. 4 (2-4)

**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 students, guided by an instructor, select a project compatible with their individual field of work. Lab fee. 4 (0-6)

**112 Template Making and Model Checking****Three credits**

Functions of models, templates, use of the sine bar, height gauge and aids. Applications of models are described and interpretations and sectioning of drawings are used. Prerequisite: Drafting Technology 100 or 110 or approval of instructor. Lab fee. 3 (2-2)

**113 Die Construction I****Three credits**

Emphasis on layout and processing, types and uses of aids applying to die construction, selection of steels, limitations on accuracy, and finishing of parts used in die construction. Covers various types of die construction used in industry and presses related to die construction. Prerequisite: DT 100 or DT 110 or approval of instructor. 3 (2-2)

**114 Die Construction II****Three credits**

Continuation of ATR 113. Covers theory of heat treat, repair and maintenance, welding, types of steels, and types of aids used in die construction. Auxiliary equipment to dies such as lifters, loaders, kickers, stackers, hoppers, dial feeds covered. Explores how dies should be built to make maintenance possible and provide long die life. Prerequisite: ATR 113 or approval of instructor. 3 (2-2)

**115 Machine Tool Careers I****Eleven credits**

The first of a three-term series for students who require in-depth experience. A minimum of seventeen hours per week includes setup and operation of most machines and precision equipment used in industry today. Assists in preparation for machinist careers, industrial vocational teaching, and related careers such as numerical control programming and pre-apprenticeship training for the metal trades. Lab fee. 11 (2-18)

**116 Machine Tool Careers II****Eleven credits**

Continuation of ATR 115. Prerequisite: ATR 115 Machine Tool Careers I. Lab fee. 11 (2-18)

**117 Machine Tool Careers III****Eleven credits**

Continuation of ATR 116. Prerequisite: ATR 116 Machine Tool Careers II. Lab fee. 11 (2-18)

**118 Principles of E.D.M.****Three credits**

Involves the theory, fundamentals and practice of Electric Discharge Machining. The student will be taught the programming of the control console, machining of electrodes, practical applications and estimating time of operation. Lab fee. 3 (2-2)

**120 Plastics I (Introduction)****Four credits**

Includes the classification of plastics, plastic structure and how plastics are made; the thermoplastic family: acrylic, fluoro-carbon, polyamide, P.V.C., A.B.S., styrene, polypropylene, etc.; and the thermoset family: Urea and melamine, casein, epoxy, phenolic, polyester, silicone, urethane, etc. 4 (4-0)

**121 Plastics II (Processing)****Four credits**

Includes molding processes such as compression, transfer, injection, extrusions, etc.; casting processes and thermoforming processes. Also foaming, heat sealing, and fabrication, etc., will be discussed. Prerequisite: ATR 120. Lab fee. 3 (2-2)

**Applied Technology****122 Plastics III (Fabrication and Design)**

Familiarizes the student with plastic fabrication such as cutting, joining, fastening, heat sealing, etc. Also the processing of plastic by injection molding, extrusion molding, blow molding, vacuum forming, compression molding, etc. Prerequisite: ATR 121. Lab fee. 3 (1-3)

**Three credits****127 Machinery Handbook I**

Designed to familiarize the student with the effective utilization of information contained in this handbook. 4 (4-0) Prerequisite: ATR 151

**Four credits****130 Blueprint Reading for Die Sinkers**

An applied course in blueprint reading designed especially for the die sinking trades. Familiarizes students with the different types of dies, their purposes, and the terminology used in the forging industry. Time will be spent on transferring the information on part prints to forging and trimmer dies. Prerequisite DT 100 or one year of high school drafting. 4 (4-0)

**Four credits****137 Industrial Presses I**

Exposes the student to different types of mechanical presses, terminology, purposes and functions in industry. Lectures will include movies and slides of mechanical action, maintenance systems, and safety supplemented by visits to plants using presses and press repairs. Excellent for mechanical trades apprentices, press repair and maintenance people, stamping plant foremen, press operators, die setup employees, mechanical engineers and students of Engineering Technology. Material fee. 4 (4-0)

**Four credits****138 Industrial Presses II**

Continuation of ATR 137 with emphasis on maintenance, in-depth coverage of the various clutches, slides, bearings, etc. Supplemented with slides and movies. Field trips are usually taken to a press user and press repair plants. Press tonnage capacities and various applications to dies utilized will provide a broader knowledge for individuals from many different trades and occupations. Prerequisite: ATR 137. Material fee. 4 (4-0)

**Four credits****139 Rigging**

Covers the uses and strengths of ropes, chains, block and tackles, and the construction and erection of gin poles with a study of rope knots used in rigging. Also covers safe working strength of slings, hooks, sheaves, ropes and chains, and the use of personal safety equipment. Lab fee. 3 (2-2)

**Three credits****142 Applied Metallurgy**

Explains physical and mechanical properties of metals, identification, selection, atomic structure, crystal structure, phases in metal systems, phase diagrams and metallography. Lab fee. 3 (2-2)

**Three credits****143 Industrial Heat Treat**

Covers hardening, normalizing, annealing, case hardening, carburizing, cyaniding, nitriding, flame hardening, induction hardening, marquenching, austempering, martempering, and production of metals. Prerequisite: ATR 142 Metallurgy. Lab fee. 3 (2-2)

**Three credits****Applied Technology****144 Basic Hydraulics and Pneumatics**

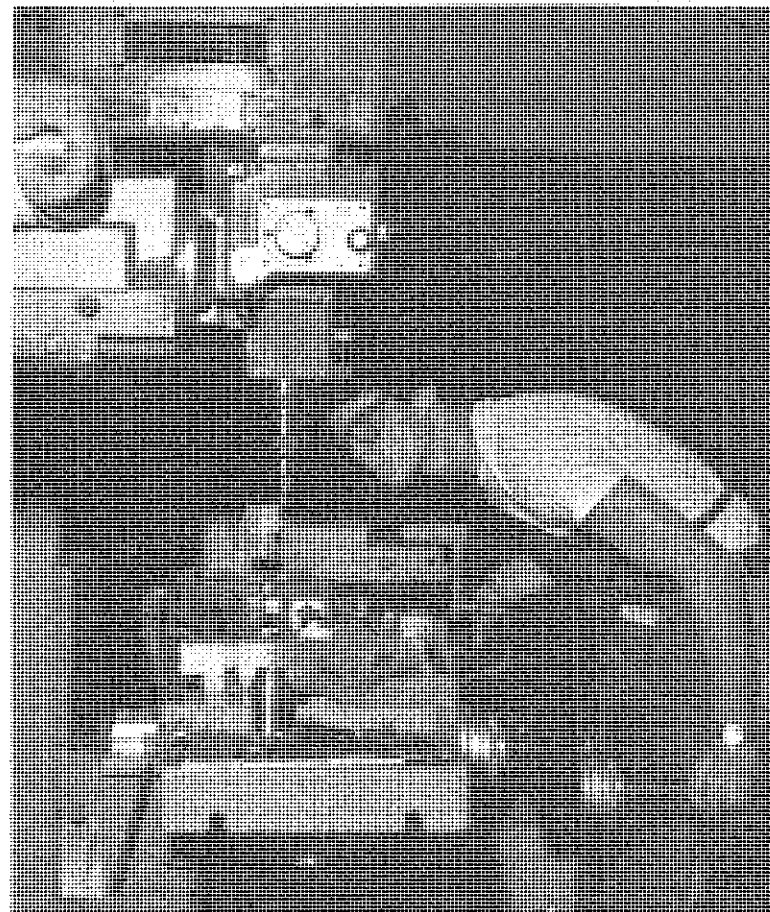
Student will be introduced to the theory of fluid power and basic circuits using cylinders, valves, accumulators, filters, pumps, motors, etc., as they are used in industrial applications. Lab fee. 3 (2-2)

**Three credits****145 Industrial Hydraulics**

Continuation of ATR 144. Emphasis is on applications of hydraulic circuitry to industrial machinery. Prerequisite: ATR 144. Lab fee. 3 (2-2)

**Three credits****146 Pneumatic Machine Control Design (Air Logic)**

Introduces student to the rapidly expanding concept of controlling industrial machinery with air-operated relays and air-logic circuits. Emphasis will be in area of moving-part air-logic systems. Covers A.N.S.I. symbols, reading ladder type diagrams, signal sensing and conversion, and hands-on assembly of an actual air-logic circuit. Prerequisite: ATR 144. Lab fee. 3 (2-2)

**Three credits**

## Applied Technology

**147. Pneumatic Machine Control Maintenance (Air Logic) Three credits**

Introduces student to basic design of valves and relays used in air-logic circuits and symbols used. A "sample circuit" is used for trouble-shooting a mock machine setup. Prerequisite: ATR 144. Lab fee. 3 (2-2)

**148 Applied Math with Calculators****Four credits**

Introduction to basic math operations including percentages, fractions, simple and compound ratio, and proportions. Also positive and negative numbers, roots and powers including fractions and negative exponents, use of the Pythagorean Theorem as an introduction to the geometric formulae; introduction to the trig functions and identities. (Instructor will give information regarding type of calculator to select.) 4 (4-0)

**149 The Metric System****Two credits**

General introduction to the basic units of the metric system and their use. The reasons for considering changing from our customary system of weights and measures to the metric system; the costs and problems which would be incurred by such a change and how these can be minimized by proper preparation are discussed. Derived units useful in industrial applications are covered also. 2 (2-0)

**150 Basic Mathematics****Four credits**

Review of basic arithmetic operations: whole numbers, common fractions, decimals, percentage, ratio and proportion. Introduction to some basic algebraic concepts and solutions for practical geometric problems involving areas and volumes. Lab fee. 4 (4-0)

**151 Applied Algebra****Four credits**

Applications of algebraic equations to shop work. 4 (4-0)

**152 Applied Plane Geometry****Four credits**

Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry. Prerequisite: ATR 151. 4 (4-0)

**153 Applied Plane Trigonometry****Four credits**

Emphasis on analysis of industrial problems utilizing trigonometric solutions by logarithms. Prerequisite: ATR 152. 4 (4-0)

**154 Advanced Applied Trigonometry****Four credits**

Continuation of ATR 153. Provides broad experience in solution of problems taken directly from industry. Prerequisite: ATR 153. 4 (4-0)

## Applied Technology

**155 Compound Angles I****Four credits**

Combination of solid geometry and advanced (solid) trigonometry enabling student to solve setup problems involving angles and tilted work. Prerequisite: ATR 153 or ATR 154. 4 (4-0)

**156 Compound Angles II****Four credits**

Continuation of ATR 155. Emphasis on application of actual tooling setups for complex machining operations. Prerequisite: ATR 155. 4 (4-0)

**160 Precision Inspection I****Three credits**

Techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, hardness testing. 3 (2-2)

**161 Precision Inspection II****Three credits**

Precision layout work related to gauges and inspection problems. Prerequisite: ATR 160. 3 (2-2)

**165 Employer Employee Relations****Two credits**

Emphasizes the interdependence of capital, employees, and managers. Ethical guidelines and practices relating to the responsibilities of all individuals in an industrial organization are discussed. The basic principles for review of hiring and termination, wages and working conditions, promotions, conflicts of interest, pricing practices and relations with customers are studied. 2 (2-0)

**206 Numerical Control I—Fundamentals of Numerical Control****Four credits**

General introduction to modern concepts of numerical control of machine tools including the interrelationship of these new manufacturing methods in the various departments of a company. Emphasizes controlling media, introductory programming and limited machine operation. Prerequisite: ATR 151. Lab fee. 4 (3-1)

**207 Numerical Control II—Manual Programming for Numerical Control****Four credits**

Continuation of ATR 106 with emphasis on developing skill in manual programming of two-and three-axis, point-to-point positioning, numerically controlled machine tools. Operation of Flexo-writer and vertical milling machine provides important part of this course. Prerequisite: ATR 206 Numerical Control I or equivalent. Lab fee. 4 (3-1)

## Applied Technology

**208 Numerical Control III—Introduction to Computer Assisted Programming** **Four credits**

Study of types of parts which can be programmed to advantage using a computer and actual experience in programming. Includes survey of various computer programming languages used to apply to numerically controlled machine tools. Equipment used includes Flexo-writer and three-axis N/C milling machine. Prerequisite: ATR 207 Numerical Control II or equivalent. Lab fee. 4 (3-1)

**211 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 students, guided by an instructor, select individual projects compatible with their field of work. Lab fee. Prerequisite: ATR 206, 207 & 208. 3 (0-4)

**218 Machine Maintenance I** **Four credits**

Explains theory and industrial application of machine repair, safe practices, troubleshooting, dismantling, and the rebuilding of a tool room machine to be continued through three terms. 4 (2-4)

**219 Machine Maintenance II** **Four credits**

Continuation of ATR 218, rebuilding and replacing worn parts, alignment of slides and ways, and use of proper tools and service manuals. Prerequisite: ATR 218. 4 (2-4)

**220 Machine Maintenance III** **Four credits**

Completion of rebuilding a tool room machine. Machining and scraping a 6" x 6" surface plate. Prerequisite: ATR 218, ATR 219 or departmental approval. Lab fee. 4 (2-4)

**224 Industrial Pump Repair** **Four credits**

Shows the fundamentals and operating principles of pumps and pump controls, applications of pump equipment in industry, along with installation, operation and maintenance procedures. 4 (2-4)

**225 Sequencing Industrial Equipment** **Four credits**

Covers chronological order of sequences of operation, analyzing circuit malfunction from sequence prints, and the relationship of electrical controls and fluid power systems. Prerequisite ATR 144. 4 (4-0)

**230 Pneumatic Tool Repair** **Three credits**

Covers maintenance and repair of industrial and automotive pneumatic tools. Lubrication, gears, motors, hoists, spray gun seals and bearings will be covered. Lab fee. 3 (1-3)

## Applied Technology

## Applied Technology Seminars (ATS)

**090-099 Pre-Apprenticeship Seminar** **Up to nine credits**  
Designed to assist individuals who need or desire additional background to aid in being considered for apprenticeship training.

**100-109 Apprentice Seminar** **Up to nine credits**  
Arranged for individuals enrolled in apprenticeship programs, and for individual trades or groups of trades to provide additional knowledge and/or skills to meet current needs.

**110-119 Automotive Seminar** **Up to nine credits**  
Intended for any area related to the automotive field.

**120-129 Building Trades Seminar** **Up to nine credits**  
These seminars are planned to assist any building trades group or groups to upgrade their skills or to review new and emerging techniques.

**130-139 Heating and Air Conditioning Seminar** **Up to nine credits**  
Covers cooling, heating, humidifying, filtering, servicing and/or ventilating, etc., for individuals already in the field or interested in any of these areas.

**140-149 Industrial Seminar** **Up to nine credits**  
Intended for any area in industry which could be of benefit to the individuals or industry concerned.

**150-159 Industrial Management Seminar** **Up to nine credits**  
Planned for those presently in management or planning to enter management functions.

**160-169 Welding Seminar** **Up to nine credits**  
Includes maintenance welding, production welding, resistance welding, and/or tool and die welding, etc.

**190-199 Technology General** **Up to nine credits**  
Includes seminar not listed under other headings.

## Automotive Trades (AUT)

## Auto Mechanics

**100 Auto Service I** **Four credits**  
Designed to teach the understanding of basic tools and equipment, safety, lubrication, exhaust systems, and basic oxy-acetylene welding. The student is required to spend a minimum of twenty hours per term reviewing slides and tapes of the program. Lab fee. 4 (2-4)



- 110 Auto Electrical Theory** **Four credits**  
A theory course covering batteries, starters, generators, regulators, ignition systems, and chassis wiring. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 111 Tune-Up I** **Four credits**  
A lecture-laboratory course covering fuel systems, equipment operations, and tune-up procedure. Prerequisite: AUT 110 or instructor approval. Lab fee. 4 (2-4)
- 112 Tune-Up II** **Four credits**  
A lecture-laboratory course with emphasis on actually tuning engines. Prerequisite: AUT 110, AUT 111, Lab fee. 4 (2-4)
- 120 Auto Drive Trains** **Four credits**  
Designed to teach the student to service clutches, manual shift transmission, universal joints, differentials, rear axles. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 121 Automatic Transmission I** **Four credits**  
This is a basic course for automatic transmission repair. Prerequisite: AUT 120 or instructor approval. Lab fee. 4 (2-4)
- 122 Automatic Transmission II** **Four credits**  
This is advanced automatic transmission repair. Prerequisite: AUT 120, AUT 121. Lab fee. 4 (2-4)
- 123 Automatic Transmission III** **Four credits**  
This is advanced automatic transmission repair. Prerequisite: AUT 120, 121. Lab fee. 4 (2-4)
- 130 Engines** **Four credits**  
Provides a background in principles, design, operation, and service procedures of modern gasoline engines. Prepares student to begin practical experience in engine maintenance and service. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 133 Small Engines I** **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 a small engine for laboratory work. Lab fee. 3 (2-2)
- 134 Small Engines II** **Three credits**  
A continuation of Small Engines I with more emphasis placed on laboratory work. Each student will be required to supply a small engine. Prerequisite: AUT 133 or instructor approval. Lab fee. 3 (2-2)
- 136 Marine Engine Repair** **Three credits**  
A course covering the basics of outboard engine servicing including carburetion, ignition, and trouble-shooting malfunctions. Lab fee. 3 (2-2)

- 137 Motorcycle Repair I** **Three credits**  
Covers the theory of operation of a motorcycle and basic service procedures, including tune up, wheel service, brake service, and drive mechanism. Lab fee. 3 (2-2)
- 138 Snowmobile Repair** **Three credits**  
A basic course covering the proper maintenance and service procedures for a snowmobile. Also included in the course are repairs to the engine and suspension. Lab fee. 3 (2-2)
- 140 Auto Brakes** **Four credits**  
The student learns to service both regular and disc brakes. This includes adjustment, shoe replacement, drum and disc turning, shoe grinding, and hydraulic system service. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 150 Auto Suspension** **Four credits**  
This course instructs the student in wheel alignment, wheel balancing, and front end part replacement procedures. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 160 Auto Air Conditioning** **Four credits**  
Instruction is given in the operation of auto air conditioning systems and repair procedures. Prerequisite: AUT 100 or concurrently. Lab fee. 4 (2-4)
- 165 General Auto Mechanics** **Three credits**  
This course is designed for car owners. The student will gain a better understanding of an automobile and be able to make some repairs. Areas covered include preventive maintenance, tune-up brakes, engines, electrical systems, drive lines, front end and steering. Lab fee. 3 (2-2)
- 181 Metal Finishing I** **Four credits**  
A body repair course designed to teach the basic sheet metal repair methods and the basic body shop tools and their proper use, along with typical materials used in body shops to fill and repair minor damaged panels. Prerequisite: WLD 100 or concurrently. Lab fee. 4 (2-4)
- 182 Panel Repair and Replacement** **Four credits**  
Instruction will be given in repair of larger dented panels, with the emphasis on replacing panels. Prerequisite: AUT 181. Lab fee. 4 (2-4)
- 183 Major Collision** **Four credits**  
A course emphasizing the restoration of a collision damaged automobile to its original condition, including estimating the total job, glasswork and painting. Prerequisite: AUT 182. Lab fee. 4 (2-4)
- 184 Frame Straightening** **Four credits**  
An introductory course in the basics of frame straightening, covering aligning the frame or unitized body to original specifications. Portable frame equipment will be used to familiarize the student with frame straightening. Prerequisite: AUT 183. Lab fee. 4 (2-4)

**Applied Technology****185 Painting I****Four credits**

An auto painting course designed to teach basic refinishing procedures. A student must refinish at least one panel in acrylic enamel or acrylic lacquer at the end of the course. Lab fee. 4 (2-4)

**186 Painting II****Four credits**

An advanced auto painting course designed to teach techniques in spot repair, color matching, and trouble-shooting. A student will gain experience in painting by utilizing the methods described in Painting I. Prerequisite: AUT 185. Lab fee. 4 (2-4)

**187 Painting III****Four credits**

An advanced auto painting course designed to teach the techniques required in refinishing a complete auto in enamel, acrylic enamel, and acrylic lacquer. Includes estimating the cost of materials and the overhead costs of operating a paint shop. Prerequisite: AUT 186. Lab fee. 4 (2-4)

**188 Auto Body Repair and Painting****Four credits**

A combined course of auto body repair and painting. The students will practice techniques learned in Metal Finishing I and Painting I. Prerequisite: AUT 181 and AUT 185. Lab fee. 4 (0-8)

**Auto Parts****196 Parts Counter Man I****Four credits**

Covers the nomenclature of automotive parts and repairs made on an automobile. 4 (4-0)

**197 Parts Counter Man II****Four credits**

This course covers parts catalogs and their use. Prerequisite: AUT 196. 4 (4-0)

**198 Parts Counter Man III****Four credits**

This course covers product knowledge. Prerequisite: AUT 197. 4 (4-0)

**Diesel****200 Basic Diesel Maintenance****Four credits**

Covers the theory of operation of both two and four-cycle diesels. Maintenance operation will be discussed in detail.

Lecture will contain detailed information on two and four-cycle engine theory, model identification, systems maintenance including fuel system, lubrication system, cooling system, naturally aspirated, supercharged and turbocharged intake systems and their repair. Lab fee. 4 (2-4)

**Applied Technology****201 Advanced Diesel Maintenance****Four credits**

Topics covered will be maintenance repair and minor rebuilding of head assemblies and ancillary equipment (i.e., water pumps, air pumps, oil pumps, generator starters). Tune-up and electrical systems will be covered during the course along with systems diagnosis and trouble-shooting. The four-hour lab will put to practical use that material covered in the two-hour lecture. Prerequisite: AUT 200 or instructor approval. Lab fee. 4 (2-4)

**202 Diesel Engine Rebuilding****Eight credits**

Covers engine rebuilding, including proper disassembly procedures, inspection and repair of diesel engine components. Emphasis will be placed on proper engine analysis prior to overhaul and proper run-in upon completion of overhaul. Prerequisite: AUT 201. Lab fee. 8 (4-8)

**203 Diesel Fuel Systems****Four credits**

A complete course on diesel fuel systems covering fuel classification, fuel system functions, pumps and injectors, proper diagnosis, trouble-shooting and rebuilding of the complete fuel system. Prerequisite: AUT 201. Lab fee. 4 (2-4)

**230 Auto Electrical Systems****Seven credits**

Theory related instruction to supplement apprentice's on-the-job training. A study of the basic electrical systems found in automotive equipment. Topics include lighting systems, ignition systems, schematic trouble-shooting, power assist systems and wiring harnesses. This course provides the automotive apprentice with a theory-based course to supplement on-the-job practical training. 7 (7-0)

**232 Auto Fundamentals****Seven credits**

Theory related instruction to supplement apprenticeship on-the-job training. An introductory course in Auto Technology, designed for automotive apprentices, that provides theory for foundation in the field of Automotive Technology. The student will be shown how to identify the components of cooling and lubrication systems; intake systems; ignition systems; and charging/starting systems; and how to read and interpret schematics and shop manuals as outlined in class. 7 (7-0)

**234 Advanced Engine Diagnosis****Seven credits**

Theory related instruction to supplement apprentice's on-the-job training. A continuation of AUT 232 with special emphasis on advanced diagnostic, testing, and repair procedure. The theoretical application of the chassis dynamometer, HC/CO testers, and oscilloscopes is stressed. The apprentice will be shown how to identify and explain the working theory of electronic ignition systems and emission control systems. The apprentice should be able to explain the use of the oscilloscope and chassis dynamometer, and be able to outline precision diagnostic and tune-up procedures as presented in class. Prerequisite: AUT 230 and AUT 232. 7 (7-0)

- 236 Brake Systems and Chassis Repair** **Seven credits**  
Theory related instruction to supplement apprentice's on-the-job training. Related trade theory of servicing brake systems, window regulators, seat mechanisms, exhaust systems, and other chassis accessories. Instruction includes delivery and road test procedures. The apprentice will be given practical information on drum brake systems, disc systems, split systems, hydraulic cylinder/valving systems, chassis components, and exhaust systems, and should have a working knowledge of delivery and road test procedures. 7 (7-0)
- 237 Motorcycle Repair II** **Three credits**  
A continuation of Motorcycle Repair I with emphasis placed on engine overhaul, transmission service and repair. Prerequisite: AUT 137. Lab fee. 3 (2-2)
- 238 Steering and Suspension Systems** **Seven credits**  
Theory related instruction to supplement apprentice's on-the-job training. Theoretical study of steering systems (both power and manual), suspension systems, and wheel alignment. Suspension, front end, and steering repair and alignment is stressed. The apprentice should gain a working knowledge of suspension systems, steering systems, and wheel alignment theory. 7 (7-0)
- 240 Mobile Hydraulics** **Three credits**  
Covers the servicing of hydraulic systems as related to construction equipment, pumps, cylinder repair, and hydraulic controls. Lab fee. 3 (2-2)
- 242 Power Plant Overhaul Theory** **Seven credits**  
Theory related instruction to supplement apprentice's on-the-job training. Instruction in the theoretical procedures necessary to completely rebuild an automotive engine. Includes disassembly and assembly techniques along with the restoring of tolerances by the machining of engine components. To provide a working knowledge of the procedures for engine diagnosis, removal, disassembly, rebuilding, and dynamic checkout. 7 (7-0)
- 244 Heating and Air Conditioning Theory** **Seven credits**  
Theory related instruction to supplement apprentice's on-the-job training. Instruction in the theory of automotive heating and air conditioning systems with emphasis placed on the basic air conditioning cycle. This course is designed to provide the apprentice with a working knowledge of automotive heating and air conditioning systems. The apprentice should be able to identify the components, explain the theory, and know the proper servicing techniques for the various systems. 7 (7-0)
- 246 Automotive Parts Department Management** **Five credits**  
Theory related instruction to supplement apprentice's on-the-job training. An in-depth study of parts numbering, storage, cataloging, retrieval, ordering, and stocking management techniques. This course is designed to provide the apprentice with a working knowledge of the theory of automotive parts department management. 5 (5-0)

- 248 Automotive Service Department Management** **Three credits**  
Theory related instruction to supplement apprentice's on-the-job training. Topics include marketing techniques, financial analysis, personnel management, work scheduling and distribution, and use of pricing manuals. This course is designed to provide the apprentice with a background in the overall workings of an automotive service department. 3 (3-0)
- 250 Transmission and Drive Systems** **Seven credits**  
Theory related instruction to supplement apprentice's on-the-job training. A study of automatic transmissions, clutches, standard transmissions, overdrives, propeller shafts, and drive axles. Includes theory of operation, diagnosis, maintenance and repair. The apprentice should gain a working knowledge of the theory and operation of automatic transmissions, standard transmissions, clutches, overdrive units, propeller shafts, and drive axles. 7 (7-0)
- 270 Auto Shop Management** **Four credits**  
This is a laboratory course that gives the student an opportunity to practice running an auto shop. Prerequisite: Instructor approval. 4 (0-8)
- 271 Engine Laboratory\*** **Six credits**  
A laboratory course to develop trade entry skill. Prerequisite: AUT 100, AUT 130 (with "B" or better) and instructor approval. Lab fee. 6 (0-12)
- 272 Tune-Up and Electrical Laboratory\*** **Six credits**  
A laboratory course to develop trade entry skill. Prerequisite: AUT 100, AUT 111 (with "B" or better in each) and instructor approval. May be taken concurrently with AUT 111. Lab fee. 6 (0-12)
- 273 Brake Laboratory\*** **Six credits**  
A laboratory course to develop trade entry skill. Prerequisite: AUT 100, AUT 140 (with "B" or better) and instructor approval. Lab fee. 6 (0-12)
- 274 Suspension Laboratory\*** **Six credits**  
A laboratory course to develop trade entry skill. Prerequisite: AUT 100, AUT 150 (with "B" or better) and instructor approval. Lab fee. 6 (0-12)
- 276 Automatic Transmission Laboratory\*** **Six credits**  
A laboratory course to develop trade entry skill. Prerequisite: AUT 100, AUT 121 (with "B" or better) and instructor approval. Lab fee. 6 (0-12)
- 280 Auto Related Service Laboratory\*** **Six credits**  
A laboratory course to allow the student to practice skills learned in previous courses. Prerequisite: AUT 100 (with "B" or better) and instructor approval. Lab fee. 6 (0-12)
- \*Approval may be given to take any of these lab courses twice for a maximum of twelve credits each.*

**291 Automotive Internship****Six credits**

This course allows the student to practice skills learned in previous courses in a real work situation. The training station, working conditions, and student must be approved by the automotive coordinator. The student is required to attend one hour per week of related instruction at the College. A pre-placement interview between the student and coordinator is also required. Prerequisite: Coordinator approval. 6 (1-15)

**Building Trades (BTA) (Open to Apprentices Only)****100 Apprentice Bricklaying****Four 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. 4 (1¼-1¾)

**105 Apprentice Asbestos Workers****Four credits**

Open to apprentice asbestos workers indentured to the Asbestos Workers Joint Apprenticeship Training Committee. Covers blueprints, applied science, related mathematics, estimating and manipulative practices. 4 (2-2)

**110 Apprentice-Carpentry****Four credits**

For apprentice carpenters on registered programs with the Lansing Carpentry Joint Apprenticeship Committee. Covers free-hand sketching and drawing, blueprint reading mathematics, use of steel square, estimating and layout, building codes, safety practices, manipulative practices and applied science. Includes light and heavy construction practices. 4 (1¼-1¾)

**120 Apprentice-Electrical (Inside)****Four 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 4 (1¼-1¾)

**125 Apprentice Electrical-Residential****Four 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. 4 (2-2)

**140 Apprentice Painting and Decorating****Four credits**

Open to painting and decorating apprentices on registered programs with the Lansing Painting and Decorating Joint Apprenticeship Committee. Includes trade techniques, color mixing and matching, mathematics related to the trade, estimating and paperhanging. 4 (2-2)

**150 Apprentice Plumbing or Pipefitting****Four credits**

For apprentice plumbers and pipefitters indentured to the Lansing Joint Plumbing and Pipefitting Apprenticeship and Training Committee. Includes mathematics, manipulative practices, theory, blueprint reading and drawing, job analysis, physics and other science, and supplementary courses from the regular college offerings approved by the J. A. C. 4 (1¼-1¾)

**Building Trades (BTJ) (Open to Journeymen and Apprentices only)****128 Journeyman Electricians Welding I****Four credits**

Open to electrical journeymen and apprentices. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. Lab fee. 4 (2-4)

**129 Journeyman Electricians Welding II****Four credits**

Open to electrical journeymen and apprentices. More advanced coverage of fundamentals of Building Trades 128. Prerequisite: Building Trades 128 or permission of instructor. Lab fee. 4 (2-4)

**160 Journeyman Pipefitters Welding I****Four credits**

Students who enter this class should be Journeyman Plumbers or Steamfitters. Apprentices to the plumbing or fitting trades will be admitted when the degree of training they have achieved meets the approval of the Joint Apprenticeship Committee on Plumbing.

Training begins with a review of welding fundamentals and proceeds rapidly into more advanced skills according to the needs of the individual student. Teaches welding of all varieties of pipe, including stainless steel, using the heliarc method. Lab fee. 4 (2-4)

**161 Journeyman Pipefitters Welding II****Four credits**

Continuation of BTJ 160. Prerequisite: BTJ 160. Laboratory fee. 4 (2-4)

**162 Journeyman Pipefitters Welding III****Four credits**

Continuation of BTJ 161. Prerequisite: BTJ 161. Lab fee. 4 (2-4)

**Building Trades (BTR) (Open to Anyone)****101 Masonry Home Projects****Three credits**

Instruction in building home masonry projects such as barbecue pits, patching and repairing masonry walls. This course is not designed to prepare a student for a job as a bricklayer. Individuals wishing to prepare for a career in bricklaying should apply to enter the Bricklaying Apprenticeship Program. Lab fee. 3 (2-2)

**105 General Home Maintenance I****Three credits**

An introductory course in general home maintenance. Topics included are furnace maintenance, humidifiers, painting, hot water heaters, and basic plumbing and electrical repairs. Lab fee. 3 (2-1)

**106 General Home Maintenance II****Three credits**

Enables home owners, vacation home owners and general maintenance personnel to perform normal maintenance on residences or apartments. The subject matter will include lecture and basic demonstrations of plumbing, carpentry, electricity, painting, paper hanging, heating and masonry. Lab fee. 3 (2-1)

**114 Residential Framing****Three credits**

Various types of frame construction will be discussed including methods of framing floor openings for stairs, joist sizing and layout. Wall construction will be covered from layout to assembly with details given on determining stud length, layout of door and window openings, bracing and sheathing. Lab fee 3 (2-1)

**115 Framing Square****Three credits**

The selection, care, and use of the framing square is covered. Students will lay out common, valley, hip and jack rafters, and determine the lengths of braces. How to use the framing square with a bevel to determine a polygon and the use of the Essex board measure table is also presented. Lab fee. 3 (2-1)

**117 Practical A. C. Job Theory****Three credits**

For the experienced wireman who needs to review topics such as the neutral balance, load calculations (single phase and three phase), Ohm's law, and basic transformer theory. Lab fee. 3 (2-2)

**118 A. C. Theory Review****Three credits**

Topics covered will be alternating-current mathematics, vector relationships, resistance, capacitance, inductance, and LCR circuits. Prerequisite: BTR 117. Lab fee. 3 (2-2)

**119 Advanced A. C. Theory****Three credits**

A continuation of BTR 118 with extensive work on wye and delta transformers; also covering inductive reactance, capacitive reactance, impedance and power factor correction. Prerequisite: BTR 118. Lab fee. 3 (2-2)

**120 Motor Theory Review****Three credits**

For the experienced wireman to review D. C. machines, single phase A. C. machines, repulsion-induction motors and three phase machines. Also covered under three phase will be the synchronizing of A. C. alternators, renumbering of Y and wound rotor motors. Lab fee. 3 (2-2)

**121 Control of Industrial Motors****Three credits**

Review of two and three wire controls, pilot devices and solenoids, across the line starters, reduced voltage starters and relays. Each class will design and wire a control system. Lab fee. 3 (2-2)

**122 Solid State Logic****Three credits**

A basic logics course for the experienced wireman covering logic elements and their use. Students will be shown how to apply the logic elements to industrial situations. Lab fee. 3 (2-2)

**125 Residential Foundations****Two credits**

Information will be given on concrete blocks, poured concrete, and treated wooden timbers; their relative advantages and disadvantages with respect to one another. Also discussed will be the layout of footings, excavations, setting of forms and the erection of residential foundations. 2 (2-0)

**135 Structural Blueprint Reading I****Four credits**

The student is shown how to visualize and interpret illustrations and sections from blueprints, and translate them into practical situations. Also shows the purpose of and the relationship between specifications and blueprints as applied to various trades. 4 (4-0)

**136 Structural Blueprint Reading II****Four credits**

A course designed to further acquaint students with symbols, conventions, and abbreviations used in structural blueprints and to further develop perceptual skills required for comprehension of prints. Emphasis will be on reading prints for commercial buildings. Prerequisite: BTR 135. 4 (4-0)

**138 Residential Estimating****Four credits**

Covers the execution of a complete material takeoff and material pricing of a residential structure. Includes the entire structure with the exception of mechanical and electrical. Prerequisites: BTR 114 and BTR 135. 4 (4-0)

**139 Construction Estimating****Four credits**

A course designed to provide in-depth experience in construction estimating. Will cover blueprint reading, specification reading, math calculations, use of labor, time tables, current material costs and weather factors. Emphasis will be on estimating costs of light commercial buildings. Prerequisite: BTR 138. 4 (4-0)

**140 Cabinet Layout and Interior Trim****Three credits**

A course designed for the individual who wishes to build or remodel a home. Topics covered will be an introduction to interior trim and basic tool use. Prerequisite: BTR 114. Lab fee. 3 (2-2)

**142 Build Your Own Home****Three credits**

A course created for those persons who wish to build their own home or have their home built. Includes design considerations, land acquisition, selection of materials, choosing contractors, scheduling of work, financing, and landscaping. The course will feature guest speakers who are experts in their various fields. 3 (3-0)

**145 Builders License Review****Three credits**

Topics relating to the State Builders License will be covered to assist individuals in preparing for the Residential Builders Exam. Materials fee. 3 (3-0)

**147 Paper Hanging I****Three credits**

Designed for painter-decorators. Includes preparation of surfaces, selection and care of tools, selection of materials and adhesives, estimating of materials, layout, avoiding and correcting faults, application of paper and vinyl. Lab fee. 3 (2-2)

**148 Paper Hanging II****Three credits**

Continuation of BTR 147, Paper Hanging I. Lab fee. 3 (2-2)

- 155 Blueprint Reading for Plumbers I** **Four credits**  
Covers orthographic projection, linear and angular measurement, and reading of prints in which three views are given in the three principal planes of projection. Examples apply to the plumbing trades. 4 (4-0)
- 156 Blueprint Reading for Plumbers II** **Four credits**  
Continuation of Building Trades 155 with emphasis on more complex prints. Actual construction prints are used whenever possible. Prerequisite: BTR 155 or instructor approval. 4 (4-0)
- 175 Sheet Metal I** **Three credits**  
Includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line and triangulation pattern development. Current techniques of fabrication emphasized. Lab fee. 3 (2-2)
- 176 Sheet Metal II** **Three credits**  
Continuation of Sheet Metal I with more advanced problems. Prerequisite: BTR 175 or instructor approval. Lab fee. 3 (2-2)
- 177 Sheet Metal III** **Three credits**  
Continuation of Sheet Metal II with specialty work. Prerequisite: BTR 176. Lab fee. 3 (2-2)
- 178 Sheet Metal Fabrication** **Three credits**  
Utilizes the layout techniques learned in Sheet Metal I to fabricate simple sheet metal fittings such as elbows and square to round. Also familiarizes student with sheet metal tools. Prerequisite: BTR 175. Lab fee. 3 (2-2)
- 180 Sheet Metal Welding I** **Four credits**  
Arc welding as applied to sheet metal. Introduction to heliarc. Lab fee. 4 (2-4)
- 181 Sheet Metal Welding II** **Four credits**  
Continuation of Building Trades 180 with additional emphasis on heliarc. Prerequisite: BTR 180 or instructor approval. Lab fee. 4 (2-4)
- 223 National Electrical Code I** **Four credits**  
Students will review the entire code book in respect to locating and interpreting the National Electrical Code. Designed for individuals with little or no knowledge of the electrical code. 4 (4-0)
- 224 National Electrical Code II** **Four credits**  
For the wireman who has had some experience working with the code book, a general review plus problems and calculations taken from the code book. Prerequisite: BTR 223. 4 (4-0)
- 225 National Electrical Code III** **Four credits**  
For the wireman interested in writing for a master license. Covers the local electrical code and interpretation of various sections, along with review of the most recent code changes. Prerequisite: BTR 224. 4 (4-0)

- 290 Building Trades Internship** **Six credits**  
This course allows the student to practice skills learned in previous courses in a real work situation. The training station, working conditions, and student must be approved by the 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 (1-20)

### Heating, Air Conditioning and Refrigeration (HAC)

- 100 Applied Electricity I** **Four credits**  
Electricity will be covered with the idea of creating and understanding the applied application rather than the theoretical. Symbols, wiring diagrams, circuits, meters and motors will be discussed and worked on to start the new serviceman and review the experienced serviceman. Lab fee. 4 (3-1)
- 101 Heating and Cooling Fundamentals** **Four credits**  
Air Conditioning I acquaints students with the fundamental math, physics and blueprint reading necessary to work effectively with heating and air conditioning equipment. Covered in detail is the interpretation of the terminology on the name plates, wiring diagrams and manuals used with climate control equipment. 4 (4-0)
- 105 Heating and Cooling Schematics** **Three credits**  
Schematics for Heating and Cooling is an applied electricity course designed to help the serviceman understand, through lecture and lab, the wiring diagrams of residential heating and cooling plants. The student will actually wire units in and become familiar with thermostats, contactors, capacitors, safety controls, limits, solenoids, transformers, primary controls, relays, safety controls and many other electric devices used in climate control. Prerequisite: HAC 100 and 101. Lab fee. 3 (2-2)
- 110 Refrigeration Servicing I** **Four credits**  
Most common types of domestic refrigerators are covered thoroughly, with particular attention to principles of construction and operation of complete refrigeration systems. Includes discussions on theory and principles underlying repairing and practical shop work, including jobs such as tube bending, flaring and soldering, as well as the charging and testing of refrigeration equipment. This course is similar to HAC 192. Prerequisite HAC 101. Lab fee. 4 (2-4)
- 140 Corrosion Control** **Two credits**  
Acquaints the student with various types of corrosion found in energy conversion systems and the methods required to overcome each type of corrosion. The course also includes a study of water, its composition, and the methods required to prevent scale in heating or cooling systems. Prerequisite: HAC 101 or 110 or instructor's approval. Lab fee. 2 (1-1)

**190 Appliance Servicing I****Four credits**

The theory and application of basic electricity and electronics will be covered. The student will be shown how to read schematic drawings; properly use hand tools and electronic equipment such as meters, and diagnose malfunctions of electrical circuits on simple one-action appliances, such as water heaters and garbage disposals. Lab fee. 4 (2-4)

**191 Appliance Servicing II****Four credits**

The student begins work on ranges, dishwashers, washing machines, clothes dryers and humidifiers, utilizing the knowledge gained in Appliance Servicing I. The use of service manuals and other published information for servicing is stressed. Prerequisite: HAC 190 or equivalent. Lab fee. 4 (2-4)

**192 Appliance Servicing III****Four credits**

Designed to familiarize the student with the theory and application of refrigeration. Covers diagnosing and repairing of malfunctioning refrigerators, freezers, room air conditioners, dehumidifiers and water coolers. This course is similar to HAC 110. Prerequisite: HAC 191 or equivalent. Lab fee. 4 (2-4)

**200 Applied Electricity II****Four credits**

Continuation of Applied Electricity I with major emphasis on heating and cooling, electrical controls and the trouble-shooting of malfunctioning controls. Prerequisite: HAC 100. Lab fee. 4 (3-1)

**210 Refrigeration Servicing II****Four credits**

Advanced course for those who have completed Refrigeration Servicing I, or who have had some practical experience in the refrigeration servicing field. More complex refrigeration systems are discussed, and students connect various components to make complete refrigeration systems. Students receive practical work in adjusting and servicing refrigerant valves and controls and in trouble-shooting multiple refrigeration systems. Prerequisite: HAC 100. Lab fee. 4 (2-4)

**211 Refrigeration III****Four credits**

Thorough knowledge of Refrigeration I and Refrigeration II will make the student ready for the move into the light service of commercial units such as reach-ins, walk-ins, display cases. Wiring schematics, defrost systems, pressure controls, EPR valves, head pressure control devices are examples of the topics covered in detail. In addition, emphasis in this course will be placed on maintenance and repair of semi-hermetic compressors. Also covered in the course is the introduction of the Absorption Refrigeration System and its uses. Prerequisite: HAC 210. Lab fee. 4 (2-4)

**220 Gas Heating****Four credits**

Gas heating courses are intended to familiarize installers and servicemen with the basic components and functions of a gas furnace. The course will go into detail on the application, theory, trouble-shooting and service of domestic gas heating systems. A basic understanding of electrical schematics will help the student gain a more thorough knowledge of the trouble-shooting involved in domestic furnaces. Prerequisite: HAC 100. Lab fee. 4 (2-4)

**221 Oil Heating****Four credits**

Information about construction and operation of the various types of oil fired heating equipment for servicemen, sheetmetal workers, and others interested in residential heating. Emphasis is on the high-pressure oil burners, but many other types will be discussed. Systematic burner service and proper combustion-testing procedures will be covered in detail. Techniques of trouble-shooting residential oil heating equipment will be part of the lab assignments. Understanding basic electric schematics will make the course more beneficial. Prerequisite: HAC 100. Lab fee. 4 (2-4)

**222 Hydronics****Four credits**

The student will become familiar with gas, oil and electrical hot water or steam heating systems. Covered in detail will be the boiler, chiller (with hot water), the piping system and all accessories necessary for a residential system. The student will perform planned service, testing, adjusting for system and components in the lab and field. Lab fee. 4 (2-4)

**231 Air Conditioning I****Five credits**

Designed to deal with the fundamental theories and principles of climate control systems. By use of discussions and demonstrations, in both the lab and field, the course will correlate theory to actual practices used in the field. Prerequisite: HAC 101. Lab fee. 5 (4-2)

**232 Air Conditioning II****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 231. Lab fee. 4 (2-4)

**233 Air Conditioning III****Four credits**

To familiarize the student with installation and maintenance of heat pumps. Reviews the proper applications and shows improperly designed systems. Through field and lab experiences the student can become proficient in dealing with the more complicated heat pump components. Trouble-shooting procedures and use of wiring schematics will be covered in detail. Prerequisite: HAC 231 and 232. Lab fee. 4 (2-4)

**235 Solar Heating and Cooling Technician I****Four credits**

Introduction to solar technology fundamentals and their application to the heating and cooling industry. Designed for tradesmen who will be installing solar equipment in conjunction with standard heating and cooling systems. Prerequisite: HAC 101, HAC 222, 231, 232, 233. Lab fee. (2-4)

**237 Solar Heating and Cooling Technician II****Four credits**

Continuation of HAC 235. Covers installation of solar collectors, pumps, blowers, storage systems and types of automatic control. Prerequisite: HAC 235. Lab fee. 4 (2-4)

The following refrigeration service Engineering Society courses require that a student become a member of the society. These courses are sponsored by the society for individuals who have prior experience in the refrigeration field and are directed to servicemen:

<b>HAC 250 RSES Refrigeration I</b>	<b>Six credits</b>
Laboratory fee. 6 (2-4)	
<b>HAC 251 RSES Refrigeration II</b>	<b>Six credits</b>
Prerequisite: HAC 250. Laboratory fee. 6 (4-4)	
<b>HAC 252 RSES Refrigeration III</b>	<b>Six credits</b>
Prerequisite: HAC 251. Laboratory fee. 6 (4-4)	
<b>HAC 260 RSES Electricity I</b>	<b>Six credits</b>
Laboratory fee. 6 (4-4)	
<b>HAC 261 RSES Electricity II</b>	<b>Six credits</b>
Prerequisite: HAC 260. Laboratory fee. 6 (4-4)	
<b>HAC 262 RSES Electricity III</b>	<b>Six credits</b>
Prerequisite: HAC 261. Laboratory fee. 6 (4-4)	
<b>HAC 264 RSES Heat Pump</b>	<b>Six credits</b>
Laboratory fee. 6 (4-4)	
<b>HAC 270 RSES Heating I</b>	<b>Six credits</b>
Laboratory fee. 6 (4-4)	
<b>HAC 271 RSES Heating II</b>	<b>Six credits</b>
Prerequisite: HAC 270. Laboratory fee. 6 (4-4)	
<b>HAC 272 RSES Heating III</b>	<b>Six credits</b>
Prerequisite: HAC 271. Laboratory fee 6 (4-4)	
<b>290 Heating and Air Conditioning Internship</b>	<b>Six credits</b>
This course allows the student to practice skills learned in previous courses in a real work situation. The training station, working conditions, and student must be approved by the coordinator. The student is required to attend one hour per work of related instruction at the College. A pre-placement interview between the student and coordinator is also required. Prerequisite: Coordinator approval. 6 (1-20)	

**Industrial Management (IM)**

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**166 Industrial Supervision I** **Three credits**

Designed to develop skills in human relations and communications in industry. Gives an analysis of company policies and goals, leadership techniques, organizational structures, planning and controlling of human resources. Covers job evaluation, job analysis methods and techniques for evaluating employee performance. 3 (3-0)

**167 Industrial Supervision II** **Three credits**

The need for direction and training of employees is covered in this course. The requirements of effective labor relations, labor legislation, and training of employees are studied. Other topics include: safety, disciplinary action, grievances, special problem employees, automation, planning work schedules and time-study fundamentals. Prerequisite: IM-166. 3 (3-0)

**168 Industrial Supervision III** **Three credits**

Acquaints the present or future supervisor with the principles and methods of cost controls, improved work techniques, plant housekeeping, equipment and facilities maintenance, product quality control, plant protection, self-development, management of time, plus business economics and statistics for supervisors. Prerequisite: IM-166. 3 (3-0)

**170 Industrial Labor-Management Relations** **Three credits**

The labor-management relationship as practiced in union and non-union industrial situations. Labor organization and labor history will be studied. Responsibilities of both labor and management will be reviewed. Students will better understand grievance procedures, collective bargaining, negotiating labor contracts and arbitration procedures. 3 (3-0)

**175 Production Planning and Control** **Three credits**

Manufacturing industries are very dependent on the effectiveness of the production planning and control function. This course is designed to review basic purpose and objectives of production control. The interdependence of all manufacturing departments with production control as the hub will be demonstrated. Primary and secondary relationships and responsibilities will be studied. Sales and manufacturing forecasts are a vital link in the planning activity, and techniques for obtaining valid projections will be topics for discussion. Utilization of critical path analysis, operation research and linear programming in support of production planning and control are presented to review and analyze. 3 (3-0)

**176 Manufacturing Cost Control** **Three credits**

Designed to provide the first line supervisor with a comprehensive understanding of basic financial concepts as they relate to the individual's area of responsibility. Special emphasis will be placed on the applications of basic concepts to planning, organizing, and controlling the industrial concern. First hand experience will be provided in developing budgets, controlling cost, analysis of variance, unit cost, performance measurement and financial decision making. 3 (3-0)



**179 Leadership Communication****Three credits**

Effective supervision requires good verbal communications as well as clear written communications in the everyday job assignments. This course is designed to acquaint the student with the principles of dynamic, enthusiastic communication. It covers numerous communication fundamentals, and the means of building enthusiasm and developing positive attitudes. It also includes organizing verbal or written communication, problem solving skills, motivation through communication, and preparing for and conducting oneself in an interview. Assistance on developing spelling skills will be available. The student should be able to overcome fear of speaking or writing in either personal or group communication settings. 3 (3-0)

**180 Industrial Organizational Communications****Three credits**

Explores a variety of communications existing in industry today. Basic definitions and models prepare the student for effective day-to-day communication. Informal, interpersonal problems, barriers and pitfalls will be discussed. 3 (3-0)

**185 Industrial Chief Executive Officer****Two credits**

To acquaint the supervisor with the diverse types of industrial firms, supervisory practices, corporate policies, and management styles, while emphasizing the underlying ethical judgments of the Industrial C.E.O. Students should be able to identify those factors which will affect their organizations' management as well as choose certain management ideals and goals to pursue personally. The class will additionally choose a topic of interest which they will explore in detail with each of the C.E.O.'s who are guest speakers, and then submit a report on that topic. 2 (2-0)

**Labor Studies (LS)****101 History of American Labor****Four credits**

Reviews the development and history of the American Labor Movement in the late 1800's, early 1900's and the present; how various events influenced and evolved into today's labor organizations and philosophies; the rise of industrial and international unionism; the influence of politics and government and the continuing involvement of this section of our society. 4 (4-0)

**102 Structure and Administration of Unions****Three credits**

Considers the organizational aspects of formal labor union structure, and presents review of local, regional, national and international structures. Jurisdictional lines and administrative responsibilities at various levels are considered. Eligibility requirements, tenure of office, standing committees, and by-laws are analyzed, compared and discussed. Election procedures, constitutional conventions, and democratic procedures and membership functions are also reviewed. 3 (3-0)

**104 Collective Bargaining: Negotiating in the Private Sector****Three credits**

Focuses on the history, philosophy and impact of collective bargaining and what it has accomplished for American workers. Emphasizes what a contract covers, the legal basis for collective bargaining, fair representation, price and tax source factors, economic pressures, and grievance procedures. The importance of thorough preparation in order to achieve bargaining goals will be stressed. 3 (3-0)

**105 Collective Bargaining: Negotiating in the Public Sector****Three credits**

The conditions that give impetus to public section unionization will be examined, as well as factors differing from traditional union issues. The legal framework affecting public unions and associations will be explored, especially recent trends in court decisions. Types of unions and associations, their applicability in varying situations and their different negotiating goals, techniques, and strategies will be discussed. 3 (3-0)

**106 Contract Administration/Private Sector****Four credits**

Topics covered include contract content, fringe benefits and non-fringe areas, working conditions, and training local union representatives to administer their own contracts. The grievance procedure, methods and techniques of grievance handling, fair representation, health and safety clauses, and EEOC procedures will also be covered, with emphasis on actual grievance handling and role playing situations. Course can be tailored to specific contracts upon request of a local union. 4 (4-0)

**107 Contract Administration/Public Sector****Four credits**

*Companion course to LS 106 designed for Public Sector Employees*

Topics covered include contract content, fringe benefits and non-fringe areas, working conditions, and training local union representatives to administer their own contracts. The grievance procedure, methods and techniques of grievance handling, fair representation, health and safety clauses, and EEOC procedures will also be covered, with emphasis on actual grievance handling and role playing situations. Course can be tailored to specific contracts upon request of a local union. 4 (4-0)

**108 Labor Law****Three credits**

The purpose of this course is to acquaint the student with an overview of labor law. Labor law is defined broadly to include those laws, both State and Federal, that affect labor directly, as well as those where labor is affected as part of society. This will include laws affecting collective bargaining, safety, Worker's Compensation and unemployment compensation, consumer legislation, the Pension Reform Act, EEOC, Social Security, and environmental law. 3 (3-0)

**201 Arbitration****Three credits**

This course begins with a review of the grievance procedure to insure adequate preparation of each grievance for possible arbitration. Skills are developed for successful investigation, interviewing, writing facts, and preparing arbitration cases. How to select an arbitrator, assembling evidence properly, examination and cross-examination of witnesses and on-site inspection procedures are covered. In addition, the course touches on the future of arbitration, especially in contract negotiation as well as contract interpretation. 3 (3-0)

**210 Labor in the Community****Four credits**

The role of unions and their members in community development is examined. Also covers consumer legislation and education; support of local community fund-raising; political action and the rules affecting such activities; non-traditional ways of increasing worker influence in local political and community decision making; and the challenge of remaining relevant to the needs of new labor constituencies—the young workers, Blacks, Chicanos, Indians and the growing role of women in the union movement. 4 (4-0)

**216 Worker's Compensation****Two credits**

Covers rules, policies, and procedures of Michigan Worker's Disability Compensation Bureau. Examines historical reasons for worker's compensation and current case interpretations in the field. 2 (2-0). LS 108 recommended.

**217 Fair Employment Practices****Three credits**

This class covers rules and procedures of both Federal legislation and State Department of Civil Rights. Areas examined include hiring, promotion, training, selection, and educational special admissions programs and their ramifications. Course was developed in cooperation with the Michigan Department of Civil Rights and represents the most current developments in the field. 3 (3-0)

**218 Consumer Awareness I****Three credits**

This course examines the issues shaping the market for goods and services that we face every day as consumers, as well as how to save money by making more well informed decisions. Topics include utility policies, health care delivery, transportation, housing, alternative food delivery systems, energy. 3 (3-0) LS 108 recommended.

**219 Consumer Awareness II****Three credits**

Explores effective change strategies in addressing consumer problems. Committee formation and use on specific issues will be learned firsthand, along with the powers and jurisdictions of state and federal regulatory agencies. Sources of support and issue research will be analyzed and effective publicity and lobbying techniques examined. 3 (3-0) LS 217 recommended.

**270-9 Leadership Skills Development Classes****One credit**

This Labor Studies option consists of a series of concentrated one-credit workshops in essential areas for union activists. Such a format gives students the flexibility of enrolling in only those specific areas in which they most need additional training. Among courses to be included are:

- LS 270 Communications Skills
- LS 271 Basic Grievance Handling
- LS 272 Health and Safety Grievances
- LS 273 Parliamentary Procedure & Alternatives
- LS 274 Community Services Counseling
- LS 275 Techniques of Political Involvement
- LS 276 Effective Decision Making

Other specific workshops can be developed if requested.

**280-9 Labor in Modern Society Classes****One credit**

This Labor Studies option consists of a series of one-credit workshops on current social issues and their impact on labor. Students thus have the flexibility of enrolling for those topics most central to their interests. Among courses to be included are:

- LS 280 Workers' Role in Society
- LS 281 Quality of Work Life
- LS 282 Rights of Women Workers
- LS 283 Multinational Firms and Unions
- LS 284 Unions and Equal Opportunity
- LS 285 Flexible Work Scheduling
- LS 286 Labor and the Future

Further workshops can and will be developed in response to emerging social and political issues.

**290 Labor Internship Program/Special Projects****Var.**

Students can assist participating locals in projects of organizational development, community action, or research and earn appropriate college credits. Progress will be evaluated by the local union involved and the Labor Studies Center. Intended primarily for students who have completed the core program.

**Credit for Experience/Equivalency Credit**

Students who have held responsible union positions or who have participated in union organizational projects, training seminars, etc., may have acquired expertise or knowledge sufficient to earn college credits in certain areas. Contact the coordinator or the Applied Technology Department for details of this aspect of the program. Credit will be given on a course-by-course basis after completion of a competency exam and faculty appraisal for each course in which CLE credit is being sought.

## Special Projects (SPA)

101

One credit

Provides, in special cases, the opportunity for a student to enroll in a course with sufficient reason at any time. The student is expected to complete the course successfully, and must have the approval of the departmental chairperson. Any course taken under this plan which appears in a Certificate or Associate Degree program can also be inserted as the actual course taken.

102

Two credits

See SPA 101 for description

103

Three credits

See SPA 101 for description.

104

Four credits

See SPA 101 for description.

105

Five credits

See SPA 101 for description.

106

Six credits

See SPA 101 for description.

## Welding (WLD)

## 100 Combination Welding

Four credits

An introductory course in the basic principles, safe operation and application of the oxyacetylene welding, cutting and electric arc and MIG (metal inert gas) processes. Each process consists of beading, butt, lap and corner joints in the flat and horizontal positions. Lab fee. 4 (2-4)

## 101 Arc Welding I

Four credits

A practical course designed to develop skills and confidence in producing quality type multiple pass fillet and groove welds in steel plate. Conventional and iron powered electrodes and recommended procedures are presented in preparation for passing performance tests in the flat and horizontal positions. Prerequisite: WLD 100. Lab fee. 4 (2-4)

## 102 Gas Welding and Brazing

Four credits

A practical course designed to develop skills and confidence in joining low and medium carbon steels, cast iron and aluminum. Silver brazing alloys, tobin bronze, general purpose brazing alloys and the common filler metals are presented. Prerequisite: WLD 100. Lab fee. 4 (2-4)

## 110 Welding Construction Trades

Four credits

Basically designed for individuals in the building and construction trades. Introduces the students to the types of welding used in their trades. Develops skills and confidence in producing quality welds in all positions along with the proper procedures for oxygen and acetylene cutting and welding. Lab fee. 4 (2-4)

## 111 Equipment Fabrication &amp; Repair

Three credits

Designed for individuals who wish to fabricate and repair items of a practical nature. Safety in welding, as well as use and operation of equipment, will be covered along with fabrication and repair fundamentals. Projects contemplated by the student will be subject to the approval of the instructor. Prerequisites: WLD 100 or Instructor approval. Lab fee. 3 (1-4)

## 150 Creative Welding I

Two credits

Basic skills are taught in the safe and proper use of acetylene and arc welding equipment. The student is encouraged to design and execute original creations. No previous welding skills are necessary. Lab fee. 2 (1-2)

## 151 Creative Welding II

Two credits

A continuation of Creative Welding I in which the student may develop greater skills with the welding equipment, and in original creations. Students who wish to use some of the more exotic (more expensive metals) must provide these materials. Prerequisite: WLD 150. Lab fee. 2 (1-2)

## 152 Creative Welding III

Two credits

An advanced course in Creative Welding offering the student an opportunity to create even more sophisticated projects, and also become highly proficient in using welding equipment. Exotic metals must be provided by the individual. Prerequisite: WLD 151. Lab fee. 2 (1-2)

## 201 Arc Welding II

Four credits

An advanced course designed to develop skills and confidence in the vertical and overhead positions. Multiple pass fillet and groove welds are demonstrated in preparation for performance tests. The use and interpretation of welding symbols related to arc welding applications are presented. Prerequisite: WLD 101. Lab fee. 4 (2-4)

## 202 TIG Welding

Four credits

A study of the principles and fundamentals of Tungsten Inert Gas (TIG or Heliarc), Plasma Arc and Submerged Arc. The student will weld in different positions on a variety of metals. Students may be asked to refresh their manipulative skills with the oxyacetylene process in preparation for TIG Welding. Upon completion of Welding 100, 101, 102, 201 and 202, the student may want to seek a proficiency certificate in welding. Lab fee. 4 (2-4)

**205 Tool and Die Welding****Four credits**

The student will practice methods involved in the welding of various alloyed metals. Includes the welding of ferrous and non-ferrous metals, pre- and post-heating of metals, recognition of materials and the proper usage of air, oil and water hardening steels. Prerequisites: WLD 100, W 101, WLD 201, WLD 202 and ATR 142 or Instructor's approval. Lab fee. 4 (2-4)

**214 Aircraft Welding****Four credits**

(Same as APA 214). Welding applications and practice on aircraft structures, load bearing members and surfaces. Lab fee. 4 (2-4)

**295 Welded Sculpture****Four credits**

Investigates three-dimensional constructions in metal through the use of basic welding techniques. The concepts of space, form, proportion, balance, composition, motion, etc., will be explored by the student through the execution of original designs and under the supervision of the instructor. Lab fee. 4 (2-4)

*Department of Health Careers**Chairperson: Michael F. Lenkowski***Programs of Study**

The Department of Health Careers currently offers programs\* leading to the Associate Degree in Applied Science with major emphasis in:

1. Nursing (R.N.)
2. Dental Hygiene (R.D.H.)
3. Radiologic Technology (R.T.)
4. Respiratory Therapy Technology (A.I.R.T.)
5. Cytotechnology C.T. (A.S.C.P.)

and one-year programs leading to the Certificate of Achievement in:

1. Practical Nursing (L.P.N.)
2. Dental Assistant (C.D.A.)
3. Nuclear Medicine Technician (N.M.T.)
4. Respiratory Therapy Technician (C.R.T.T.)
5. Operating Room Technician (C.O.R.T.)
6. Emergency Medical Technician (C.E.M.T.)

\*The length of these programs varies from six to nine quarter terms in order to meet curriculum, clinical practice, and other requirements established by professional accrediting agencies and government licensing agencies. Most programs also require more than the minimum ninety quarter term credits for graduation.

Because these programs are designed to assist the student in qualifying to write Licensing or National Certification Examinations, and meeting minimum standards of safety in practice in the respective field, specific admission requirements have been established for each program. Applicants are expected to satisfy requirements for the College as well as for the individual program.

All programs conducted in the Department are subject to criteria and minimum education standards of government licensing agencies and/or professional accrediting agencies. The following agencies have either granted full approval and/or full accreditation or are currently in process:

1. American Medical Association, Council on Medical Education and affiliates:
  - Cytology Programs Review Committee of the American Society of Cytology
  - American Association for Respiratory Therapy
  - American Registry of Radiologic Technologists
2. American Dental Association, Council on Education
3. National League for Nursing, Department of Associate Degree Nursing Programs
4. American Association of Operating Room Nurses and American Association of Operating Room Technicians
5. Michigan Board of Nursing
6. Michigan Board of Dentistry
7. Michigan Department of Public Health, Division of Emergency Medical Services

#### Audio-Visual/Patient Care/Practice Laboratory

The Department of Health Careers has developed a series of audio-visual study units which have been designed to replace some traditional teaching methods, and others which supplement or enhance classroom and laboratory instruction. Study units include color slide films or filmstrips, audio-tapes, and a printed laboratory study-work manual. These study units have been developed by the audio-visual laboratory with all faculty participating to assure effectiveness and pertinence to respective curriculums.

Development of additional study units is a continuing process in the department, and as units are completed they will be utilized in the respective programs and courses.

Students in all programs receive an intensive orientation in the use of audio-visual laboratory equipment, scheduled study units, and laboratory instruction staff assistance.

#### Associate Degree Program in Nursing

The Associate Degree Program in Nursing at Lansing Community College is a basic nursing program. The nursing sequence is seven quarters in length. Prerequisite courses generally require two additional terms. Graduates of the program are qualified to apply to the Michigan Board of Nursing to write the State Board Test Pool Examination for licensing as Registered Nurses.

Courses in the biological and social sciences, psychology and in English provide an academic background of scientific principles and communication skills on which to base principles of patient care. Theory and simulated clinical laboratory sessions are conducted at the College. The College laboratories are furnished and equipped to simulate clinical nursing areas.

Clinical learning experiences are conducted by the College faculty in four local hospitals and two extended care facilities. Student to faculty ratios in the clinical areas are maintained at eight to one.

Other community health agencies and programs provide opportunities for observational experiences of related health care activities.

Student experiences are planned to progress from simple to complex patient care problems. Emphasis is placed on the application of scientific and sociological principles to patient care, and the development of nursing skills. Concepts of pharmacology, nutrition, mental health and interpersonal relationships are integrated throughout the curriculum.

Upon completion of the program, the graduate will have received the theory and related clinical experiences in Medical-Surgical Nursing, Maternal-Child Nursing, Nursing of Children, Psychiatric Nursing, and will have had opportunities to apply beginning principles of leadership which relate to the care of a group of patients.

The student is required to meet College criteria for the Associate Degree in Applied Science-Nursing Major to qualify for graduation. The Associate Degree Program in Nursing is approved by the Michigan Board of Nursing and is accredited by the National League for Nursing.

Applicants to the program are required to meet the admission requirements to the College and those specifically established for the Associate Degree Program in Nursing. Applicants are admitted to the program on a first qualified, first served basis which may entail a 6-12 month wait after completion of the admission requirements.

## COURSE DESCRIPTIONS

### Associate Degree Nursing (NUR)

#### 100 Basic Pharmacology

**Two credits**

Introduces the nursing student to the basic concepts of pharmacology. This course must be taken concurrently or prior to NUR 102, Nursing Foundations. (Practical Nursing students are also required to take this course.) Various groups of drugs are presented with emphasis on the effect of drugs on the human body. The actions of drugs in the body, the importance of the proper routes of administration and barriers to absorption of medicines are discussed. Nursing responsibilities in relation to medication administration are introduced. No prerequisite.

#### 101 Patient Care Principles

**Eight credits**

The first course in the nursing sequence emphasizes the patient assessment portion of the nursing process. Students learn to do a complete nursing assessment for patients with uncomplicated medical and surgical conditions, with basic patient care activities emphasized.

Basic nursing skills are included, such as assessing vital signs, positioning and transfer of patients, general hygiene procedures and other skills involved in the nursing care of hospitalized patients. Interpersonal relationships and motivations influencing behavior are also studied. Students utilize the Audio-Visual Laboratory to learn these nursing skills and are expected to practice these in the practice laboratories under supervision of Registered Nurse faculty members. Only when these skills are demonstrated satisfactorily in Evaluation Lab are students allowed to progress to the clinical area to care for patients. Prerequisite: Admission to program.

#### 102 Nursing Foundations

**Ten credits**

The second course in the nursing sequence emphasizes the entire nursing process as a basis for planning individualized patient care. Students build on the assessment skills learned in NUR 101, Patient Care Principles, to identify and set priorities in patient care problems, to devise nursing interventions to meet the problems identified and to evaluate the care given to patients.

More complex skills such as medical and surgical asepsis, administration of medications, pre- and post-operative nursing care, and nursing responsibilities for patients with cancer are presented.

Students again follow the Audio-Visual Laboratory to Practice Laboratory to Evaluation Laboratory to Clinical area sequence to learn the necessary nursing skills. Interpersonal relationships skills presentations are also continued with further study of motivations affecting behavior as it relates to themselves and patients. Techniques of intervention to facilitate patient communication are emphasized. Prerequisite: NUR 101

#### 103 Maternal-Child Nursing

**Twelve credits**

The Maternal-Child Nursing course focuses attention on the principles and implementation of nursing care for the childbearing family during the antepartal, intrapartal, postpartal and newborn phases. The childbearing family is approached in a holistic manner, viewing the family from psychological, sociocultural, environmental, and physical aspects. Emphasis is placed on the normal childbearing family and views this family in its relation to a changing society. Teaching-learning and patient education concepts are introduced. Prerequisite: NUR 101-102

#### 201 Physical Illness of Adult and Child I

**Thirteen credits**

This course will aid the student in understanding the pathophysiology and psychosocial aspects of the patient who has problems with transportation of materials to and from cells, maintaining a supply of oxygen and/or the removal of carbon dioxide and maintaining the body's nutritional status. The course builds on the student's knowledge of normal physiology and anatomy of the cardiovascular system, the respiratory system and the gastrointestinal tract; the knowledge of the normal needs of children and adults and the knowledge of basic nursing principles and skill. Learning experiences in the classroom and clinical setting will enable the student to use the nursing process to meet the needs of these patients and their families. Discussion of medication and diet therapy is included in classroom presentations and the student's clinical experience. The student will have experiences in teaching patients about prevention and early detection of physical illness and in coping with a long term health problem. A follow-through experience in the care of a patient having surgery will increase the student's understanding of the patient's surgical experience as well as an observational experience of the surgical suite and functioning of the surgical team. Prerequisite: NUR 101-102

#### 202 Physical Illness of Adult and Child II

**Thirteen credits**

Learning experiences progress from the simple to the complex, leading to mastery of knowledges and skills necessary to the nursing care of individual patients with complex medical and/or surgical problems. A theoretical framework designed to promote understanding of the etiology, treatment and prevention of physical illness and its emotional ramifications, and provide the concepts and principles which are applied in selected clinical experiences.

Clinical experiences are structured to reinforce theoretical learning. Emphasis is placed not only on selecting priorities of care for a multi-problem patient, but additionally, both the theory and clinical experiences are structured to assist students in selecting priorities for small groups of patients and organizing and implementing care to meet patient needs.

Concepts previously introduced in natural science, social science, and nursing courses are further developed to provide skills in understanding and dealing with patient needs all along the health-illness continuum. Prerequisite: NUR 201

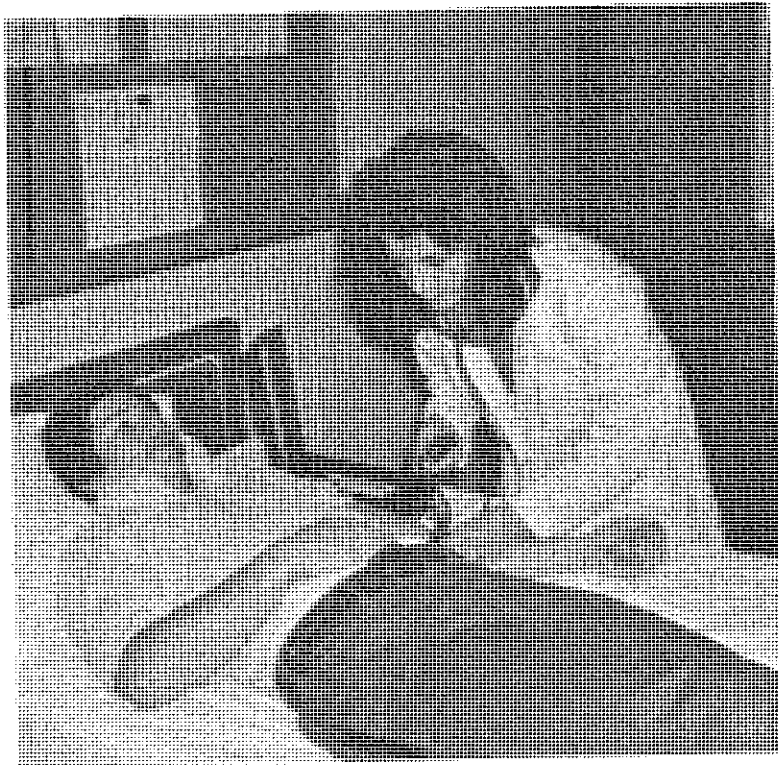
**203 Advanced Nursing Skills****Thirteen credits**

This is the final course in the nursing sequence and is designed to provide the student with opportunities to study and apply the principles of management as well as the techniques of advanced nursing skills.

Opportunities are provided for the student to observe and participate in various leadership roles in the clinical laboratory under the supervision of College faculty. Within the framework of the nursing process the student will develop the nursing skills, professional attitudes and judgments necessary for providing total management of nursing care. Prerequisite: NUR 201-202 and G.P.A. of not less than 2.0 (Nursing major)

**204 Psychiatric Nursing****Ten credits**

Psychiatric Nursing teaches the student to apply theory and concepts from the psychosocial sciences into nursing interventions with patients. The focus is upon the dynamics of human behavior, and the roles of the mind and body in the various disease processes. The formation and development of a therapeutic nurse-patient relationship are emphasized through the use of problem-solving techniques and empathic communication skills. Didactic presentations and classroom discussions are correlated with scheduled clinical laboratories involving individual patient interactions and group participation. Prerequisite: NUR 101-102

**Practical Nursing Program**

Lansing Community College offers a one-year (four quarters) program in Practical Nursing. Graduates of the program receive a Certification of Achievement, and are eligible to apply to the Michigan Board of Nursing to write the State Board Test Pool Examination for Licensed Practical Nurses.

Courses in Human Anatomy, Human Physiology and Psychology provide principles on which to base patient care activities. Nursing theory classes and simulated clinical laboratory sessions are conducted at the College. The College laboratory is furnished and equipped to simulate clinical nursing areas.

Clinical learning experiences are conducted by the College faculty in four local hospitals and several community extended care facilities. Student to faculty ratios in the clinical areas are maintained at eight to one. Other community health agencies are utilized to give students an overview of related health care activities.

Student experiences progress from simple to complex patient care. Emphasis is placed on the development of basic bedside nursing skills. The nursing process is integrated throughout the nursing sequences, as are basic concepts of pharmacology, nutrition, mental health and interpersonal relationships. The nursing sequence includes theory and concurrent clinical learning experiences in Nursing Foundations, Maternal-Child Nursing, Nursing of Children and Medical-Surgical Nursing.

The student is required to meet the Department of Health Careers criteria for Practical Nursing students to qualify for graduation. The Practical Nursing Program is approved by the Michigan Board of Nursing.

Applicants to the program are required to meet the admission requirements to the College and those specifically established for the Practical Nursing Program. Applicants are admitted to the program on a first qualified, first served basis, which may entail a six-month wait after completion of the admissions requirements.

**COURSE DESCRIPTIONS****Practical Nursing (PN)****104 Growth and Development****Three credits**

The course covers the principles of normal growth and development, the normal variations in developmental patterns and the ways in which these principles can help the nurse assess and meet the physical, emotional, social and intellectual needs of the hospitalized child. The role the family and the role the community play in the development of individual personality characteristics, and some practical applications of the theories of growth and development are also considered. No prerequisite

**105 Emergency Care for Practical Nurses****Two credits**

The primary objective of this course is to prepare the student Practical Nurse with the theoretical concepts of emergency intervention and enable the student to provide safe and effective care and treatment. The student will be able to utilize the knowledge learned in emergencies involving patients in the clinical settings, victims outside the clinical area and incidental happenings in everyday life. Prerequisite: NUR 101

**110 Vocational Relations****Two credits**

Vocational Relations is viewed as a summary course in the Practical Nursing Program to acquaint the student with nursing as a profession and the role of the Practical Nurse as a member of the health care team. The course will include a discussion of the history of nursing, the function of the Practical Nurse, legal and ethical responsibilities, nursing care delivery methods, nursing organizations, leadership principles and the Practical Nurse as a team leader. Prerequisite: NUR 102

**114 Maternal-Child Nursing****Six credits**

Maternal-Child Nursing is designed to offer a family-centered approach to the study of nursing during the child-bearing experience. This includes the physical and psychosocial aspects of pregnancy, labor and delivery, the post-partum period, and the needs of the newborn infant. The course is presented with a focus on how these events affect the family, as individuals and as a unit of society.

This course is presented in sequence with PN 115, Nursing of Children, each occupying five weeks of the 10-week term. Prerequisite: NUR 101-102

**115 Nursing of Children****Six credits**

This course is designed to give the student Practical Nurse the basic education in the nursing care of children from infancy through adolescence. Phases of development and reactions of the various age groups to hospitalization are emphasized. Nursing care of children with congenital conditions, various contagious and non-contagious disease conditions are presented. The clinical laboratory is utilized to reinforce the classroom discussions utilizing the nursing process as a basis for quality nursing care.

This course is presented in sequence with PN 114, Maternal-Child Nursing, each occupying five weeks of the 10-week term. Prerequisite: NUR 101-102

**116 Medical-Surgical Nursing****Thirteen credits**

Building upon previously learned concepts, this course will assist the student Practical Nurse in understanding basic pathophysiology of various dysfunctions of body systems and their impact upon the patient/client. Emphasis is placed upon the holistic needs of individuals and implementation of the nursing process in assisting the patient/client in attaining an optimum degree of wellness. Focus is also directed toward health maintenance and discharge needs. The student is encouraged to identify and appropriately plan for needs in the psychosocial and spiritual realms as well as the physiological.

The course builds upon and integrates the student's knowledge of normal anatomy and physiology of major body systems; the understanding of the needs unique to the patient/client as an individual; and the basic nursing principles and skills learned in Foundations. Learning experiences in the classroom and clinical setting are integrated to allow the student to learn about and implement concepts of health and disease in patient care with instructor guidance. The course is built around the nursing process and its appropriate implementation in quality health care for the patient/client and family. Discussion of medications and diet therapy is included in classroom discussion and the clinical setting. Experiences are arranged in teaching the patient/client about prevention and early detection of physical illness and in coping with a long term health problem. Prerequisite: NUR 101-102

**Dental Hygiene Program**

Program Director, Sally Deck

Lansing Community College offers a two-year\* dental hygiene program. Upon successful completion of the program an Associate Degree is awarded, and the graduate is eligible for the licensing examination in dental hygiene administered by the Michigan State Board of Dentistry. Following graduation and successful completion of the examination for licensure, the dental hygienist is prepared to function as a member of the dental health team in the state of Michigan.

The Dental Hygiene Program has "full accreditation" status which is granted by the Commission on Dental Education, American Dental Association. Admission qualifications and basic curriculum are carefully designed to assist the graduate in meeting the responsibilities of the dental hygienist's professional role.

\*Prerequisite courses generally require three additional terms prior to the six-term clinical Dental Hygiene sequence.

**COURSE DESCRIPTIONS****Dental Hygienist (DH, DHA)**

Admission to the program is a prerequisite for each course. Admission requirements may be obtained from the Admissions Counselor for Health Careers, Admissions Office.

Course descriptions for revised curriculums will be available at the Admissions Office and/or Dental Auxiliary Programs Office.



**110 Oral Health Practices****Four credits**

A laboratory and practical course which will introduce the student to the predominant dental diseases and the need for good oral health, and aid the student in developing personal oral health regimen.

**111 Oral Anatomy I****Four credits**

Lecture, laboratory, and AVT sessions will explain the visible anatomic structures of the oral cavity including a detailed description of the morphology of the human dentition. Emphasis is placed upon the identification of extracted specimens of human teeth, tactile discrimination of anatomic landmarks, surfaces, calculus and caries. The histology of the enamel, dentin, and pulp, and the embryology of the tooth will be presented.

**112 Introduction to Dental Procedures****Three credits**

Through lecture and practical experience the student will be introduced to dental procedures and the use and maintenance of dental instruments and equipment.

**110 Dental Office Management****Two credits**

Office procedures relating to management, appointments, recall system, business correspondence and effective use of telephone and dental terminology will be presented.

**120 Introduction to Clinical Dental Hygiene****Seven credits**

A course of study in which the dental hygiene student will learn appointment procedures and the techniques for 1) obtaining medical histories, 2) planning treatment and 3) performing a complete oral prophylaxis.

**121 Oral Anatomy II****Three credits**

Lecture, laboratory and AVT sessions will explain the anatomy and basic histology of the head and neck associated with the oral cavity and surrounding areas. Normal physiology of the oral cavity is presented.

**HC 102 Nutrition****Two credits**

A series of lectures covering the identification, function, metabolism and sources of specific food nutrients required by man for normal growth and development. Application of principles to the individual's needs is emphasized.

**130 Clinical Dental Hygiene I****Seven credits**

This initial clinical course offers the student an opportunity to perfect skills in methods of patient education, oral physiotherapy, recognition and recording of oral conditions, and performing a complete prophylaxis.

**131 Dental Radiography****Five credits**

Development of the theory and practice of radiology to prepare the auxiliary for routine dental office responsibilities. The student will expose, process, evaluate for quality, and mount radiographs. The lecture section will cover the production and emission of dental radiation, indications for exposure, techniques of exposure, and the processing and evaluation of dental radiographs.



**122 Oral Pathology****Three credits**

A study of the diseases affecting the oral region including developmental disturbances, diseases of the teeth and supporting structures, and neoplasms.

**210 Clinical Dental Hygiene II****Nine credits**

A continuation of DH 130 offering additional practice in the dental hygienist's clinical skills. Lecture and seminar sessions include theory of patient education and aspects of preventive dentistry for the individual. Laboratory sessions introduce additional clinical skills.

**211 Periodontics****Three credits**

A study of the anatomy, physiology, and histology of the periodontal tissue as it relates to the identification, etiology, prevention, and treatment of periodontal disease and occlusal disorders. Knowledge, skills, and attitudes that will enhance the dental hygienist's clinical competence in treating periodontal patients are emphasized.

**220 Clinical Dental Hygiene III****Nine credits**

Clinical practice is continued from DH 210 for the dental hygiene student. Lecture and seminar sessions will help the student to prepare health education and service programs for groups, school and special populations. Various models of dental service programs will be discussed, including the dental hygienist's role.

**221 Dental Materials****Four credits**

Lecture and laboratory sessions will address the selection, manipulation and evaluation of materials used in dentistry. Attention is given to procedures performed and materials used by the dental hygienist and dental assistant.

**230 Clinical Dental Hygiene IV****Six credits**

An opportunity to continue clinical skills, gain experience in providing dental hygiene services to community groups, and learn expanded duty techniques.

**231 Dental Specialties****Four credits**

Students are introduced to dental office procedures through selected visitations to public and private clinics. Lectures by practicing dentists will provide orientation to the eight dental specialties.

**Dental Assistant Program**

Program Director, Sally Deck

The one-year curriculum for dental assisting combines arts and science courses. This curriculum will prepare the student to assist the dentist in four-handed dental procedures. After completing the four terms of course and laboratory work at Lansing Community College, the student may apply for a Certified Dental Assistant recognition. The student will receive certification after successful completion of the examination conducted by the Certifying Board of the American Dental Assistant Association.

**COURSE DESCRIPTIONS****Dental Assistant (DA, DHA)**

Admission to the program is a prerequisite for each course. Admissions requirements may be obtained from the Admissions Counselor for Health Careers, Admissions Office.

Course descriptions for revised curriculums will be available at the Admissions Office and/or Dental Auxiliary Programs Office.

**110 Dental Office Management****Three credits**

Office procedures relating to management, appointments, recall systems, business correspondence, effective use of the telephone, dental terminology, financial record-keeping, prepaid dental care plans and dental payment plans will be emphasized.

**110 Oral Health Practices****Four credits**

A laboratory and practical course which will introduce the student to the predominant dental diseases and the need for good oral health, and aid the student in developing an appropriate personal oral health regimen.

**111 Oral Anatomy I****Four credits**

Lecture, laboratory, and AVT sessions will explain the visible anatomic structures of the oral cavity, including a detailed description of the morphology of the human dentition. Emphasis is placed upon the identification of extracted specimens of human teeth, tactile discrimination of anatomic landmarks, surfaces, calculus and caries. The histology of the enamel, dentin, and pulp, and the embryology of the tooth will be presented.

**112 Introduction to Dental Procedures****Three credits**

Through lecture and practical experience the student will be introduced to dental procedures and the use and maintenance of dental instruments and equipment.

**120 Dental Assisting I****Seven credits**

Discussion of four-handed procedures, preparations and techniques will be continued with practical experience scheduled in dental offices.

**121 Oral Anatomy & Pathology****Three credits**

Lecture, laboratory and AVT sessions will explain the anatomy and basic histology of the head and neck associated with the oral cavity and surrounding areas. Normal physiology of the oral cavity is presented.

**HC 102 Nutrition****Two credits**

A series of lectures covering the identification, function, metabolism and sources of specific food nutrients required by man for normal growth and development. Application of principles to the individual's needs is emphasized.

**221 Dental Materials****Four credits**

Lecture and laboratory sessions will address the selection, manipulation and evaluation of materials used in dentistry. Attention is given to procedures performed and materials used by the dental hygienist and dental assistant.

**130 Dental Assisting II****Ten credits**

Continuation of chairside assisting with emphasis on four- and six-handed techniques. The duties and responsibilities of the dental assistant in specialty areas and the utilization of special tray set-ups and procedures are stressed. Field experience in private dental offices will be continued.

**131 Dental Radiography****Five credits**

Development of the theory and practice of radiology to prepare the auxiliary for routine dental office responsibilities. The student will expose, process, evaluate for quality, and mount radiographs. The lecture section will cover the production and emission of dental x-radiation, indications for exposure, techniques of exposure, and the processing and evaluation of dental radiographs.

**122 Pharmacology****Three credits**

A study of the theoretical and practical implications of the use of drugs in dental practice. Action and effects due to the administration of drugs, adverse reaction to drugs, and the management of common medical emergencies will be discussed.

**140 Dental Assisting III****Eight credits**

Includes field experiences, supervised clinical practice and seminar sessions. Seminars will include discussion of field experience, techniques and skills, applying for employment, and review and update of materials and procedures.

**Associate Degree Program in Radiologic Technology**

Program Director, Ronald Griffith

The Associate Degree Program in Radiologic Technology at Lansing Community College is approved by the American Medical Association's Council on Education. Graduates are eligible for the Associate Degree in Applied Science and are qualified to write the Registry examination as given by the American Registry of Radiologic Technologists, entitling them to the privilege of carrying the insignia initials, R.T.

The two-year (24 continuous months) curriculum includes selected liberal arts and science courses which provide the basis for an in-depth consideration of theory and clinical applications in Radiologic Technology. The students are first evaluated on their performance in an examination at the College laboratory before they complete their assignments at one of the four affiliate and cooperating institutions: Ingham Medical Hospital, Lansing General Osteopathic Hospital, Edward W. Sparrow Hospital, and St. Lawrence Hospital.

Interested students are urged to contact the Admissions Counselor for Health Careers, Admissions Office, for specific requirements for program admission.

**COURSE DESCRIPTIONS****Radiologic Technology (RXT)****100 Introduction to X-ray Services****Three credits**

The course surveys the role of the Radiologic Technologist in the hospital setting beginning with the early foundations and discovery of X-ray until the present. Ethics, medical terminology, and principles of radiation protection both for personnel and patient are stressed. Deals with the basis for and methods of achieving effective interaction with the patient.

Addresses issues which aid the student by enhancing the understanding of self and the dynamics of the health professional-patient relationship. The course also develops the student's awareness of the complementary roles of other health professionals. Prerequisite: Admission to the program

**101 Clinical Seminar I****One credit**

An introduction to the physical environment of the Radiology Department. The student begins to put into practice the interpersonal relationship skills presented in RXT 100, and is given the opportunity to apply some of the basic patient care skills and radiographic positioning presented in HC 104 (Patient Care Principles) and RXT 111 (Radiographic Positioning I). Prerequisite: HC 104, RXT 100, RXT 111

**111 Radiographic Positioning I****Five credits**

Review of the structure and organs of the body with topographic anatomy and detailed information on the various positions for both pediatric and adult procedures, supplemented with practical instruction and application in a radiographic room. Topics included are the nomenclature of positioning, bones of the extremities, pelvic girdle, thorax, and the thoracic and basic abdominal viscera. Prerequisite: Admission to the program

**112 Radiographic Positioning II****Ten credits**

Radiographic positioning of the structure and organs of the body to include both the common pediatric and adult radiographic procedures using contrast media. Topographic physiology is given with practical clinical instruction and application in a radiographic room. Topics included are the spine, skull, general characteristics of contrast media, the organs of the gastrointestinal tract, biliary tract, urinary tract, and additional procedures in obstetrics. A clinical component is also included. Prerequisite: RXT 111

**113 Radiographic Positioning III****Eight credits**

Designed to acquaint the student with the more complex technical procedures in radiology. Lecture and clinical laboratory exercises include: topographic physiology, studies of sophisticated major and auxiliary equipment, opaque media, and the general indications for each examination. Detail topics include the specialized neurologic, orthopedic, dental and vascular procedures, and body section radiography. A clinical component is also included. Prerequisite: RXT 112

**121 Radiographic Exposure I****Four credits**

Basic fundamentals of radiographic exposure which are concerned with production, analysis, and recording of the radiographic image. A basic study of devices, factors, and properties which are applicable to radiographic quality. Included is a study of basic chemistry, film apparatus, and processing techniques for both manual and automatic processing. Laboratory activities complement these topics. Prerequisite: Admission to the program

**122 Radiographic Exposure II****Four credits**

A detailed discussion of factors involved in film contrast, detail and quality application of accessory devices; capabilities and limitations of radiographic equipment; technical conversion techniques; exposure technique charts, and the mechanical aspects of fluoroscopy. Laboratory activities complement these topics. Prerequisite: RXT 121

**131 Radiologic Physics I****Two credits**

Involves basic principles of physics and their relationships to radiology; fundamentals of ionizing and radium physics; and the basic principles underlying the construction and operation of X-ray equipment and auxiliary devices. Additional emphasis is given to theory for practical radiation monitoring and protection. Prerequisite: PHY 191

**132 Radiologic Physics II****Two credits**

A study of units of radiation measurement; measurement of radiation exposure and instrumentation; radiation quality factors, such as half-layer values; and tube voltage; specifics of X-ray generators and circuitry; filtration; X-ray beam restrictors; and intensifying screens, with greater emphasis on patient exposure and protection. Prerequisite: RXT 131

**133 Specialized Fields in Radiology****Two credits**

A course in the fundamentals of radiation therapy, including various types of equipment and devices, with their application to disease. Introduction to the study of radiobiology and the effects of radiation in tissue, dosimetry and treatment planning, tumor localization, port films, and treatment positions. Includes fundamentals of medical isotopes, basic instrumentation and clinical application, and basic equipment. Prerequisite: RXT 132

**210 Clinical Seminar II****Two credits**

Designed to acquaint the student with current concepts in radiology. An understanding of these should enable the student technologist to function more effectively within the radiology department. Topics covered include contrast media utilized, the department, advances in special procedures, radiography, ultrasound, xerography, thermography, positioning and new pieces of equipment. Additional materials presented serve to acquaint the student with the organization, function, supervision, and financial arrangements relative to departments of radiology. Familiarizes the student with basic X-ray equipment for performing preventive maintenance and detecting simple functioning difficulties. Prerequisite: RXT 213

**221 Clinical Practice I****Seven credits****212 Clinical Practice II****Seven credits****213 Clinical Practice III****Six credits****214 Comprehensive Experience I****Eight credits****215 Comprehensive Experience II****Nine credits**

Prerequisite: RXT 113 and grade point average of not less than 2.0 in major. The five courses listed above consist of clinical application in radiography theory in all phases of radiologic technology. Formal and informal discussion groups are held weekly at each clinical facility. Each course is programmed with specific performance activities. A minimum of 2200 clock hours of laboratory and clinical practice is required prior to graduation. Credit is arranged for the above courses according to the number of clock hours spent in the clinic per week for each individual term, with a ratio of approximately one credit-hour per six clock-hours.

**Certificate Program in Nuclear Medicine Technology**

Program Director, Ronald Griffith

The Certificate Program in Nuclear Medicine at Lansing Community College is accredited by the American Medical Association's Council on Education. Graduates are eligible and qualified to write the Registry Examination as given by the American Registry of Radiologic Technologists (R.T.). Students also are eligible to write the examination given by the American Society of Nuclear Medicine Technologists (N.M.T.C.B.). Upon successful completion of either of these examinations the student will be a registered Nuclear Medicine Technologist.

The Nuclear Medicine program is conducted to serve as a contribution to the total health care team. The program promotes the concept that Nuclear Medicine Technology is a health service, shared with other health disciplines, which has a basic responsibility for promoting health, conserving life, and assisting the individual to achieve an optimum health status and self-sufficiency. As a member of the patient oriented team, the Nuclear Medicine Technologist utilizes basic knowledge and skills to contribute to patient care and diagnostic expertise as indicated by individual needs.

The Program has developed educational experiences for students based on the philosophy of education for Nuclear Medicine Technology.

Interested students are urged to contact the Admissions Counselor for Health Careers, Admissions Office, for specific program requirements.

## COURSE DESCRIPTIONS

## Nuclear Medicine Technology (RXT)

**240 Nuclear Medicine Instrumentation I** **Two credits**

Upon completion of this course the student should be able to describe the different components of a scintillation detection system, and to understand the meaning of various electrical symbols used in electrical diagrams for the various nuclear medicine instruments. Prerequisite: Admission to program

**241 Nuclear Medicine Instrumentation II** **Two credits**

Upon completion of this course the student should be familiar with laboratory and personnel monitoring devices and liquid scintillation detectors. The student is also exposed to statistics, and involved in counting radioactive materials and calibration of various nuclear medicine instruments. Prerequisite: RXT 240

**242 Nuclear Medicine Instrumentation III** **Two credits**

Nuclear Medicine Instrumentation III is designed to further the student skills of operating and calibrating nuclear medicine instruments. The student should be able to choose the proper collimator for a particular procedure if the radioisotope to be used is given. Also, the student is introduced to routine maintenance performed on the nuclear medicine instruments. Prerequisite: RXT 241

**243 Nuclear Medicine Instrumentation IV** **Two credits**

This course is designed to teach the students not only how to perform routine maintenance on the instruments, but also how to check a nuclear instrument's performance. The student should be able to perform quality control tests on various nuclear medicine instruments. Also the student is exposed to the computer's capabilities and function in the nuclear medicine department. Prerequisite: RXT 242

**250 Nuclear Medicine Clinical Applications I** **Two credits**

Clinical Nuclear Medicine I is the first of a four-term course which is designed to follow a didactic approach to clinical nuclear medicine technology. Considerable numbers of class hours are spent introducing concepts in anatomy, physiology, and pathology of the clinical procedures outlined in the main topics. The rest of the time is spent describing the various radiopharmaceuticals, instruments, indications, contraindications, and the showing of films demonstrating these procedures. Also covers neurological and cardiovascular/pulmonary examinations. Prerequisite: Admission to program

**251 Nuclear Medicine Clinical Applications II** **Two credits**

This course follows the same format as RXT 250 with the additional coverage of competitive protein binding assays, hematological, and genitourinary tract examination. Prerequisite: RXT 250

**252 Nuclear Medicine Clinical Applications III** **Two credits**

Same as RXT 251. Endocrine/exocrine examinations and therapeutic examinations utilizing radionuclides are covered. Prerequisite: RXT 251

**253 Nuclear Medicine Clinical Applications IV** **Two credits**

A continuation of RXT 250, 251, 252. Includes discussion of the skeletal examinations, soft tissues examinations, and gastrointestinal examinations. Prerequisite: RXT 252

**260 Principles of Nuclear Medicine I** **Two credits**

Principles of Nuclear Medicine I is the first of a four-term course that is structured to correlate with topics discussed in Nuclear Medicine Clinical Applications I-IV. This segment of the course provides the student with technical factors and background such as instrumentation, positioning, patient preparations, etc. involving neurological, cardiovascular, and pulmonary nuclear medicine examinations. Prerequisite: Admission to program

**261 Principles of Nuclear Medicine II** **Two credits**

This is the second term that is structured to coincide with Nuclear Medicine Clinical Applications. This segment of the course provides the student with the technical background, such as instrumentation, positioning, patient preparations, etc., needed to perform radionuclidic competitive binding assays and RIA tests, hematological and genitourinary nuclear medicine examinations. Prerequisite: RXT 260

**262 Principles of Nuclear Medicine III** **Two credits**

A continuation of RXT 261 coinciding with Nuclear Medicine Clinical Applications III. This segment of the course provides the student with the technical background such as instrumentation, positioning, and patient preparations needed to perform radionuclidic skeletal and soft-tissue examinations, and gastrointestinal examinations. Prerequisite: RXT 262

**263 Principles of Nuclear Medicine IV** **Two credits**

This is the fourth term to coincide with Nuclear Medicine Clinical Applications IV. The course is structured to provide the student with the technical background such as instrumentation, positioning, patient preparations, needed to perform radionuclidic skeletal and soft-tissue examinations, and gastrointestinal examinations. Prerequisite: RXT 262

**270 Radiobiology** **Two credits**

A course in which the fundamentals of radiobiology, the system's sensitivity to radiation of both normal and neoplastic, radiation pathology, and the biological effects of radiation are stressed. Additional emphasis is placed on the effects of radiation and the effect of radiation absorption on tissue and tissue recovery rate. Prerequisite: Admission to program

**271 Nuclear Physics I** **Two credits**

A review of the basic units of the metric system. A study of basic electronics and electronical instruments, their theory of operation and function with emphasis on calibration. Basic emphasis on principles of nuclear physics will be introduced. Prerequisite: Admission to program

**272 Nuclear Physics II****Two credits**

An introduction to the basic concepts of atomic and nuclear radiation physics. Nuclear decay schemes and concepts of radioactive decay are discussed; emphasis is placed on interactions of radiation with matter. Prerequisite: RXT 271

**273 Nuclear Physics III****Two credits**

Radiation protection for the user as well as the patient during the transportation, setting up, administration, and absorption of radionuclides. Presentation of regulatory requirements pertaining to licensing and inspection. Prerequisite: RXT 272

**290 Radiopharmacy I****Two credits**

Radiopharmacy I presents basic concepts of chemistry pertinent to the understanding and introduction of basic radiochemistry, including radionuclide production and generatory systems, and a toxicology introduction. Prerequisite: Admission to program

**291 Radiopharmacy II****Two credits**

Radiopharmacy II presents basic concepts of the tagging of compounds, tracer concepts, colloid chemistry, mechanisms of radiopharmaceutical localization, plus problem solving exercises dealing with radiation decay. Prerequisite: RXT 290

**292 Radiopharmacy III****Two credits**

This course presents basic concepts on radiochemical separation, radiopharmaceutical design, quality control procedures, and an introduction to competitive binding theory. Prerequisite: RXT 291

**293 Radiation Safety****Two credits**

Radiation Safety presents information concerning state and federal regulating agencies for radioactive substances, and concepts concerning the safe handling, storage, and disposal of radioactive materials.

**280 Clinical Experience I****Five credits****281 Clinical Experience II****Five credits****282 Clinical Experience III****Five credits****283 Clinical Experience IV****Five credits**

Prerequisite: Admission to program and grade point average of not less than 2.50 in major.

The four preceding courses consist of clinical application of clinical nuclear medicine theory in all phases. Formal and informal discussion groups are held weekly at each clinical facility. Each course is programmed with specific performance activities. A minimum of 1400 clock hours of laboratory and clinical practice is required prior to graduation. Credit is arranged for these courses according to the number of clock hours spent in the clinic per week for each individual term, with a ratio of approximately one credit-hour per six clock-hours.

**Associate Degree Program in Cytotechnology**

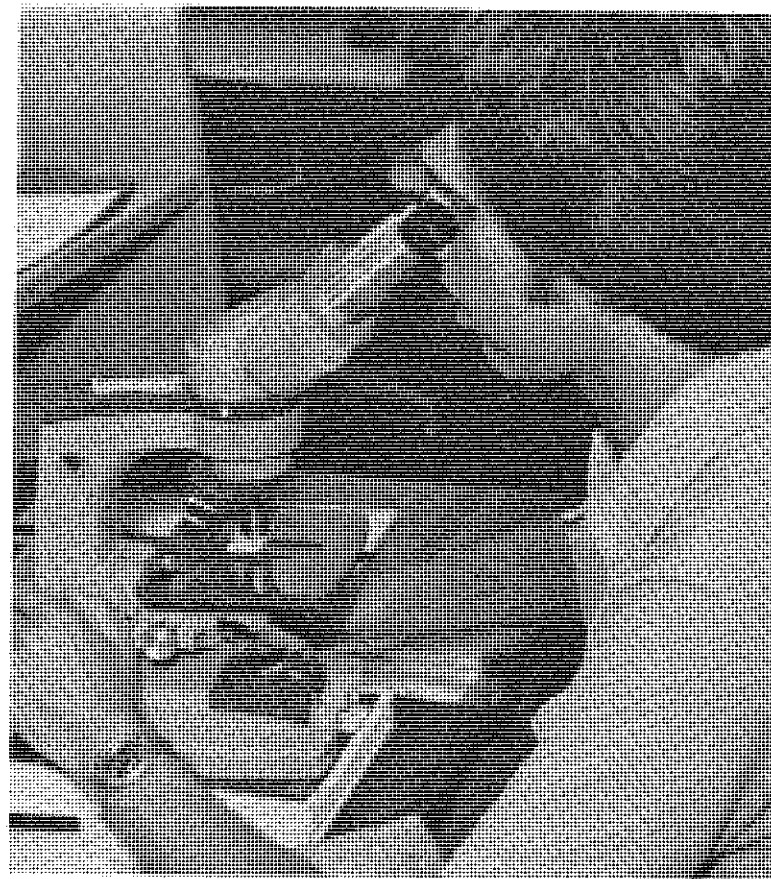
Program Director, Margaret Haynes, C.T. (A.S.C.P.), C.M.I.A.C.

A basic Associate Degree Program conducted during a three-year period. Curriculum requirements are based on accreditation criteria of the American Medical Association, Council on Medical Education and the American Society of Cytology. The first year is the preparation year during which the applicant must complete 48 of 90 credits in prescribed science and liberal arts courses.

Applicants are selected for the Cytotechnology major sequence on a competitive basis (A.C.T. scores, G.P.A., and personal interview).

In order to meet the minimum 1500 hour theory and clinical laboratory practice requirement, the second and third year will include six regular quarter terms, two eight-week summer terms and one special term (two weeks in length).

Graduates are eligible to apply for the certifying examination given by the A.S.C.P. Board of Registry upon successful completion of program requirements. Those completing the program will be expected to screen slides of various body fluids to identify abnormal cellular presentations for a pathologist.



The eyes of the cytotechnologist detect disease patterns in the cytoplasm and nucleus of cells that are stained with special dyes. This microscopic work requires patience, accuracy and the ability to work independently. Patient contact is minimal.

Laboratory experiences progress from simple to complex as the student is promoted from one term to the next. The major clinical courses in cytologic technique are conducted concurrently throughout the second and third year, utilizing various laboratories in the community and slide study sets in the on-campus laboratory.

All courses are conducted by personnel who meet the qualifications of Lansing Community College, the essentials for Schools of Cytotechnology of the American Medical Association Council on Medical Education and the American Society of Cytology.

Interested students are urged to contact the Admissions Counselor for Health Careers, Admissions Office to obtain specific requirements for program admission.

## COURSE DESCRIPTIONS

### Associate Degree Cytotechnology (CYT)

**101 Introduction to Cytotechnology** **Three credits**  
The first course in a progressive sequence of clinical laboratory courses. It includes an introductory survey of the field of cytotechnology as well as an in-depth study of benign cytology of the female genital tract. This will include all normal cell types encountered and microorganisms of the reproductive system. Prerequisite: Admission to program

**102 Clinical Cytotechnology I** **Four credits**  
A comprehensive study of the female genital tract. Specific concepts considered will include the normal cytology of the reproductive structures, the menstrual cycle, menopause, pregnancy and atrophy. Students will have the opportunity to learn and identify benign disease states of the female genital tract. Also included is a detailed study of dysplasias and carcinoma in-situ. Prerequisite: CYT 101

**103 Clinical Cytotechnology II** **Five credits**  
An in-depth study of cancer in the female genital tract. Emphasis is directed to cancer of the cervix. Laboratory sessions are designed to increase the students' diagnostic skills in identifying dysplasias, carcinoma in-situ, and invasive squamous cancer. Other malignancies of the female reproductive tract will be covered including adenocarcinoma and mixed tumors. Prerequisite: CYT 102

**104 Clinical Cytotechnology III** **Six credits**  
A course designed to provide opportunities for the student to refine the skills acquired in the previous three courses. The student will be screening unknown cell samples from the female genital tract. Prerequisite: CYT 103

**201 Clinical Cytotechnology IV** **Twelve credits**  
Deals with the cytology of the respiratory tract. The student will have opportunities to review benign as well as malignant changes in the lung. Lectures will include conditions and situations simulating malignancy. A portion of this course will also consider oral lesions and metastatic tumors. Prerequisite: CYT 104

**202 Cytology Screening Techniques** **One credit**  
This course will provide opportunities for the student to apply principles of non-gynecological cytology presented in CYT 201. Unknown cases will be utilized in this segment of the program. The practical screening of material will also be supplemented by a clinical rotation in cytopreparatory methods pertinent to body systems. Prerequisite: CYT 201

**203 Clinical Cytotechnology V** **Twelve credits**  
Covers the cytologic presentation of effusions and the urinary tract. The student will be exposed to evidences of benign as well as malignant changes found in body fluids and urine. Material will also cover conditions in which mesothelial cells simulate malignancies. Prerequisite: CYT 202

**204 Clinical Cytotechnology VI** **Thirteen credits**  
Comprehensive study will be made of gastrointestinal tract cytology in this course. Other areas of study to be covered include: breast cytology, aspiration cytology, buccal smears and skin scrapings. Prerequisite: CYT 203

**205 Advanced Clinical Cytotechnology** **Fourteen credits**  
Provides screening experience necessary to refine the skills learned throughout the program. The student will prepare and screen a normal workload of cases and participate in daily sign-out procedures with a pathologist.

Journal Club activity will be encouraged with special emphasis upon a research paper prepared on a specific area of interest in cytology. Prerequisite: CYT 204

### Associate Degree Program in Respiratory Therapy

Respiratory Therapy Technician

Program Director, Thomas Stout

The Lansing Community College Department of Health Careers offers a two-year Associate Degree program designed to prepare therapist level personnel, and a one-year Certificate of Achievement program designed to train technician level personnel. Both programs involve classes in the liberal arts and sciences, general health career courses, and specific courses in respiratory therapy.

Respiratory Therapy courses involve classroom lectures, campus laboratory practice and extensive scheduled hospital practice.

Upon successful completion of seven terms\* in the Associate Degree program, the student is awarded an Associate Degree in Applied Science, specializing in respiratory therapy. After completing required work experience in respiratory therapy, an Associate Degree graduate is eligible to take the written and clinical simulation National Registry Examination administered by the National Board for Respiratory Therapy.

Upon successful completion of four terms in the Certificate program, the student is awarded a Certificate of Achievement in respiratory therapy. After completion of an additional year of full-time work experience in respiratory therapy, a Certificate program graduate is eligible to take the National Certification Examination administered by the National Board for Respiratory Therapy.

Certificate program graduates are eligible to apply for re-admission to the second year of the Associate Degree program after completing at least nine months of post graduate work experience in respiratory therapy.

Respiratory Therapy admissions are limited due to the small number of students who can be effectively trained in equipment and procedures on campus and in supervised hospital clinical practice.

Prospective applicants should obtain detailed admissions information and requirements from the Admissions Counselor for Health Careers, Admissions Office.

\*Prerequisite courses generally require three additional terms prior to the seven-term clinical Respiratory Therapist sequence.

## COURSE DESCRIPTIONS

### Respiratory Therapy (IT and RIT)

#### 100 Orientation to Respiratory Therapy Science **Four credits**

The first theory course in the basic respiratory therapy sequence provides an introduction to roles of respiratory therapists and respiratory therapy technicians with the patient-care team. Aspects of chemistry, physics and anatomy of the respiratory and cardiovascular systems are developed as components of respiratory therapy science. Prerequisite: Admission to program

#### 105 Introduction to Clinical Respiratory Therapy **Three credits**

The first clinical course in the basic respiratory therapy sequence emphasizes hospital equipment and procedures involved in cleaning, disinfection and sterilization, electrocardiography, oxygen, humidity and aerosol therapy. Departmental and hospital policies and procedures are considered. Intensive supervision of the use of equipment and practice of procedures necessitates small numbers of students in this course. Prerequisite: Admission to program

#### 115 Respiratory Therapy Techniques I **Four credits**

The first techniques course in the basic respiratory therapy sequence emphasizes equipment and procedures pertinent to: cleaning, disinfection and sterilization of respiratory therapy equipment; electrocardiography, compressed gas storage and handling; oxygen administration, and humidity and aerosol administration. A weekly laboratory component involves practice with the variety of procedures and equipment discussed in lecture. Prerequisite: Admission to program

#### 101 Clinical Respiratory Therapy I **Five credits**

A study of clinical equipment for and practice of: intermittent aerosol therapy; IPPB therapy; postural drainage, percussion and vibration; airway suctioning, and basic respiratory physical assessment. Intensive supervision of the use of equipment and practice of procedures necessitates small numbers of students in this class. Prerequisite: IT 105

#### 102 Physiology for Respiratory Therapy **Four credits**

A survey of respiratory and cardiovascular physiology. Normal function of the lungs, heart and circulatory system is emphasized in relation to maintenance of homeostasis. Prerequisite: IT 100

#### 108 Respiratory Pharmacology **Three credits**

An introduction to general and critical care pharmacology with specific emphasis on medications administered by respiratory therapy procedures and medications which affect respiratory function. Prerequisite: IT 100

#### 111 Respiratory Therapy Techniques II **Four credits**

Covers equipment and procedures pertinent to: IPPB therapy, incentive spirometry; postural drainage, percussion and vibration, and respiratory assessment. A weekly laboratory component involves practices of the variety of procedures and equipment discussed in lecture. Prerequisite: IT 115

#### 103 Respiratory Pathology and Disease **Four credits**

A survey of common pathologic conditions which adversely affect respiratory and cardiovascular function, and an introduction to rationale for various modes of respiratory therapy. Prerequisite: IT 102

#### 104 Clinical Respiratory Therapy II **Five credits**

Clinical practice in general critical care, continuous ventilation, ventilator patient care, maintenance of natural and artificial airways and cardiopulmonary resuscitation. Intensive supervision of the use of equipment and practice of procedures necessitates small numbers of students in this course. Prerequisite: IT 101

#### 106 Clinical Practicum (Certificate) **Eleven credits**

Supervised clinical practice in: afternoon and midnight shifts, adult intensive care units, pulmonary function and blood gas laboratory, non-invasive cardiology laboratory, and neonatal intensive care unit. Due to supervision and practice requirements, small numbers of students can be accommodated in this course. Prerequisite: IT 104

#### 107 Clinical Practicum (Associate Degree) **Seven credits**

Supervised clinical practice in intensive care units, afternoon and midnight shifts, general respiratory care, specific specialty areas, and electronic maintenance laboratory. Due to supervision and practice requirements, small numbers of students can be accommodated in this course. Prerequisite: IT 104



**114 Respiratory Therapy Techniques III** **Four credits**  
A study of equipment and procedures pertinent to: cardiopulmonary resuscitation; continuous ventilation, airway management, and general critical care. A weekly laboratory component involves practice with the variety of procedures and equipment discussed in lecture. Prerequisite: IT 111

**116 Respiratory Therapy Techniques (Certificate)** **Three credits**  
The final techniques course for Certificate program students emphasizes equipment and procedures pertinent to: basic neonatal respiratory care; basic blood gas and pulmonary function laboratory procedures; respiratory and cardiovascular patient assessment and monitoring; and home respiratory care. Prerequisite: IT 114

**117 Respiratory Therapy Techniques (Associate Degree)** **Three credits**  
The summer term campus laboratory course for Associate Degree program students emphasizes equipment and procedures pertinent to: respiratory patient monitoring and physical assessment; chest radiographic interpretation; theory and practice of pulmonary function testing, and hemodynamic physiology and monitoring. Prerequisite: IT 114, Admission to Associate Degree program

### Course Descriptions (RIT)

**201 Advanced Respiratory Physiology and Testing** **Four credits**  
Continuation of the physiology portion of IT 102. Measurement of respiratory and cardiovascular physiologic parameters is integrated with related physiology. Prerequisite: IT 103, admission to second year

**202 Clinical Respiratory Therapy III** **Five credits**  
Supervised clinical practice in: advanced patient care including home care and pulmonary medicine specialties; blood gas and pulmonary function laboratory; cardiovascular (open-heart) patient care; adult critical care including neurologic, renal and burn specialties; neonatal critical care unit; and non-invasive cardiovascular laboratory. Supervision and practice requirements necessitate small numbers of students in this course. Prerequisite: IT 107

**212 Advanced Respiratory Therapy Techniques I** **Four credits**  
This first course in the advanced respiratory therapy techniques sequence emphasizes equipment and procedures pertinent to continuous ventilatory support and medical management of specialized patient situations. Prerequisite: IT 117

**203 Advanced Respiratory Pathology and Disease** **Four credits**  
Continuation of IT 103. Detailed aspects of pathologic conditions which affect respiratory and cardiovascular function and treatment. Prerequisite: RIT 201

**204 Clinical Respiratory Therapy IV** **Five credits**  
Continuation of RIT 202 with assignment to specialty areas. Supervision and practice requirements necessitate small numbers of students in this course. Prerequisite: RIT 202

**214 Advanced Respiratory Therapy Techniques II** **Four credits**  
Covers specific applications of respiratory care to patients with diagnoses representative of the variety of medical specialties. Medical presentations emphasize specialized patient management situations. Prerequisite: RIT 212

**205 Respiratory Therapy Management Skills** **Four credits**  
A study of the concepts, responsibilities and procedures of management as related to respiratory therapy. Emphasis is on development and implementation of appropriate objectives in preparation for potential jobs such as supervisors, department heads and educators. Prerequisite: RIT 203

**206 Clinical Respiratory Therapy V** **Five credits**  
A continuation of RIT 204 with assignment to specialty areas. Supervision and practice requirements necessitate small numbers of students in this course. Prerequisite: RIT 204

**216 Advanced Respiratory Therapy Techniques III** **Four credits**  
Individual preparation for credentialing; specialized medical management situations and comprehensive respiratory and cardiovascular patient support. Prerequisite: RIT 214

### Operating Room Technology

Program Director: Barbara I. Bishop

Lansing Community College offers a one-year (3 terms and 2 special terms) program in Operating Room Technology. Upon completion of the program, the student will have earned a Certificate of Achievement and will then be eligible for certification by the American Association of Operating Room Technicians.

The Operating Room Technician is employed in the hospital as part of the surgical team which includes the surgeon, anesthesiologist and nurse. The duties of the Operating Room Technician include preparing and positioning patients for specific surgical procedures, operating surgical equipment, and directly assisting the surgeon by providing instruments. The O.R. Technician must be able to work well under stress and be able to communicate effectively with the other members of the surgical team.

Applicants to the program are required to meet admissions requirements of the College and of those specifically established for the Operating Room Technology Program. Information regarding specific requirements for program admission may be obtained from the Admissions Counselor for Health Careers, Admissions Office.

**COURSE DESCRIPTIONS****Operating Room Technician (ORT)****100 Clinical Practice****Two credits**

A two-week hospital clinical session during the December special term. Classes are held five times each week during the morning and/or afternoon for four hours at an area hospital. Students will spend one week in the Central Supply area where emphasis will be placed on demonstrating proper methods of handling equipment and supplies related to the operating room. The second week will be spent in the operating room suite where emphasis will be placed on successfully carrying out all procedures learned in ORT 101 within the atmosphere of the operating room when surgery is in progress. Prerequisite: ORT 101

**101 Introduction to Operating Room Technology****Six credits**

An introduction to the role and function of the Operating Room Technician as a member of the surgical team and the operating room staff. Historical aspects of surgery, asepsis and anesthesia are considered along with care and safety of the patient, medical terminology, weights and measures, and ethical-moral-legal responsibilities. The student will participate in hospital laboratory sessions where emphasis will be placed on physical organization of the operating room and the basic skills necessary to function in the operating room. Prerequisite: Admission to program

**102 General Surgical Procedures****Six credits**

The first course in a two-term sequence will introduce the O.R. Technician student to the most common general surgical procedures. In addition to instructor lecture, the course will utilize lecture and discussion by visiting surgeons. The student will learn the consideration necessary for bringing the patient to surgery, types and methods of anesthesia, routine positioning for procedures discussed, routine surgical incisions and tissue closures.

The student will gain a basic understanding of disease related symptoms, primary diagnostic procedures, preoperative preparations, and postoperative results and complications. Taken concurrently with ORT 103. Prerequisite: ORT 101

**103 Applied Operating Room Techniques I****Seven credits**

Clinical session at an assigned area hospital meeting for a full day twice each week. Includes participation in and assisting with selected surgical procedures. Taken concurrently with ORT 102. Prerequisite: ORT 101

**104 Surgical Specialty Procedures****Six credits**

The second course in the two-term sequence to introduce the O.R. Technician student to more advanced and special areas of surgery: obstetrics and gynecology thoracic, genito-urinary, ear, nose and throat surgery, plastic surgery, eye surgery, orthopedic surgery, neurosurgery and traumatic injury surgery. Taken concurrently with ORT 105. Prerequisite: 102, 103

**105 Applied Operating Room Techniques II****Seven credits**

Clinical session at an assigned hospital meeting a full day twice each week. The students will participate and assist in selected surgical procedures as determined by the faculty. Taken concurrently with ORT 104. Prerequisite: ORT 102, 103

**106 Clinical Practicum****Three credits**

A June mini-term practicum will be arranged with cooperating hospitals to assure that minimum practice requirements are met. The course consists entirely of clinical practice and will meet eight hours each day, five days a week, for a two-week period. Prerequisite: ORT 104, 105

**Emergency Medical Technology Programs**

Program Director, Rexine A. Finn

The Department of Health Careers offers a three-term Certificate program of classroom and clinical instruction in Emergency Medical Technology. The three-term series of courses are designed for students who do not have EMT experience and for students preparing for the Advanced EMT Program. Classes and clinical experiences are conducted by registered nurses, paramedics (advanced EMT's), and community physicians in cooperation with local emergency rooms, the Lansing Fire Department, Ingham County Sheriff Department, and the Grand Ledge and Mercy Ambulance Services. Students are required to attend full time to complete all requirements for graduation. Classes and clinical laboratories are held throughout the day and evening, five days a week during the regular College calendar.

Upon successful completion of the program, the student is eligible to take the National Registry Examination offered by the National Registry of Emergency Medical Technicians and the State of Michigan Examination for Basic EMT's (in preparation).

The Emergency Medical Technician Program meets the requirements of the U.S. Department of Transportation, National Highway Safety Bureau, and the Tri-County Emergency Medical Services Council.

The Advanced EMT (Paramedic) Program is also offered through the Department of Health Careers, consisting of both classroom and hospital clinical experiences. This course is designed to prepare a basic Emergency Medical Technician to function at the level of Advanced Emergency Medical Technician (Paramedic) as defined by Public Law 275. The program is approved by the Michigan Department of Public Health, Division of E.M.S.

Upon successful completion of the two-term Advanced EMT Program the student is eligible to take the State of Michigan Written and Practical Examination for Paramedics.

## COURSE DESCRIPTIONS

### Emergency Medical Technician (EMT)

*Any course listed with an EMT Course Code can be taken by a practicing EMT.*

**110 Introduction to Emergency Services** **Three credits**  
An introduction and overview of existing medical emergency services and supporting agencies. The role of Emergency Medical Technicians is reviewed in relation to the physician, emergency room personnel, law enforcement agencies and the community. Lectures and discussion are illustrated during scheduled field observations in emergency rooms, intensive and coronary care units, and ambulance services. Prerequisites: Admission to program or current employment in emergency services as an EMT

**112 Basic EMT I** **Five credits**  
**113 Basic EMT II** **Five credits**

Two-sequence courses to prepare the student in basic EMT skills necessary to provide on-the-spot emergency care to accident victims and to victims of medical and psychiatric emergencies. Focuses on the skills and knowledge necessary to provide efficient and safe care.

This sequence may also be taken as a two-term basic EMT class separate from the three-term Certificate Program, for those unfamiliar with emergency medical techniques.

**102 Practicum** **Three credits**  
A practicum course which offers the EMT an opportunity to reinforce and refine skills presented in the basic EMT training. Lecture content gives minimal reinforcement of material with the majority of class time spent in practicing skills under the supervision of an instructor.

This course may also be taken by active EMT's as a refresher course.

**103 Extrication** **Two credits**  
Designed to provide the student with skills in light and heavy extrication. Includes the use of backboards, power tools and extrication from various emergency situations.

**104 Emergency Communications and Telemetry** **Two credits**  
An introductory course designed to orient the student to the types, methods, and use of emergency communication. Telemetry systems are defined, and their use is discussed.

**105 Traige and Defensive Driving** **Three credits**  
Designed to provide the student with skills and knowledge to adequately triage at the scene and assure optimum patient care to all victims. It also provides knowledge necessary to safely manipulate an emergency vehicle and avoid hazardous situations. Campus labs in driving an emergency vehicle are conducted.

**106 Terminology and Report Writing** **Two credits**  
Designed to provide the student with basic medical terminology and proper methods of filling ambulance report forms.

**108 Emergency Pharmacology** **Three credits**  
Focuses on medications frequently encountered in emergency situations: street drugs; medications used in emergency situations, and sterile technique essential to assisting a paramedic, nurse or physician in administering emergency medications.

**ESA 201 Advanced EMT (Paramedic) I** **Nineteen credits**  
**ESA 202 Advanced EMT (Paramedic) II** **Nineteen credits**

Prepares a basic Emergency Medical Technician to function at the level of Advanced EMT (Paramedic). Consists of both classroom and hospital clinical experiences. Lecture, audio-visual labs and skill labs are utilized as well as observation and/or practice in assessing and caring for patients with various conditions. Includes time in the emergency room, intensive care unit, coronary care unit, surgery, recovery room, burn unit and the stroke unit. Prerequisite: Admission to program

The following courses are general Emergency Care courses offered through the Health Careers Department. These courses may be offered on a demand basis.

**111 CPR Seminar** **One credit**  
This seminar will provide instruction in the basic life-saving technique of cardio-pulmonary resuscitation (CPR). There will be practice labs under supervision, using both infant and adult manikins.

Participant evaluation will be done by practical evaluation and a written examination. An American Heart Association Certificate will be issued to those who successfully complete the eight-hour course.

**114 EMT Concepts** **Four credits**  
This course is designed to provide the EMT with current concepts in care of: medical emergencies, environmental emergencies, childbirth and obstetrical emergencies, legal aspects of emergency care, shock, hemorrhage, trauma, evaluation of vital signs, psychological emergencies, and HEAR radio format. The course will prepare the student for the written portion of the State of Michigan EMT exam and the National Registry Examination. This course is for active EMT's only.

**115 Independent Clinical Practice** **One credit**  
A course available to provide the active EMT (Basic or Advanced) with specific clinical laboratory time to meet individual needs.

**COURSE DESCRIPTIONS (ER)****100 Community Emergency Care** **Three credits**

This course is designed to provide individuals in the community with skills to treat emergency situations until professional help arrives. The course will include assessment, respiratory arrest, medical emergencies, cardiac arrest, bleeding and shock, fractures, poisons and drug overdose, burns and moving the injured safely.

**107 Sports First Aid** **Three credits**

Provides the students with skills and knowledge to provide emergency care until professional help arrives. Emphasis is placed on the types of injuries incurred while participating in athletic functions, although emergency care will be covered.

**200 Emergency Crash Care** **Three credits**

Prepares students to respond first at the scene of an accident. Designed for law enforcement officers, the course also provides a refresher for the basic EMT.

**203 First Aid/Instructor Training** **Four credits**

This course is designed to provide key personnel (supervisors, foremen, etc.) with the skills to administer emergency assistance to the injured prior to the arrival of professional assistance.

**Continuing Health Education**

Program Director, Carol Phelan

The Health Careers Department offers courses and seminars in all health disciplines to update skills and knowledge obtained in basic programs, and to enable graduates from basic programs to acquire new skills and knowledge in order to expand their roles, or to assume new roles.

Because new programs are being developed continuously, please contact the Continuing Health Education Office for periodic updates.

**Community Services**

Courses which meet a need for the community for beginning vocational skills, but are not complete programs, are also offered. Current offerings include Ward Secretary, Nurse Aide, Central Supply Technician, Exceptional Family Aide, Home Health Aide, Nurse Assistant Seminar I, Nurse Assistant Seminar II, and Medical Insurance Billing.

**COURSE DESCRIPTIONS****Continuing Health Education (CHC)****100 R.N. Refresher** **Ten credits**

For the inactive R.N. who would like to reenter active practice. Includes theory and practice in nursing care, pharmacology, professional practices and new concepts of delivering health care. This course offers a clinical component and is limited to 10 students.

**101 Coronary Care** **Seven credits**

For the active R.N. practitioner who is employed in the Coronary Care Unit, or who is contemplating such employment. Builds on basic knowledge and includes special procedures, special equipment, theoretical understandings, cardiogenic drugs and a defibrillation practice lab session. This course has a clinical component.

**102 Pharmacology** **Six credits**

Designed primarily for the Licensed Practical Nurse, but useful as a review for the inactive Registered Nurse. Covers the areas of dosage, administration of medications, equivalencies, pharmacological action, untoward effects and legal aspects. This course does not have a clinical component.

**103 Dental Hygiene Seminar** **Two credits**

This course is designed to familiarize the hygienist with periodontal disease states and to review the rationale for various forms of therapy. Much of the material will be presented by lecture with extensive use of projected slides. Laboratory demonstrations will also be used to review certain aspects of dental anatomy and the recognition of various types of root deposits and varying degrees of root smoothness by probing. The use of the Eva Reduction System will also be demonstrated along with ways to evaluate instruments for sharpness and proper shape.

**104 R.N. Basic Arrhythmia Interpretation** **Three credits**

A thirty-hour course which combines lecture and supervised practice sessions to introduce the R.N. and other Allied Health Professionals to the basics of arrhythmia interpretation. The course will include, electrophysiology, five arrhythmias, clinical pharmacology, pacemakers, and general EKG. The student will be able to recognize life threatening arrhythmias and institute chemical and/or electrical intervention.

**105C Respiratory Therapy Registry Update** **Three credits**

Designed to serve as a review for the challenging written registry exam scheduled periodically. The format will be lecture and discussion with extensive examination practice over weekly topics, reading assignments will be drawn from textbooks and other sources as specified. May also be useful as a review of current standards and procedures.

**105F Health Seminar Pharm Math** **One credit**

A five-week seminar designed for the R.N., L.P.N. or student in a nursing curriculum. The course will include a basic math review and will familiarize the student in working with drug dosages, I.V. calculations and pediatric dosages.

**106 Cardiac Nursing** **Three credits**

For Licensed Practical Nurses and Registered Nurses. Covers all aspects of cardiac pathology, special equipment and procedures, special nursing approaches and significance of laboratory tests. This course does not have a clinical component.

**107 X-Ray Positioning** **Three credits**

Designed to provide instructions in the roentgenographic positioning of the structures and organs of the body. This course will provide precise and detailed information on the various positions and should be supplemented with practical instruction and applications in the radiographic room. Open to practicing Radiologic Technologists.

**110 X-Ray Quality** **Three credits**

This course is designed specifically for the practicing X-Ray Technologist who has been out of school for several years. It includes material designed to acquaint the practitioner with the latest developments in the field. There will be a hands-on laboratory experience. Due to the limitation of laboratory space and equipment, the enrollment will be limited to 12 students.

**111 Dental Plaque Seminar** **One credit**

This seminar is designed for the practicing Dental Hygienist to update and advance existing skills and knowledge in plaque formation, control and removal. The seminar will include a practice laboratory session and evaluation of instruments as needed for individual patient procedure.

**112 Dental Auxiliary X-Ray** **Two credits**

Geared to the practicing dental auxiliary who desires to acquire the skills and knowledge for taking oral X-rays, or to improve these skills. Both theory and laboratory practice are involved.

**113 L.P.N. Physical Assessment** **Three credits**

This course is designed to expand the skills of the active Licensed Practical Nurse in gathering and evaluating information about the physical status of the patient. The course will be valuable for nurses when the physician is not immediately present and when they must make the primary assessment of patient's needs for intervention by the physician. The four major areas of focus include: cardiovascular, respiratory, gastrointestinal and neurological. This is not designed to teach complete physical examination.

**114 Physical Assessment** **Three credits**

Designed to expand the skills of the active Registered Nurse in gathering information about the physical status of the patient and in evaluating that information and making nursing judgments. Useful when the physician is not immediately present, and a primary assessment of the patient's need for intervention by the physician is needed. This course uses live models.

**115 R.N. Ostomy Care** **One credit**

A course designed to guide nurses and allied health professionals in caring for patients who have an ostomy, or abdominal stoma. An attempt will be made to clarify some misconceptions that have built up around the care of ostomies and reduce the apprehensions many health professionals feel when confronted with a wide variety of equipment and practical suggestions for care to offer the patient. The methods of presentation will be lecture, discussion, and laboratory practice demonstration.

**117 Respiratory Therapy Update** **Three credits**

A course designed to update the practicing Respiratory Therapy Technician or Therapist in basic science and therapy principles. This course will be beneficial for those preparing for National Certification or Registry Examinations. The course content will stress fundamental aspects of theory and clinical applications of Respiratory Therapy. Examination questions similar to Certification and Registry Examination questions will be extensively used.

**118 L.P.N. Refresher** **Ten credits**

Combines theory with clinical practice for the Licensed Practical Nurse who has been inactive for five or more years. Focuses primarily on nursing care assessment and planning, and new concepts and practices. Limited to ten students.

**119 Document Patient Care** **Three credits**

A course designed specifically for nursing personnel in extended care facilities to improve their skills and knowledge in devising and keeping a system of nursing notes and charts which will document both the quantity and quality of nursing care. Will include authenticating nursing care, insuring continuity of nursing care, providing a basis for revising treatment and nursing care, and methods for establishing means for third party evaluation.

**120 EMT Seminar** **Two credits**

A seminar which provides the practicing EMT with a survey of a variety of subjects including assessing and dealing with pain in the emergency situation, legal aspects of the EMT, coping with sudden unexpected death, step-by-step in airway obstruction, review and practice CPR, and "how much oxygen and when." Total of twenty hours.

**121 Continuing Radiological Principles** **Two credits**

A continuing education course for active radiologic technicians. The emphasis will be on knowledge and skills which will refresh and update the practitioner in the principles of radiology. The course will cover all elements of practice. There will be small group laboratory practice sessions. Class enrollment is limited to twelve students.

**122 Respiratory Nursing Seminar****Three credits**

Students will be presented a model for defining the functions, structures, and properties of the cardio-pulmonary system. Given this model as a frame of reference, the student will determine the source of breakdown in the respiratory and cardiovascular systems in selected case studies. The case method will also illustrate subjective and objective findings indicative of alterations in respiratory and cardiovascular function. Based upon the above, the student will develop plans of action to prevent further breakdown and/or resolve the existing problems. This plan will include independent nursing actions as well as those carried out under the direction of other health team members.

**124 Emergency Care Seminar****Two credits**

This seminar is designed to provide an opportunity for a basic review and more in-depth study of nursing problems common to specific injuries of the musculo-skeletal system as seen in various aspects of occupational health. Criteria will be established for early recognition and initial management of musculoskeletal injuries. Students will acquire a working definition of the interrelationships of the skeleton and soft tissues in specific regions that might be injuries.

**125 Medical/Legal Aspects Allied Health****Three credits**

A survey of the health laws relating to medical care delivery in Michigan. All aspects of emergency care will be covered. The course is designed to acquaint the health professional with the law as it relates to the delivery of health care. The course will include lecture, small group work sessions on selected topics and a field trip to court. The course will be taught by an attorney-at-law.

**126 Advanced Cardiac Nursing Seminar****Three credits**

A course designed for the R.N. who has had a basic C.C.U. course and who has had at least six months work experience in a Coronary Care Unit. The seminar topics will be presented by physicians, nurses, nutritionists, and other health specialists.

**127 Community Health Nursing****Three credits**

A didactic course for R.N.'s and L.P.N.'s which serves as an introduction to the unique concepts and characteristics of community nursing. The course will focus on the resources of the community for continuing care after hospitalization, the special needs and characteristics of the homebound patient and discharge planning and referrals.

Helpful to nurses in all work settings to increase the understanding of patient and family needs in order to be better able to anticipate home problems and make appropriate referrals.

**130 Pharmacology for Pharmacy Technicians****Four credits**

This course is intended for pharmacy technicians and will provide the basic considerations of drug therapy, and the mechanisms of drug actions, utilizing basic anatomy and physiology. It is designed to acquaint the technician with the complexity of clinical drug therapy and increased risk of error by emphasizing accuracy in dealing with drugs including simple calculations that are encountered daily. Emphasizes the technician's ever expanding role in the health care team, and provides some tools to cope with the profession's new demands.

**COURSE DESCRIPTIONS****Community Services (HC)****101 Nurse Aide****Nine credits**

This course is designed to prepare men and women for beginning positions as nurse aides. It includes the concepts and skills found to be common elements in the job expectations of nurse aides in all health agencies. Special skills and knowledge peculiar to individual agencies are not included in the anticipation that these will be included in orientation and in-service.

Method of instruction includes theory, related audio-visual units for skills, practice laboratory sessions, evaluation sessions and clinical practice. Final evaluation will include ability to perform skills, to apply theory to practice, and the personal characteristics of the student.

**107 Nurse Assistant Seminar I****Two credits**

A lecture course designed for men and women who have previous experience as nursing assistants. The topics will include anatomy and physiology of all body systems, concepts of basic and advanced nursing care skills, communication, and clinical observation skills. The course will be limited to sixteen students. The successful completion of HC 107 and HC 108 will lead to a Certificate.

**108 Nurse Assistant Seminar II****Two credits**

A lecture course designed to build on the information and practice sessions covered in HC 107. The emphasis will be on relating the normal anatomy and physiology to the pathophysiology of certain disease conditions physiologically. The course content will deal with recognition of clinical signs and symptoms and the application of specific nursing care measures. The completion of both HC 107 and HC 108 will lead to a Certificate.

**110 Home Health Aide****Six credits**

A course offered concurrently with SW 295 to prepare men and women for entry level positions as home health aides with regard to community needs. Methods of instruction include lecture, audio-visual tutorial, laboratory practice and evaluation, and community agency observation. Emphasis is placed on the role of the health aide in relationship to basic patient care needs as they may be continued in the home environment. There is a clinical experience in area nursing homes.

**111 Medical Insurance Billing****Three credits**

A course designed to teach the student every phase of medical insurance billing, from receiving the patient information until the payment is received. The methods of instruction will be lecture, discussion, group work sessions and a field trip. The topics will include how to obtain the patient information, procedure coding, H-ICDA coding, plus federal, commercial and independent insurance billing forms and procedures.

**112 Living with Cancer Education I****One credit**

A 5-week seminar designed for the adult person who has, or who has had a cancer experience, their families, and/or friends. The overall purpose is to assist the participants in processing the information from the program, and utilizing it in their individual lifestyles. The focus will be to familiarize the students with the disease process and treatment patterns, provide information regarding community resources and to provide information regarding planning for the future. Content will be provided by physicians, nurses, and other health professionals.

**114 Parent Health Education I****One credit**

The course will cover the infant from birth to 18 months of age. The content is designed for students who are parents and/or care-givers of these children. The methods will include lecture, audio-visuals and group discussion. A topical outline includes basic body structure and function, growth and development from birth to 18 months, identification of health problems, first-aid, resuscitation, and identification of community resources.

**116 Parent Health Education II****One credit**

The course will cover the infant from 18 months to 5 years of age. The content is designed for students who are parents and/or care-givers to these children. The method of instruction will include lecture, audio-visuals, and group discussion. A topical outline includes: basic body structure and function; growth and development of ages 18 months to 5 years; identification of health problems; first aid and CPR, and identification of community resources.

**115 Ward Secretary****Six credits**

The Ward Secretary course is designed to prepare the student in the general skills necessary in keeping a nursing unit running smoothly. Ward secretaries work closely with the nursing team and are responsible for many and varied functions. The course will deal with such topics as communication skills, clerical and receptionist duties, vocabulary of the medical profession, the hospital environment, setting priorities, organizing the nursing unit, noting physicians' orders, cardio-pulmonary resuscitation and many others. Specialized skills and specific procedures of various institutions and agencies are not included in this course. Upon completion of the Ward Secretary course, the student should have the knowledge and skills necessary for a beginning level position as Ward Secretary in the community.

**201-202-203 Dietary Supervisor I, II and III****Six credits each**

A series of courses to prepare men and women to function primarily in a nursing home situation as Dietary Supervisors. Covers all aspects of the position: nutrition; food hygiene, storage and purchase; food preparation and management principles; therapy and practice. A Certificate is given to students on successful completion of all three terms.

**204 Exceptional Family Aid****Five credits**

This course is designed to prepare the student for a career as a para-professional aide. Exceptional families include those with at least one member who requires care, assistance and companionship because of conditions such as mental retardation, loss of vision, physical handicaps, old age, or multi-handicaps.

Upon completion of the course, the student will be able to provide basic emergency care in the home (comparable to the nurse aide working in a health care institution), provide assistance for basic or personal hygiene, assure adequate nutrition, and be able to recognize special problems that may arise as a consequence of the individual's handicap.

**205 Central Supply Technician****Five credits**

This course is aimed to prepare personnel to perform effectively in a central supply department of a hospital, and under direct and/or indirect supervision, execute a wide variety of duties related to the service conducted by the CSR department for all using areas of the hospital.

The course could lay the ground work for a possible eventual assistant supervisor or supervisor of a CSR department, depending on the individual requirements of a hospital.

**210 Analyze Health Style****Three credits**

A course designed to stimulate lay persons to focus on their individual life styles and the relationship to wellness and illness. The method of instruction will be lecture and group discussion. Various presentations will be made by health professionals.

**231 Pharmacology of Substance Abuse****Three credits**

Deals with the chemical and physiological nature of the substances (alcohol, hard drugs, amphetamines) which have addictive possibilities. In one course is a 20-credit Certificate program on Substance Abuse. The emphasis is on pharmacology of substance abuse, detection, identification of physiological responses specific to various substances. The course is designed for the Allied Health Professional.

**232 Overdose Crisis Intervention****Two credits**

This course is designed for the health worker, with focus on the psychological and physiological aspects of overdose, assessment of the problem, and ways of dealing on the spot with the problem. Emergency intervention will be included.

**233 Substance Abuse as it Relates to Medical Treatment****Three credits**

The medical treatment of substance abuse details the kinds of medically acceptable treatment of addiction which augments social and emotional treatment. Deals also with some of the health problems relating to drug action and to other health problems relating to addiction. Course is designed for the para-professional in substance abuse and for the professional who is interested in increasing skills and knowledge in this field.

The preceding HC 231-232-233 series of courses is offered as part of a Certificate in Substance Abuse through the Social Science Department. These courses may also be taken separately and without intent of a Certificate.

## COURSE DESCRIPTIONS

### Health Careers Core Courses (HC)

#### 102 Nutrition Two credits

For students in basic Allied Health curriculums. Covers normal nutritional needs of varying age groups, foods, their composition, and their function in the body.

#### 104 Patient Care Principles Six credits

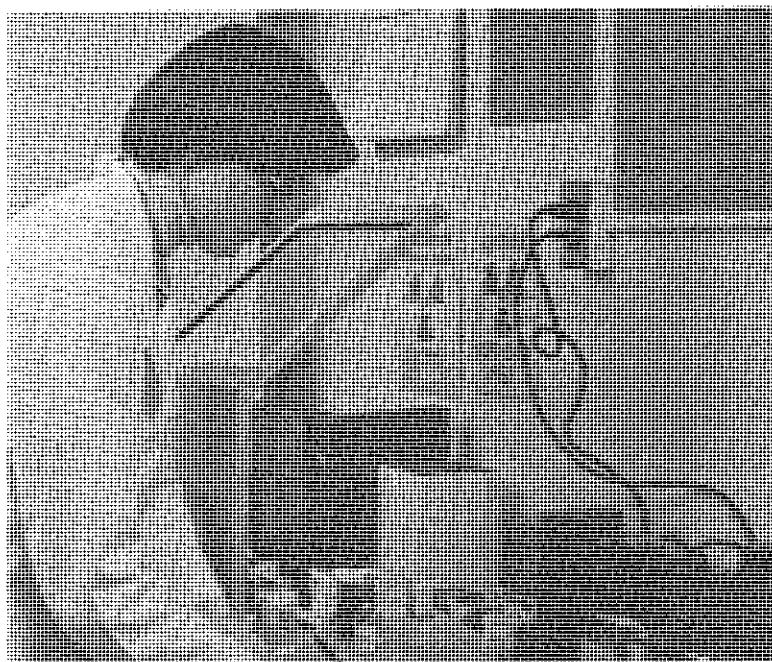
Basic principles of patient care are given with the emphasis placed on the Allied Health Personnel role in the health team. Areas of interest include basic patient practices with aid to emotional support. An audio-visual study unit series is adapted to demonstrate concepts of basic patient care principles.

#### 106 Introduction to Pathology Three credits

A course primarily for students in basic Allied Health curriculums. Focus is on the basic processes which give rise to specific disease entities. Includes etiology, the process itself, possible resolution of the process and how the process affects body physiology.

#### 212 Emergency Care Two credits

For students in basic Allied Health curriculums. Focus is on the sudden alteration of body processes due to trauma, unusual reactions to drugs or to medical procedures, and the possibility of psychiatric or medical emergencies. Includes pathophysiology of emergencies, initial responses and necessary follow-through.



## Adaptive Rehabilitation Program

Program Director, John McPhail

The Department of Health Careers, through Continuing Health Education, offers an Adaptive Rehabilitation Program. Courses are offered to aid the person who is recovering from heart disease, heart surgery, and stroke or lung problems, as well as the families of those persons. In addition, current medical information and advice is given for persons who wish to maintain their health through aerobic exercise and the reduction of stress and other risk factors.

## COURSE DESCRIPTIONS

### Adaptive Rehabilitation (CHC)

#### 140 Adaptive Cardiac Rehabilitation Three credits

This lecture/discussion course is designed for persons who have had cardiovascular problems requiring rehabilitation following discharge from an acute care hospital facility. A close family member is encouraged to attend each session as a student. The focus of this course is education and discussion.

#### 150 Adaptive Physical Rehabilitation Cardiac Exercise I Three credits

#### 151 Adaptive Physical Rehabilitation Cardiac Exercise II Three credits

#### 152 Adaptive Physical Rehabilitation Cardiac Exercise III Three credits

#### 153 Adaptive Physical Rehabilitation Cardiac Exercise IV Three credits

These course series are medically (physician) supervised exercise sessions which meet three days a week for one hour. They also include sessions regarding health maintenance, as well as an evening session once a term for spouses. (Physician referral *and* stress test are required to take these courses.)

#### 160 Adaptive Physical Rehabilitation Health Education I Two credits

#### 161 Adaptive Physical Rehabilitation Health Education II One credit

#### 162 Adaptive Physical Rehabilitation Health Education III One credit

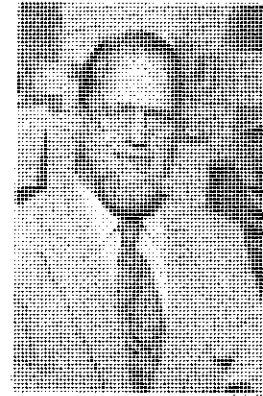
#### 163 Adaptive Physical Rehabilitation Health Education IV One credit

This lecture/discussion series is for the person interested in upgrading health through aerobic exercise, proper health habits, heart disease risk factor reduction, and current health information. Students are expected to begin a personal fitness program involving exercise at least three times a week.



*Department of Performing and Creative Arts*

*Chairperson: Dr. David F. Machtel*



The Department offers courses leading to Certificates of Achievement and two-year Associate Degrees. Most course work may be applied toward degrees offered by four-year colleges and universities. Students wishing to transfer to a specific institution should check with the counselor of transfer programs to verify the transferability of courses to that particular university.

Emphasis is placed upon career training. Referred to as Performing Arts Career Courses, the Department offers a unique opportunity for extensive training in the arts, allowing the student to be involved in a chosen artistic discipline.

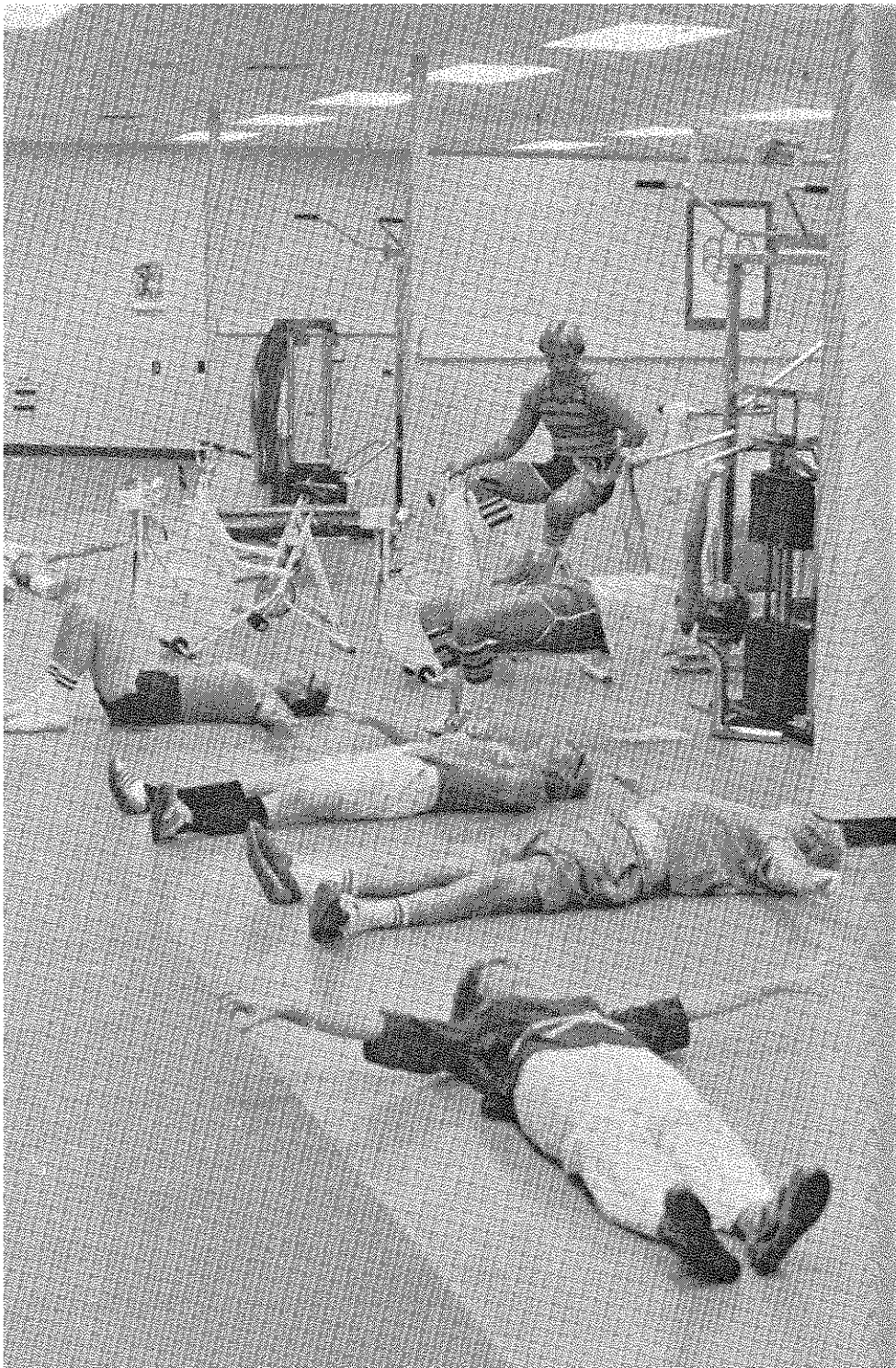
The main objective is to allow students to train for professional careers by concentrating on the skills and attitudes appropriate for their chosen fields. As a result of this concentration the student can gain practical and theoretical knowledge through a systematic approach to teaching with the emphasis on performance skills.

Offerings are designed to meet the needs of students with varying talents and goals, and to help each student realize his/her potential for artistic development as a performer, teacher or critic. The curriculum provides the student with an opportunity to learn technical skills and gain an awareness of the fine arts world and its role in contemporary society.

**Group Activities**

Membership in a variety of groups and organizations is available to students who qualify by audition. This provides an opportunity for growth beyond the requirements of a basic curriculum.

Group course activities in which students currently participate include: art exhibits, dramatic productions, choreography for musicals and operas, student recitals, ensembles in music, including the Community Concert Band, Jazz Ensemble, Writers' Band, LanSymphonic Choral Society, Opera Workshop, Concert Choir, Tudors, LanSwingers, LCC Community Orchestra, and Pop-Rock Group; and dance companies such as Lansing Ballet Company, Ballet Folklorico Latino, LCC Dancettes, Near Eastern Performing Company, and the LCC Disco Express. More information concerning each group is contained in the course descriptions under the Music and Dance programs.



**Art Programs**

The four Art disciplines: Fine Art, Commercial Art, Interior Design, and Crafts are designed to guide artists through the techniques and skills necessary to develop and express their creative talents.

The Fine Arts curricula are divided into separate areas. Students may choose a curriculum leading to a transfer degree or may pursue a program of concentrated fine art training.

Since there are many directions open to the commercial artist, the programs in Commercial Art are geared to develop skills in diverse areas. Students enter commercial art training via the Foundation Program which emphasizes keyline and paste-up skills. Upon completion of the Foundation Program or by approval, students may elect specialization in either Advertising Layout or Design of Illustration. The structure of courses allows students to major in both areas simultaneously.

The Interior Design discipline is a two year Associate Degree—Applied Arts Program. Program objectives include:

1. Providing a sound background in the fundamentals of interior design.
2. Affording the student the opportunity to prepare to enter the market place in Interior Design and related fields.
3. Affording the student the opportunity to learn the skills necessary to begin development of a self-employed free lance business.

Crafts programs include Associate in Applied Arts Degrees in Crafts Career, Ceramics and Ceramics Craftsperson. The student utilizes the principles and techniques developed in the widest variety of media possible. These may include clay, fiber, rope, metal, glass, wood and/or fiber. The student may then have a broad base upon which to build.

Art students are advised to discuss programs with Art program advisors and to secure copies of curriculum guides for specific courses.

**COURSE DESCRIPTIONS****Art (ART)****100 Options in Art** **Four credits**

The student will explore various disciplines in art as a framework from which the beginning artist may select a medium most suitable to individual expression. The course will present the commercial arts, fine arts and crafts, and discuss the career possibilities in each field. Material will be presented through lecture, field trip and student projects. Recommended for students with little or no art background. 4 (2-4)

**101 Design I** **Four credits**

An introduction to the visual arts with emphasis on composition and its application to media. Dealing in a black and white medium, the universal principles of design will be presented. Through assigned projects students will apply design principles and discuss design vocabulary. Students should consult the curricular guide to determine course requirements in the various art curricula. 4 (2-4)

**102 Design II** **Four credits**

A continuation of design projects with emphasis on color medium. Through assigned projects, students will arrange two-dimensional surfaces in accordance with established design and color principles; examine color interaction; and manipulate the properties, principles, and qualities of color. Prerequisite: ART 101. 4 (2-4)

**103 Design III** **Four credits**

Through assigned projects students will examine line, shape, form, value, texture, in a variety of materials. The principles and elements of design will be examined as they relate to the construction of three-dimensional projects using various media. Prerequisite: ART 101. 4 (2-4)

**104 Ceramics I** **Four credits**

An introduction to ceramics, also known as pottery. The course will focus on construction methods such as slab, coil, and pinch forms. Basic decoration, glazing, and firing techniques are introduced. Emphasis is placed on development of a philosophy of aesthetics toward ceramics as well as the practical understanding of problems in construction and the application of various techniques toward problem-solving. 4 (2-4)

**105 Ceramics II** **Four credits**

The student is introduced to wheel throwing techniques using the potter's wheel, and will continue examination of hand construction, decoration, and glazing techniques. Prerequisite: ART 104. 4 (2-4)

**106 Ceramics III** **Four credits**

A continuation of the development of ceramic skills. Emphasis is placed on practice of techniques in wheel throwing and hand construction. Glaze formulation, glazing, and decorative techniques are also practiced. Problems in the forming and shaping of pieces are introduced in preparation for more advanced work. Prerequisite: ART 105. 4 (2-4)

**107 Advanced Ceramics** **Four credits**

Skills developed in the first three terms of ceramics are reviewed and practiced. The course will focus on development of the student's own area of interest in forming and decorating techniques. More complex problems will be explored. Successful students will select one or two methods of working with clay, researching materials, and taking responsibility for individual work assignments. Glaze formulation, glazing, and decorating will be practiced with increasing emphasis on experimentation and independent study. The course may be repeated three terms for credit. Prerequisite: ART 106. 4 (2-4)

**108 Ceramic History Seminar** **Four credits**

An introductory course surveying the development of ceramics throughout history as related to twentieth century ceramics. The course is required in the ceramic curriculum. 4 (4-0)

- 109 Software Seminar I (Raku)** **Four credits**  
An introduction to the ancient art of Raku. Students will examine and practice construction of Raku pottery, the method of glazing used to achieve its special effect, and firing techniques used in the process. Prerequisite: ART 104. 4 (2-4)
- 110 Ceramic Design—Form and Function** **Four credits**  
A practical course designed to assist the student in developing methods of solving basic problems of coordinating design and function in ceramic pieces. This is a lab course in which projects will be made to comply with the above objectives. Prerequisites: ART 102, ART 105. 4 (2-4)
- 111 Jewelry I** **Four credits**  
An introduction to basic metal-working with emphasis on jewelry and jewelry-scale objects. Students will apply techniques of forging, forming, soldering, pewter casting, stone setting, chasing, etching, and engraving to the creation of jewelry pieces. 4 (2-4)
- 112 Jewelry II** **Four credits**  
A continuation of Jewelry I emphasizing more advanced metal-working techniques such as casting with silver, gold, or brass using centrifugal, sand, and vacuum casting equipment. Additional projects utilizing skills in Jewelry I will be presented. Prerequisite: ART 111. 4 (2-4)
- 113 Jewelry III** **Four credits**  
A continuation of Jewelry I and II. The student will review and practice skills presented in previous jewelry courses, and apply these skills to solving more complicated problems. Emphasis is on creation of non-jewelry objects and theatrical or ritual objects. The successful student will begin to explore visual aesthetics through the making of objects. Prerequisite: ART 112. 4 (2-4)
- 114 Advanced Jewelry** **Four credits**  
A studio course to continue the development of metal-working techniques in making jewelry and jewelry-scale objects. The course will focus on the student's own area of interest. The successful student will utilize skills and techniques to construct increasingly complex objects, and under supervision, select materials, develop designs, and construct objects demonstrating a visual sensitivity and aesthetic response to form and color. The course may be repeated three terms for credit. Prerequisite: ART 112. 4 (2-4)
- 115 Jewelry Casting** **Four credits**  
The exploration and creative use of various casting techniques, advanced stone-setting techniques, and the casting properties of different metals. The course will include centrifugal casting, sandcasting, cuttle, bone casting, vacuum casting, and lost wax casting. The properties of various common casting metals will be discussed. The successful student will cast objects, set stones, and finish objects utilizing the techniques presented. The principles of design as well as techniques of construction will be emphasized. Prerequisite: ART 111. 4 (2-4)

- 121 Dye and Spinning** **Four credits**  
An exploration of fibers (natural and synthetic) spun into yarn; dyeing (natural and synthetic) of hand-spun as well as commercial yarns, with an end result of either a functional or decorative textile. Also shows techniques for embellishing commercial textiles through the medium of dyeing. 4 (2-4)
- 122 Off-Loom Weaving** **Four credits**  
The exploration of fiber interlacements including tapestry weaving on a frame loom or back-strap loom; basketry (coil and plaiting); inkle (band) weaving; card weaving; sprang; finger weaving; knotless netting; spinning and some finishing techniques. 4 (2-4)
- 123 Weaving I** **Four credits**  
Further exploration of fiber interlacement. Students will examine weaving theory, threading drafts, tie-ups, and treadlings; use of yarns; color and design; several methods of warping looms; care of a loom. Students will apply techniques to a loom-woven project. Prerequisite: ART 122. 4 (2-4)
- 124 Weaving II** **Four credits**  
Continued exploration of weaving skills. Students will practice more difficult techniques, and experiment with projects of individual choosing. May be taken three terms for credit. Prerequisite: ART 123. 4 (2-4)
- 125 Experiments in Fibers** **Two credits**  
An exploration of fiber techniques which are related to weaving but not necessarily involving the interlacement of threads. The course will examine felt-making, paper-making, and fiber preparation. 2 (1-2)
- 129 Sketching** **Two credits**  
Designed for students with no experience or limited experience in drawing. The student will produce simple drawings of still life arrangements, figures, and plaster casts capturing the basic action and character of the subject. A variety of media will be introduced: pencil, charcoal, conte crayon, and India ink. Principles of two-point perspective, shadow masses, light planes, and proportion will be discussed. 2 (1-2)
- 131 Drawing** **Four credits**  
A studio course to apply skills in drawing. The course will focus on a variety of tools and methods, introducing the student to realism, abstract, surrealism, stream of consciousness and caricature, using materials such as pencil, ink, and conte crayon. Still life, casts, and limited figure work will be examined. Students will progress into more complex problems as ability develops. May be repeated three times for credit. ART 101 recommended concurrently. 4 (2-4)
- 132 Life Drawing** **Four credits**  
Introduction to basic concepts, approaches, and techniques in drawing the human figure. The student will utilize materials such as pencil, ink, charcoal and conte crayon, and progress into more complex problems as ability develops. The course may be repeated three times for credit. Prerequisite: ART 131. 4 (2-4)

- 133 Advanced Drawing** **Four credits**  
A continuation of drawing involving more complex problems in still life, portrait, landscape, and figure drawing. A variety of tools and materials will be used in black and white, and in color. The successful student will strive to complete a number of portfolio pieces. The course may be repeated three times for credit. Prerequisite: ART 131. 4 (2-4)
- 135 Introduction to Printmaking** **Four credits**  
Students will examine the various printmaking techniques, tools, and vocabulary of the printmaker. Fine art and career opportunities for printmaking will be discussed. 4 (2-4)
- 136 Relief Printing I** **Four credits**  
A studio practice course in which students will apply techniques for printing images from a raised surface. Woodcuts and linoleum block techniques will be demonstrated for student practice and experimentation. 4 (2-4)
- 137 Relief Printing II** **Four credits**  
A continuation of Relief Printing I. The student will practice more complex problems in relief printing, and experiment with aesthetic expression. Prerequisite: ART 136. 4 (2-4)
- 138 Etching** **Four credits**  
A studio practice course in zinc plate etching. Techniques in drypoint, hard-ground, soft-ground, and aquatint will be demonstrated. Students will practice techniques through projects. Prerequisite: ART 135. 4 (2-4)
- 139 Lithography** **Four credits**  
An introduction to plate lithography. Emphasis is on techniques such as drawing, wash, painting on a plate, and photo-image transfer. Students will practice techniques through a series of projects printed on a press. Prerequisite: ART 135. 4 (2-4)
- 140 Screen Printing I** **Four credits**  
A studio practice course introducing skills and techniques of silkscreen printing including basic photographic silkscreen processes. Students will construct a frame, make a photo-transparency, and practice techniques through a series of projects. Prerequisite: ART 135. 4 (2-4)
- 141 Screen Printing II** **Four credits**  
A continuation of Screen Printing I. Students will practice techniques and experiment with more complex problems as skills progress. Prerequisite: ART 140. 4 (2-4)
- 143 Studio Practices I** **Four credits**  
An introduction to paste-up and keyline skills. The student will prepare a portfolio consisting of: a composition booklet, a student's own layout design, a keyline of the layout design, and a finished copy of the layout. 4 (2-4)

- 144 Studio Practices II** **Four credits**  
A continuation of Studio Practices I involving more advanced use of equipment, materials, and techniques. The course will focus on use of templates, ruling pens, and airbrushes. The successful student will complete a portfolio consisting of two mounted, masked, and acetated silhouette photos; a complex keyline with color separation of a six-page accordion fold of the student's own design; and a tight "comp" of the booklet. The course is required as part of the Commercial Art Foundation Program. Prerequisite: ART 143. 4 (2-4)
- 145 Lettering** **Four credits**  
A studio course in typography. The course will present the history of type and typesetting, type styles, identification, and classification. Copyfitting and type indication for layouts and keylining will be practiced. Includes design work with display type for specific purposes. 4 (2-4)
- 147 Perspective Product Rendering I** **Four credits**  
A studio course applying the basic principles of perspective drawing utilized in product and architectural illustration. The student will render in one, two, and three point perspective; draw and render architectural exteriors and interiors; draw and render product illustrations, utilizing photographs or actual products. The student will work with a variety of materials. The course is required as part of the Commercial Art Foundation Program. 4 (2-4)
- 148 Perspective Product Rendering II** **Four credits**  
A continuation of Perspective Product Rendering I. Emphasis is on color rendering and practicing techniques of illustrating architectural and product subjects most often used in the graphics or visual communications industries. Prerequisite: ART 147. 4 (2-4)
- 150 Design and Layout I** **Four credits**  
A practice studio course exploring the areas of layout activities used in visual communication such as newspaper, labels, brochures, and various printed matter. The student will complete practice projects including research, media study, and execution of layouts, from thumbnail to comprehensives. The design principles, their effect on the composition and organization, and the role layout plays in the overall procedure of commercial art will be discussed and demonstrated. The course is required as part of the Commercial Art Foundation Program. Prerequisite: ART 145. 4 (2-4)
- 151 Drawing Techniques** **Four credits**  
An introductory course in the varied illustrative techniques utilized to take a preliminary pencil drawing and convert it to a finished ink drawing. The emphasis is on sound draftsmanship and a wide variety of contemporary, realistic illustrative black and white techniques in both solid black line and wash. Students will utilize both pen and brush to execute line patterns to indicate texture and surface and tonal gradation; develop black and white areas as pure patterns and design and realistic shadow masses and light planes. The course is suitable to both commercial art and fine art students. The course is required as part of the Commercial Art Foundation Program. Prerequisite: ART 132. 4 (2-4)

**155 Art Form Development I****Four credits**

A course which surveys painting, sculpture, architecture, and decorative arts of the prehistoric, ancient Egyptians, Mesopotamians, Greeks, Romans, and early Christians. Effect, style, and interpretation will be studied. The student will examine historical events correlated to specific pieces of art, individual artists within the period, similarities and differences within the individual art work. This course is required in commercial art, fine art, and interior design curriculums. 4 (4-0)

**156 Art Form Development II****Four credits**

A course which surveys painting, sculpture, architecture, and decorative arts concentrating on the humanistic art of the Islamic, Romanesque, Gothic, Renaissance, and Mannerist periods for its effect, style, and interpretation. The students will examine historic events correlated to specific pieces of art, identification of individual artists of the period, and similarities and differences within the individual art work. The relationship of this period to current commercial art, fine art, and crafts will be discussed. This course is required in commercial art, fine art, and interior design curriculums. 4 (4-0)

**157 Art Form Development III****Four credits**

A course which surveys painting, sculpture, architecture, and decorative arts focusing on the seventeenth century Baroque, late eighteenth century Neo-Classicism and Romanticism, nineteenth century Realism, Impressionism and Post-Impressionism, twentieth century Fauvism, Cubism, Dadaism, Surrealism, Abstract Expressionism, Pop Art and Op Art for their effect, style, and interpretation. Students will examine historic events correlated to specific pieces of art, identification of individual artists to the period, and similarities and differences within the individual art work. The relationship of this period to current commercial art, fine art, and crafts will be discussed. This course is required in commercial art, fine art, and interior design curriculums. 4 (4-0)

**160 Interior Design I****Four credits**

An introduction to the profession of interior design. Emphasis is on design theory, color theory, and the principles and elements of design used to communicate solutions to environmental interior problems. The course will examine the design vocabulary; the differences in hue, value, and saturation levels of color as they effect human and interior environments; the principles and elements of design in a composition such as a floor plan. The student will render a wall elevation in ink. Basic kitchen and bath planning and furniture arrangement will be demonstrated. The course is required in Curriculum 906 Interior Design. ART 163 Interior Design Drawing is recommended concurrently. 4 (2-4)

**161 Interior Design II****Four credits**

A continuation of interior design training. The course will focus on the effects of textiles on interiors. Emphasis is on window treatment, furniture construction, floor coverings, accessories, and interior plants. The design and drawing techniques of various window treatments will be demonstrated. The course is required in Curriculum 906 Interior Design. ART 164 Interior Design Drawing II is recommended concurrently. Prerequisite: ART 160. 4 (2-4)

**162 Interior Design III****Four credits**

A continuation of professional interior design training. The course will examine the relationship of human needs to interior environmental design. The student will explore the technology and psychology of building design including interior architecture and landscaping; the use of lighting design to create various atmospheres, effects, and to fulfill certain functions. The student will draw and render an exterior elevation, design a lighting project for a given room with specific fixtures, and render an interior perspective of a community building. The course is required in Curriculum 906 Interior Design. ART 165 Interior Design Drawing III is recommended concurrently. Prerequisite: ART 161. 4 (2-4)

**163 Interior Design Drawing I****Four credits**

A practice course in fundamental drafting techniques used by the interior designer. The course will emphasize drafting terminology; drafting techniques in pencil, ink and prisma; kitchen and bathroom construction detailing including wall sections, stairwells, fireplaces, support systems used in building; uses of building codes and zoning laws; principles of architectural lettering; fundamentals of furniture arranging; electrical and lighting overlay techniques; interior elevations, and one-point perspective. The course is required in Curriculum 906 Interior Design. It is recommended that this course be taken preceding or in conjunction with Interior Design I ART 160. 4 (2-4)

**164 Interior Design Drawing II****Four credits**

A continuation of Interior Design Drawing I, introducing the student to various media used by the interior designer. The course will emphasize techniques and practice in a variety of media; rendering perspectives of interior space in one-point perspective, two-point perspective, eyeball sketching, isometrics; different techniques in board graphic presentations; stylized lettering and logos; different methods for reproduction of drawings. The course is required in Curriculum 906 Interior Design. It is recommended that the course be taken preceding or in conjunction with Interior Design II ART 161. Prerequisite: ART 163. 4 (2-4)

**165 Interior Design Drawing III****Four credits**

A continuation of Interior Design Drawing II. The course will focus on problem-solving and practice in all media, and preparation of a professional portfolio of renderings and a resumé. The course is required in Curriculum 906 Interior Design. Prerequisite: ART 164. 4 (2-4)

**166 Home Decorating****Two credits**

A survey of general information on decorating residential buildings. The course will introduce and utilize the principles of interior design. Students will explore decoration of their own residences, including fabric and furniture selection, color schemes, window treatments, and furniture arrangements. The course will serve as an introductory survey for those who wish to pursue a career in interior design. Careers within this profession will be discussed. 2 (1-1)

**167 Antiques and Collectibles****Two credits**

Designed to introduce the student to the world of antiques. The course will focus on the recognition and identity of general types of antiques and collectibles with regard to basic styles, historical periods, material and methods of construction. Successful students will increase knowledge to become informed consumers of items for their own homes, and for entering the field of buying and selling antique items. Career opportunities and methods will be discussed. 2 (1-1)

**177 Holiday Crafts****Two credits**

Designed to explore ideas and techniques for producing holiday objects and foods. Students will produce items to be used for gifts or part of holiday decoration of the particular season in which the course is taught. Ideas are presented for producing low-cost objects and foods to be used by volunteer groups in fundraising or sale of items to gift shops and through craft fairs as a part-time career opportunity. 2 (1-1)

**178 Macramé****Two credits**

A course designed to practice the ancient art of knot-tying to form useful and decorative objects. Students will complete four forms for personal use and display. Discussions are held on techniques and opportunities for sale of items in retail and custom-made fields. 2 (1-1)

**179 Soft Sculpture****Two credits**

A studio course dealing with construction of stuffed fabric three-dimensional sculpture. The student will examine manipulation of fabric, problems of three-dimensional design, and construct objects for personal use utilizing techniques demonstrated. Career aspects of this art form will be emphasized through discussion of the potential sale of items to interior design and architectural firms as well as fine art display. 2 (1-1)

**180 Creative Stitchery****Two credits**

An introduction to the techniques of embroidery. Students will practice the techniques of embroidery stitches, utilize principles of design in manipulating cloth and yarn, and create objects for their own homes. Discussions will be held on the opportunities to sell items through gift shops and crafts fairs, and as a fund-raising activity for volunteer groups. 2 (1-1)

**181 Needlepoint****Two credits**

A course to practice design principles through the medium of needlepoint. Students will become familiar with the techniques of needlepoint through the completion of assigned projects for their own use. Discussion will be held on the opportunities of selling items to retail establishments; organizing group activities utilizing this craft medium as a therapy or activity for hospitalized or aged persons. 2 (1-1)

**182 Knitting****Two credits**

An exploration of techniques, terms, variations, and tools of knitting. The course will examine knitting terms, pattern instructions, tools, and their uses. The successful student will construct items for use in the home applying the techniques demonstrated. Individual as well as group instruction will be used to assist the students on particular problems. Discussions are held on the opportunities to employ this craft as a group activity for aged or hospitalized persons as well as a part-time career. 2 (1-1)

**183 Sewing Men's Clothing****Two credits**

An introduction to men's tailoring. Students will be introduced to the pressing, grading, and sewing techniques used in tailoring men's clothing. The successful student will create a professional-looking three piece suit. The course will introduce and discuss the career of tailoring. 2 (1-1)

**184 Sewing with Knits****Two credits**

An introduction to the basic principles of clothing construction with knits. The course will emphasize principles and techniques in knit sewing, and focus on cost savings through making personal clothing. The student will construct a pull-over knit top, slacks, woman's shell, woman's sweater, and bathing suit for personal use. Discussions are held on occupational opportunities in clothing design and construction careers. 2 (1-1)

**185 Advanced Knit Sewing****Two credits**

A continuation of basic knit sewing implementing the more advanced construction techniques with knit fabrics. The course will expose students to interchangeable pattern pieces, redesigning basic patterns, and changing basic patterns with sash and spread techniques. The student will complete a series of garments of their own choosing for personal use. The course is part of the introduction to a career in clothing design and construction and discusses opportunities in the occupation of tailoring. Prerequisite: ART 184. 2 (1-1)

**186 Quilting****Two credits**

An introduction to the art of quilting and quilting techniques. The course will examine pattern, templates, quilt pieces, and blocks. The successful student will complete a project for personal use, utilizing the principles demonstrated. Discussions are held emphasizing the opportunities to utilize this craft as a part-time occupation and as a group activity for volunteer groups and recreational therapy. 2 (1-1)

**187 Advanced Quilting****Two credits**

A continuation of basic quilting in which the student will deal with larger, more complex design problems. The student will be introduced to advanced quilting techniques, and the successful student will select a project applying these techniques to a finished product. Discussions are held emphasizing the opportunities to utilize this craft as a part-time occupation and as a group activity for volunteer groups and recreational therapy. The course may be repeated three times for credit. Prerequisite: ART 186. 2 (1-1)

**188 Stained Glass****Three credits**

A course in the art of stained glass, exploring design and construction techniques. Students will be introduced to techniques involved in the art of stained glass such as copper foil and lead stained glass. Students will produce works for their own use, such as a terrarium, planter, or lamp. The course will also introduce opportunities and techniques to utilize this art as an occupation through sales to retail outlets, craft fairs, and custom work for interior designers and architects. 3 (2-1)

**189 Stained Glass Advanced****Three credits**

A continuation of the stained glass art. The course will examine the color hues and lines in glass to select the proper glass to give a three-dimensional and realistic look to completed projects. The successful student will complete more complex pieces for personal use or as part of a portfolio in occupational preparation. Career opportunities and sales presentations will be discussed. Prerequisite: ART 188. 3 (2-1)

**190 Leathercraft****Three credits**

A class workshop designed to give a basic understanding of the construction of products in leather. Through the practice of construction techniques, students will make their own projects. Upon completion, the successful student should be able to assemble leather goods in either abstract or functional categories. Pattern making and design techniques will be shown. In addition, discussion will be held on the opportunity for sale of leather items through craft fairs and retail outlets. The course may be repeated three times for credit. 3 (2-1)

**191 Woodcarving****Three credits**

An introduction to woodcarving. The course will focus on two basic techniques of woodcarving: chip-carving and low-relief carving. Students will examine wood and tool selection, design elements, carving techniques and various types of finishes. Discussion is held on career opportunities through sales to retail outlets, craft fairs, and custom order work. 3 (2-1)

**200 Matting and Framing Techniques****Three credits**

Designed to explore various materials and techniques for displaying and exhibiting art work. The student will apply demonstrated techniques to matting and framing their own work. 2 (1-1)

**201 Painting****Four credits**

An introduction to fine art painting. The course will focus on building stretchers, sizing canvas, mixing paint, and individual attention to the resolution of painting problems. Both oil and acrylic paints are used to demonstrate the physical and visual differences. The successful student will produce a series of canvases demonstrating a variety of style approaches to subject matter. The course may be repeated three terms for credit. Prerequisite: ART 102. 4 (2-4)

**202 Portrait Painting****Four credits**

An introductory studio practice course in oil painting, with primary concentration on human portraiture in the classic academic tradition of the seventeenth century. Students will convey realistic images through a series of disciplined procedures for each aspect of the subject; prepare canvases and grounds; examine the brushes and various oil painting mediums; and paint a series of canvases of the human figure progressing from simple to complex problems as abilities increase. The course may be taken three terms for credit. It is recommended that the student have a strong familiarity with the human figure from a background in life drawing. Prerequisite: ART 132 or instructor approval. 4 (2-4)

**203 Advanced Painting****Four credits**

A studio practice course to apply painting skills in developing and analyzing a personal approach toward painting. The student will produce a series of canvases of increasing complexity, striving for preparation of a portfolio or exhibit. Individual attention will be given to problems and procedures as they arise. The course may be taken three terms for credit. Prerequisite: ART 201 or ART 202. 4 (2-4)

**204 Watercolor****Four credits**

A studio practice course introducing the art of transparent watercolor. Through a series of exercises the student will examine paper characteristics, degrees of wetness, brushes and tools, and various techniques in producing watercolor artworks. Students will progress in technique and complexity of problems as abilities increase. Individual attention will be given to special problems. The course may be repeated three times for credit. Prerequisite: ART 102. 4 (2-4)

**205 Advanced Watercolor****Four credits**

A continuation of Watercolor (ART 204). The course will emphasize more advanced techniques and increasingly complex problems in watercolor painting. The course may be taken three terms for credit. Prerequisite: ART 204. 4 (2-4)

**210 Design and Layout II****Four credits**

A continuation of Design and Layout I. The student will examine an overall view of media uses in planning campaigns; a step-by-step procedure for creating layouts; procedures for campaign building; and practice a variety of techniques for rendering layouts. The course is required as part of the Proficiency Certificate in Advertising Design and Layout. Prerequisite: ART 150. 4 (2-4)

**211 Design and Layout III****Four credits**

A continuation of design and layout training. Emphasis is on three-dimensional graphic design, packaging, and display. The student will work with a variety of materials, tools, methods, and techniques in gaining skills in the development of three-dimensional graphic products. The course is required for the Proficiency Certificate in Advertising Layout and Design. Prerequisite: ART 210. 4 (2-4)

**212 Design and Layout IV****Eight credits**

A review and practice course of design and layout skills emphasizing portfolio preparation for job procurement. The student will produce a portfolio including a magazine layout, newspaper layout, brochure layout, billboard layout, package layout, corporate identification, letterhead layout, one- two- and three-fold layout. The course is required in the Advertising Design and Layout Proficiency Certificate. Prerequisite: ART 211. 8 (4-8)

**213 Illustration I****Four credits**

A continuation of Drawing Techniques I emphasizing practice and development of skills using India ink with pen and brush and tempera techniques. Students will progress through more complex and sophisticated exercises in practicing sound basic illustrative techniques, and begin preparation of portfolio pieces. The course is required in the Illustration Proficiency Certificate. Prerequisite: ART 151 or instructor approval. 4 (2-4)

**214 Illustration II****Four credits**

A studio workshop course designed to practice more advanced illustration skills. The course will emphasize full color exercises in tempera and introduction to several acrylic techniques. Students will experiment with and explore more stylized drawing expressions and design-oriented compositions. The course is required in the Illustration Proficiency Certificate. Prerequisite: ART 213. 4 (2-4)

**215 Illustration III****Eight credits**

An intensive studio practice workshop for the student artist planning a career as an illustrator. The course will emphasize portfolio preparation for job procurement. The student may concentrate on a specific illustration specialty or experiment with different techniques and styles, and prepare a portfolio to include full color illustration in tempera, acrylic, dyes, or mixed media; black and white ink renderings in pen and brush; wash drawings; and scratch board drawings. The course is required for the Proficiency Certificate in Illustration. Prerequisite: ART 214. 8 (4-8)

**216 Cartooning****Four credits**

The course will focus on strong, stylized drawing, dramatic exaggerated action, simple but imaginative characterizations and uncluttered ink rendering techniques. The student will execute exercises in pencil, fibertipped pen, and ink—both brush and pen. The course is designed to introduce cartooning but is suitable for students with some cartoon drawing background. It is recommended that students have a strong foundation in figure drawing. The course is required for the Proficiency Certificate in Illustration. Prerequisite: Foundation Program or instructor approval. 4 (2-4)

**217 Cartooning II****Four credits**

A continuation of Cartooning I designed as a studio practice course to develop more advanced and sophisticated drawings, and introduce basic techniques of slide film art. The student will execute cartoon illustrations from simple spots to complex compositions and comic strip panels, and practice slide film cartoon art in full color utilizing techniques demonstrated. The course is required for the Proficiency Certificate in Illustration. Prerequisite: ART 216. 4 (2-4)

**218 Fashion Illustration I****Four credits**

An introduction to the rendering of wearing apparel. The course will focus on fashion illustration utilizing black and white line and wash technique, emphasizing use of pen and ink. Students will render a garment of their own design. The student will practice renderings for men's, women's and children's fashions. Prerequisite: ART 132 or instructor approval. 4 (2-4)

**219 Fashion Illustration II****Four credits**

A continuation of Fashion Illustration I. A wider variety of materials will be introduced such as brush, markers, soft pencil, chalk, charcoal, white ink, and paint. The student will practice a variety of renderings utilizing materials demonstrated. Prerequisite: ART 218. 4 (2-4)

**220 Fashion Illustration III****Four credits**

A studio practice workshop to increase skills in fashion illustration. The student will be introduced to the limited use of color: watercolors, pastels, and crayons. The successful student will prepare a portfolio of sample pieces for presentation and job procurement. Prerequisite: ART 219. 4 (2-4)

**221 Airbrush Techniques I****Four credits**

An introduction to the operation and techniques of the airbrush. Students practice using the airbrush and other tools in shading and creating textures in both black and white and color. The course will utilize waterbase paints only, focusing on a number of projects which increase in complexity as the student's ability increases. Prerequisite: 4 (2-4)

**222 Airbrush Techniques II****Four credits**

A continuation of airbrush training. Students will review and practice techniques striving for increased skills. The course will focus on more complex airbrushing problems, and allow students to work on areas of specialization. Prerequisite: ART 221. 4 (2-4)

**223 Communication Art****Four credits**

A survey course directed at the audio-visual aspects of commercial art as a form of communication. The course will examine various types of media used by industry to communicate through the use of art. Emphasis will be on copyrighting, broadcasting, film, and television. Prerequisite: Foundation Program. 4 (2-4)

**224 Human Relations in Art****Four credits**

A survey course of career opportunities, wages and compensation, creative thinking, problem-solving, and evaluation of human reaction in art-related situations. The course will focus on an approach to dealing with and understanding individuals in business relationships. Discussions are held on protecting art, copyrights, and the process of setting goals.



- 225 Commercial Art Workshop** **Ten credits**  
A studio workshop course in which the student becomes a member of a simulated commercial art studio operation, involved in all aspects of a campaign: client procurement, planning, meeting client goals and deadlines, to following a "job" from inception to completion. Prerequisite: Approval of Instructor. 10 (5-10)
- 230 Interior Design IV** **Four credits**  
A continuation of Interior Design study focusing on energy shortage problems and the interior design professional. The student will examine the effects of energy on the design industry, alternate energy sources (especially solar energy), and effects on interior environments, and interior designs with energy efficiency as the primary goal. The course will also cover design of interior spaces of mass-production structures such as mobile-homes, modular units, and efficiency apartments. Prerequisite: ART 162. 4 (2-4)
- 231 Interior Design V** **Four credits**  
A continuation of Interior Design Training emphasizing contract design. The student will design commercial interiors, integrating client's needs and the socio-psychological aspects of the environment, including estimating and specifying a contract interior. Prerequisite: ART 230. 4 (2-4)
- 232 Interior Design VI** **Four credits**  
A course to examine the fundamentals of the interior design business process, focusing on design responsibilities and incorporation of design ethics in the professional practice, and the benefits of membership in the American Society of Interior Designers. The student will participate in quick problem-solving situations, simulating a studio environment and designer/client roles. Prerequisite: ART 231. 4 (2-4)
- 233 Interior Design/Textiles** **Four credits**  
An examination of the fundamentals of textiles, their characteristics and identification, fabric weaves and uses. Basic fiber weaves and currently used complex weaves, natural fibers and man-made fibers will be discussed. Prerequisite: ART 160. 4 (2-4)
- 234 History of Decorative Arts** **Four credits**  
A survey of the history of decorative art periods including furniture, architecture, textiles and accessories. The course will relate eighteenth century through twentieth century periods to modern-day environments. Prerequisite: ART 162. 4 (4-0)
- 235 Interior Design Workroom Practices I** **Four credits**  
Designed to examine studio workroom methods and techniques. The course will cover measuring, estimating, and installation techniques for floor, wall, and window coverings. In addition, students will practice sketching methods that enable the designer to communicate the design concept to the workroom person. Prerequisite: ART 162. 4 (2-4)

- 236 Interior Design Workroom Practices II** **Four credits**  
A continuation of workroom methods and techniques. The course will emphasize cost estimating for a total job. The student will also practice installation techniques for window treatments and wall coverings. Workroom procedures and traffic flow will be discussed. Prerequisite: ART 235. 4 (2-4)
- 237 Interior Design Sources** **Four credits**  
A course to acquaint the student with specific resources used in the current design industry. Through field trips and demonstrations, the class will examine various resources used by the interior designer. Procedure for setting up a job book for client presentation will be demonstrated and practiced. Prerequisite: ART 235. 4 (2-4)
- 241 Ceramic Sculpture I** **Four credits**  
A practical course in ceramic sculpture using clay as the material to explore and experiment and develop sculptural conceptions as the finished piece. Prerequisite: ART 103, ART 105. 4 (2-4)
- 242 Ceramic Sculpture II** **Four credits**  
A continuation of Ceramic Sculpture I with an emphasis on development of more technical expertise in the development of form and content and the appropriate finishing and presentation of ceramic sculpture. Prerequisite: ART 241. 4 (2-4)
- 243 Ceramic Sculpture III** **Four credits**  
A continuation of Ceramic Sculpture II. May be taken twice for credit. Prerequisite: ART 242. 4 (2-4)
- 244 Clay and Glaze Formulation I—Low Fire** **Four credits**  
A studio course which will examine basic knowledge of low fire clay and glaze materials, and their uses for formulation, so that the student will progress to functioning independently. The course is required in the Ceramics Curriculum. Prerequisite: CEM 101 Applied Ceramic Chemistry. 4 (2-4)
- 245 Clay and Glaze Formulation II—High Fire** **Four credits**  
This is a practical course which is a continuation of Clay and Glaze Formulation I. The course will provide the student with a basic knowledge of high fire clay and glaze materials and their uses for formulation so that the student will be able to function independently. Prerequisite: ART 244. 4 (2-4)
- 246 Advanced Ceramic Decoration and Finishing** **Four credits**  
This course is specifically designed to assist the student in developing a knowledge and use of various decoration techniques to augment the finishing of handmade ceramics. Prerequisite: ART 105. 4 (2-4)
- 247 Advanced Hand Construction** **Four credits**  
This course is a continuation of Ceramics I. Emphasis will be on the development of additional hand construction techniques both on an experimental basis and according to research of traditional techniques developed by native American, African, Japanese, Korean, and other cultures. Prerequisite: ART 104. 4 (2-4)

- 248 Ceramic Production Technique** **Eight credits**  
This course is designed to introduce the student to efficient production studio techniques through demonstration, lectures, and student participation. Prerequisite: ART 107. 8 (4-8)
- 249 Kiln Construction** **Four credits**  
A practical course designed to introduce students to basic kiln construction techniques, the use of various refractory materials, firing techniques and the use of fuels. Prerequisite: ART 105. 4 (2-4)
- 250 Ceramic Soft Ware ("Traditional")** **Four credits**  
The course will introduce the student to traditional methods of firing soft ware as developed by the native American and African cultures. Hand construction will be the primary method of making the objects for this class. Prerequisite: ART 104. 4 (2-4)
- 255 Lithography II** **Four credits**  
A continuation of Lithography I. The student will review and practice skills, and experiment with increasingly complex problems towards producing portfolio pieces. Prerequisite: ART 139. 4 (2-4)
- 256 Screen Printing III** **Four credits**  
A continuation of Screen Printing II. The student will review and practice skills, and experiment with increasingly complex problems towards producing portfolio pieces. Prerequisite: ART 141. 4 (2-4)
- 257 Etching II** **Four credits**  
A continuation of Etching I. The student will review and practice skills, and experiment with increasingly complex problems toward producing portfolio pieces. Prerequisite: ART 138. 4 (2-4)
- 258 Papermaking** **Four credits**  
An introduction to papermaking with emphasis on the art process of pulpmaking. Because of the contemporary feeling toward paper, the course will view papermaking as a printmaking process via the casting technique. Through a series of projects students will make acid-free paper. 4 (2-4)
- 259 Printmaking Portfolio** **Four credits**  
A course designed to explore the techniques and skills for preparing a printmaking portfolio. The student will examine a selection of artworks for various portfolio types; develop a theme in portfolio presentation; construct containers for storage or transportation of prints; and prepare a resumé for a specific direction of a portfolio; i.e., job, exhibition, etc. Students will also take slides of art pieces to prepare a mailer portfolio. 4 (2-4)

- 260 Basic Art for Elementary Teachers** **Six credits**  
A course designed especially for elementary teachers in school systems in which the homeroom teacher is responsible for the student's art experiences. Setting up art corners, teacher-learner elements, developing meaningful art experiences, learning to judge and select, use of tools, and producing art objects will be emphasized. Prerequisite: PSY 204 Educational Psychology. 6 (3-6)
- 270 Ceramics Independent Study** **Four credits 4 (2-4)**  
**271 Ceramics Independent Study** **Eight credits 8 (4-8)**  
A course intended to allow the student pursuit of a special project not incorporated in regular course offerings. The student will formulate a specific task, problem, or objective; develop an organizational path toward solution of the problem; research and practice the necessary skills to accomplish the objective; and demonstrate completion of the determined task. The student will operate under the guidance and supervision of a faculty member in accomplishing the goals of the project. Prerequisite: Departmental approval.
- 272 Printmaking Independent Study** **Four credits 4 (2-4)**  
**273 Printmaking Independent Study** **Eight credits 8 (4-8)**  
A course intended to allow the student pursuit of a special project not incorporated in regular course offerings. The student will work primarily in one major print medium giving serious investigation to a personal art philosophy while creating and executing a portfolio of images. The student will operate under the guidance and supervision of a faculty member in completing the objectives. Prerequisite: Departmental approval.
- 274 Commercial Art Independent Study** **Four credits 4 (2-4)**  
**275 Commercial Art Independent Study** **Eight credits 8 (4-8)**  
A course intended to allow the student pursuit of a special project not incorporated in regular course offerings. The student will formulate a specific task, problem, or objective; develop an organizational path towards solution of the problem; research and develop necessary skills to accomplish the objective; and demonstrate completion of the determined task. The student will operate under the guidance and supervision of a faculty member in completing the objectives. Prerequisite: Departmental approval.
- 276 Art Independent Study** **Four credits 4 (2-4)**  
**277 Art Independent Study** **Eight credits 8 (4-8)**  
A course intended to allow the student pursuit of a special project not incorporated in regular course offerings. The student will formulate a specific task, problem, or objective; develop an organizational path towards solution of the problem; research and develop the necessary skills to accomplish the objective; demonstrate completion of the determined task. The student will operate under the guidance and supervision of a faculty member in completing the objectives. Prerequisite: Departmental approval.

**280 Commercial Art Portfolio Review****One credit**

Intended as preparation for entering the commercial art market, the student will arrange and prepare portfolio pieces for presentation as if seeking a job or client. The portfolio will be presented to a commercial art review board at the end of spring term for evaluation and critique. Prerequisite: Departmental approval. 1 (1-0)

**Dance Program**

Dance includes many kinds of expressive movement: jazz, ballet, tap and modern. Dance at Lansing Community College uses all four techniques in its classes, serving the needs of each student, whether interested in dance as a career opportunity or as a continuing education activity. With the growing number of theatre and dance groups, dance training can provide the basis for many years of stimulating creative activity for both the amateur and the professional. Dance not only provides an outlet for creative expression, but is excellent discipline for maintaining physical fitness.

The curriculum at Lansing Community College offers a sound foundation in the two mainstreams of dance discipline: ballet and modern. Every dance major is required to take work in both areas, and may then elect to specialize in one or the other. Music, acting, dance history and dance theory enhance the student's understanding, appreciation and interpretation of dance.

Lansing Community College offers a two-year Associate Degree with transfer emphasis and a two-year Associate Degree with career emphasis in dance. A concentrated one-year Certificate is also offered.

**COURSE DESCRIPTIONS****Dance (DNC)****101 Modern Dance Beginning I****Three credits**

Designed to prepare the body for movement exploration in the modern dance context. The student will execute exercises to increase body strength, coordination and control. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 3 (2-1)

**102 Modern Dance Beginning II****Three credits**

A continuation of skills and concepts developed in Modern Dance Beginning I, the student will execute changing levels, tempos, and floor patterns in movement; compose and perform a short movement pattern demonstrating qualities of movement. Modern dance vocabulary will be presented. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 101. 3 (2-1)

**103 Modern Dance Intermediate****Three credits**

Exercises for the training of the body with increased complexity and duration to enhance the dancer's technical skills and encourage ability to remember movement design. Introduction of improvisation exercises. The student will execute intermediate exercises to increase body strength, stretch, and balance; explore the elements of direction and design, and compose a two-minute movement pattern. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 102. 3 (2-1)

**104 Dance History III****Three credits**

With emphasis on the modern and jazz periods, the course will include in-depth studies of persons making major contributions to the history of dance, and the interrelationships and repetitions of the major phases of dance. Lectures will cover the period nineteenth century to the present. Prerequisite: DNC 105. 3 (3-0)

**105 Dance History II****Three credits**

The general history of dance from the development of modern dance and beginning of jazz dance to the present. Interrelationships and repetitions of major phases of dance in relation to world history will be presented. Lectures will cover the development from prehistoric era to the nineteenth century. The course is required for dance majors and recommended for general humanities, theater, and music students. 3 (3-0)

**106 Dance History I****Three credits**

The general history of dance from prehistoric period through the development of ballet. Lectures will present interrelationships and repetitions of the major phases of dance in relation to history from prehistoric era to the nineteenth century. The course is required for dance majors and recommended for general humanities, theater, and music students. 3 (3-0)



**107 Beginning Ballet I****Three credits**

Students will practice and demonstrate basic barre exercises, five basic positions of the hands and feet, control of balance in plié and relevé, and combinations in centre. Basic skills and dance terminology found in the International Vocabulary of Ballet are presented. Ballet is the foundation upon which all western dance is based; therefore, some training in this discipline is required for all dance majors. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 3 (2-1)

**108 Beginning Ballet II****Three credits**

The student will practice basic exercises for the development of strength, balance, and coordination. Additional dance terminology and skills found in the International Vocabulary of Ballet are presented and practiced in class. The successful student will demonstrate flexibility in legs, torso, and arms; execute poses in the five basic body positions and identify each; execute basic chaîne and preparations for pirouette; and demonstrate correct vertical body alignment and coordination in combination. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 107. 3 (2-1)

**109 Intermediate Ballet I****Three credits**

The course presents intermediate ballet exercises for development of strength, balance, and coordination. Intermediate barre and centre exercises are demonstrated with skills and dance terminology found in the International Vocabulary of Ballet. Students practice intermediate barre exercises; adagio sequences with control and balance, and pirouettes from the fourth, fifth, and second positions. Students should be able to execute center combinations from memory. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor. Prerequisite: DNC 108. 3 (2-1)

**110 Dance Choreography—Beginning****Three credits**

Creation of dance for performance. The course will examine accompaniment, entrances, exits, stage groupings, classification of ideas, costuming, rehearsal techniques, and selection of dancers, and will introduce various stimuli as sources for creating dance. The successful student will organize, conduct auditions, rehearse, and present a three-minute composition utilizing three or more dancers. This course is a Related Professional Class. May be repeated three times for credit. 3 (2-1)

**111 Methodology/Dance****Three credits**

This course will examine several established methods of dance instruction, including Cecchetti Method, Italian Ballet Technique, Russian Ballet Technique, Graham Modern, Holmes Modern, Ailey Jazz and Giordano Jazz. Students will prepare course descriptions, class outlines, and report on assigned readings relevant to the instruction of dance. Recommended for dance majors planning to teach at the elementary, high school and community service levels. Prerequisite: Instructor approval. 3 (1-2)

**113 Introduction to Dance Forms****Three credits**

An introduction to the fundamentals and basic techniques of ballet, yoga, ethnic, jazz, and modern dance. Intended for beginning and intermediate students who wish to expand knowledge of various dance forms. 3 (2-1)

**114 Exploring Movement/Theatre****Three credits**

Exploration of physical habits, structure, alignment, gesture rhythm, and spatial relationships. Use of various sensory exercises, basic dance techniques, improvisation, and mime in examining awareness of the body as an agent of personal and artistic expression. The course is basic and complimentary to all disciplines in the performing and creative arts. May be repeated three times for credit. 3 (1-3)

**115 Dance Seminar I****One credit 1 (0-2)****131 Dance Seminar II****Two credits 2 (1-1)****132 Dance Seminar III****Three credits 3 (2-1)**

Three courses designed to accommodate guest lecturers, guest instructors, and classes of special interest. Also designed to provide students with contacts and instruction not normally available in the dance curriculum, and to provide special interest groups with information, instruction and exchange of ideas. May be repeated three times for credit. Prerequisite: Departmental approval.

**116 Lansing Dance Theatre I****Two credits**

Designed as an apprenticeship class for Lansing Dance Theatre II. Students will memorize the repertory from the previous year, receive training in the technique and style of the Lansing Dance Theatre performing company as preparation for audition. This course may be repeated three times for credit. Prerequisite: Some experience. 2 (2-1)

**120 Lansing Ballet Company****Four credits**

A performing class under the artistic direction of the Lansing Ballet Association. Dancers participate by audition. The successful student will gain experience auditioning for a professional artistic director, and become a more sophisticated performer by continuing professional association. Students will participate in concerts, lecture/demonstration, and inter-discipline productions. This course may be repeated three times for credit. Prerequisite: Audition. 4 (2-4)

**122 Career Singers—Dance****One credit**

A course to develop techniques in movement to complement singers. Students will examine stage direction, blocking, entrances, and exits. Designed to assist the student in developing confidence and projection for musical/vocal productions. May be repeated three times for credit. Prerequisite: Departmental approval. 1 (1-1)

**123 LCC Dancettes****Three credits**

A performing company presenting precision tap drills and jazz routines. Students may enter the course by audition. Introduces the student to skills and techniques required in performance and provides performance experience. May be repeated three times for credit. Prerequisite: Audition. 3 (2-1)

**124 Folklorico Latino****Three credits**

A performing company presenting dances of Spain, Mexico, and Latin America, including Ballroom-Latin. Students may enter the course by audition. Introduces the student to skills and techniques required in performance and provides performance experience. May be repeated three times for credit. Prerequisite: Audition. 3 (2-1)

**125 Lansing Dance Theater II****Four credits**

A performing company. Participation is by audition. The student will be introduced to the current repertory of the company, participate in professional rehearsals, and will obtain practical experience in public performance. This course may be repeated three times for credit. Prerequisite: Audition. 4 (2-4)

**126 Gym Dance/Routine Competition****One credit**

This course is designed for the intermediate/advanced gymnast to develop creative expression, originality and projection in the composition routines. Interpretation of music, projection, and originality in execution will be stressed. The successful student will develop a three-minute competition routine and will compete in area events. May be repeated three times for credit. 1 (0-2)

**127 Gymnastics/Dance****Three credits**

Designed to combine dance and tumbling with gymnastics on floor and balance beam. Emphasis will be on flexibility, strength, and correct technique in dance and gymnastic movement. Successful students will use stretching exercises, basic dance and tumbling exercises to create a one and one-half minute floor composition. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 3 (2-1)

**128 Gymnastics Dance Intermediate****Three credits**

A continuation of dance and tumbling techniques on floor and balance beam. Emphasis will be on flexibility, strength, and correct technique at the intermediate level. Successful students will demonstrate flexibility, develop a competitive routine, and perform from memory a one and one-half minute floor or beam routine. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 127. 3 (2-1)

**129 Gymnastic Dance Advanced****Three credits**

Advanced level course relating tumbling and dance to gymnastics on floor and balance beam. Emphasis will be on performance technique and competition. Successful students will demonstrate advanced flexibility, evaluate competitive routines, and perform from memory a one and one-half minute floor or beam routine at the advanced level. Students will compete in gymnastic meets. This course may be repeated three times for credit. Placement in technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 128. 3 (2-1)

**130 Gym Dance/Balance Beam****One credit**

This course is designed for the intermediate/advanced gymnast to increase expertise in movement on the balance beam. Control, balance, and fluid movement will be stressed. The student will develop a one and one-half minute beam exhibition for classroom performance. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 127. 1 (0-2)

**133 Tap I****Three credits**

An introduction to tap technique. Students will be introduced to fundamental soft-shoe, waltz clog, and variations; the rhythmic execution of foot, head, hand, and body movements particular to tap dance; and the history of tap dancing in American dance forms. Successful students will perform from memory a two-minute class routine. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 3 (2-1)

**134 Tap II****Three credits**

Introduction of intermediate tap technique and tap variations such as military tap, rhythm tap, and buck and wing. Choreographic problems are presented regarding movement, time and space analysis. The student will examine the difference in style and content in choreography. An intermediate two-minute routine will be performed by successful students. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 133. 3 (2-1)

**135 Tap III****Three credits**

Introduction to advanced tap technique. Emphasis will be placed on character and novelty tap as they apply to the traditional musical theatre. Successful students will apply tap styles and techniques in performing, from memory, a two-minute advanced routine. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 134. 3 (2-1)

**136 Pantomime/Theatre****Three credits**

Dealing with presentation and theatrical aspects of pantomime, this course will emphasize problem solving for public performance. Students will execute exercises and techniques for body control and conditioning. Differences in pantomime, mime, and rhythm will be examined. Recommended for theatre, dance, and humanities students who are performance oriented. May be repeated three times for credit. 3 (1-3)

**137 Mime Advanced/Theatre****Three credits**

Designed as a preparation for public performance, students will solve pantomime problems, utilize rehearsal techniques to develop professional discipline for presentation of pantomime, mime, and rhythm skills. Students will appear in public performance with the class. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 136. 3 (1-3)

**138 Mime/Dance****Three credits**

Beginning with the basic movement exercises, the student explores skills in the ancient art of pantomime. This course includes studies in hand and body movements, and solo and group dynamic scenarios. Students will execute abstractions of daily life movements in a stylized manner, and create environments without words for audience identification. The successful student will execute a fifteen to twenty-second study in the imitation of objects such as machines, plants, or furniture. Recommended for theatre and dance students in addition to dance majors. May be repeated three times for credit. 3 (2-1)

**139 Folk Dance Intermediate****Two credits**

An exploration of folk dancing at the intermediate level with a selection of Greek, Yugoslavian, Rumanian, Bulgarian, and Israeli dances. Students will be introduced to the social significance of folk dances and the structure of the music in relation to national histories. No partner is required. This course may be repeated three times for credit. Prerequisite: DNC 147. 2 (1-2)

**140 Jazz Dance Beginning****Three credits**

Introducing the music and dance of American jazz. The course will identify the accents and phrases of jazz music and punctuate movement according to those accents. Move-in slides, steps, and turns, with appropriate body accents will be demonstrated. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 3 (2-1)

**141 Spanish Dance****Two credits**

Introduction of flamenco dance as performed in southern Spain, with familiarization of the music, hand clapping, and background of musical origin. Students may enroll singly or in couples. This course may be repeated three times for credit. 2 (1-2)

**142 Mexican Folk Dance****Two credits**

Introduction to the basic Mexican dance, music, steps, and techniques. Students will explore the music, costumes and customs, and the relation of dances to historical and social aspects of the country. This course may be repeated three times for credit. 2 (1-2)

**143 Hawaiian Dance****Two credits**

Introduction to a selection of Hawaiian and Tahitian dances. The course will examine the relationship of the dances to the cultural and historical aspects of the country. Basic Hawaiian and Tahitian dances will be demonstrated and practiced. May be repeated three times for credit. 2 (1-2)

**144 Polkas****Two credits**

An introduction to the fundamentals and variation of movements in polkas. Students will also explore the music, customs, and background of polkas with the goal of developing confidence to participate in polka dancing. This course may be repeated three times for credit. 2 (1-2)

**145 Square Dancing****Two credits**

Designed to introduce the music and movement techniques of traditional American square dance. Various ethnic contributions to square dancing are discussed. The course is recommended for theatre and dance students and for those interested in group leadership techniques. Partners are recommended. May be repeated three times for credit. 2 (1-2)

**146 Greek Folk****Two credits**

Students will apply the fundamentals and variations of movement to the most popular Greek, Lebanese, Syrian, and Israeli folk dances as they are performed today. Music, costumes, customs (as they affect the dance), and variations in the style will be discussed. This course may be repeated three times for credit. 2 (1-2)

**147 Folk Dance****Two credits**

An introduction to a selection of Greek, Yugoslavian, Rumanian, Bulgarian, and Israeli dances. The course will promote an understanding of the fundamentals and variations of movement in similar and different folk dances. May be repeated three times for credit. 2 (1-2)

**148 Russian Dance****Two credits**

An introduction to Russian folk dancing, including basic steps, particular dances, and the growth to a performing art. The course will include the use of Russian character dance in classical ballet. The use and place of musical instruments such as tambourine, balalaika, and accordion within the dance structure will be discussed. May be repeated three times for credit. 2 (1-2)

**149 African Dance****Two credits**

Introduction to African Dance forms including rhythmic patterns of music and geographic origin. Dances of the Ashanti, Anlo Ewe, Ghanaian and Akan cultures will be demonstrated and practiced. A Ghanaian Drum Dance of performance quality will be memorized and performed. This course may be repeated three times for credit. 2 (1-2)

**151 Dance Workshop I****One credit 1 (1-0)****152 Dance Workshop III****Three credits 3 (2-1)****153 Dance Workshop II****Two credits 2 (1-1)**

Workshops are developed for creative experimentation, improvisation, and special projects. They differ in character, promoting development of style and exchange of ideas. Workshop offerings are listed in term schedule hooks, and explanations posted. These courses may be repeated three times for credit. Prerequisite: Some experience.

- 154 Independent Study I** **One credit 1 (0-2)**  
**155 Independent Study II** **Two credits 2 (1-2)**  
**156 Independent Study III** **Three credits 3 (1-4)**

Dance majors who wish to devote time to research projects, choreography, assigned student teaching projects, and other related dance interests may enroll in independent study. The level is determined by the complexity of the project. Students interested in independent study may submit their proposals to the dance program director for approval and guidance. These courses may be repeated three times for credit. Prerequisite: Departmental approval.

**164 Flexibility/Gym** **One credit**

This course demonstrates exercises, stretches, and gymnastic movements to increase body flexibility for the dancer and the gymnast. The successful student will exhibit increased flexibility and body control through consistent, planned repetition of exercises learned. May be repeated three times for credit. 1 (0-2)

**166 Tai-Chi** **Three credits**

An introduction to the understanding and execution of the sequence of Zazen Meditation and the basic principles and qualities of Tai-Chi. Demonstration and practice of beginning relaxation of Yoga exercises, Zazen breaths and stretches, basics of Ch'uan and Tai-Chi qualities. Successful students will execute the first 17 movements of the short form of the Yang School of Tai-Chi Ch'uan. This course may be repeated three times for credit. 3 (2-1)

**167 Dance/Yoga Practicum** **Two credits**

Designed to provide additional hours of body conditioning, review execution of exercises, and reinforce techniques acquired in Dance 168- Dance/Yoga Technique. This course may be repeated three times for credit. 2 (1-1)

**168 Dance/Yoga Technique** **Three credits**

An examination of yoga technique with particular emphasis on dance-related exercises for improved breathing, relaxation, flexibility, and muscle tone. The course will focus on conditioning the body to protect against injuries; increasing flexibility, and more efficient and graceful use of the body. This course is recommended for all dance students, actors, and athletes. May be repeated three times for credit. 3 (2-1)

**169 Dance Exercise** **One credit**

Designed to provide dance exercises and techniques as a means of increasing flexibility, strengthening the body for good posture, greater mobility, improved breathing and circulation, and promoting general good health. The course is recommended for all levels of dance, and dance majors planning to teach at the elementary, high school and community service levels. May be repeated three times for credit. 1 (0-2)

**170 Jazz Dance Intermediate** **Three credits**

Continuation of the music and dance of American jazz. Intermediate exercises for familiarizing the body with jazz movement are practiced. Jazz styles of various eras are introduced, identifying the accents and phrases of jazz music and punctuating movements accordingly. The successful student will perform a group composition. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 170. 3 (2-1)

**171 Jazz Dance Advanced** **Three credits**

A continuation of jazz dance emphasizing advanced exercises to control jazz movement. Students will utilize the phrases of various jazz styles and music incorporating current jazz styles with techniques previously developed. Composition and performance are stressed. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 170. 3 (2-1)

**172 Near East Dance Practicum** **One credit**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Near East Dance (Dance 175). This course may be repeated three times for credit. 1 (1-1)

**173 Near East Dance Intermediate Practicum** **One credit**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Near East Dance Intermediate (Dance 176). This course may be repeated three times for credit. Placement in technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 175. 1 (1-1)

**174 Near East Dance Advanced Practicum** **One credit**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Near East Dance Advanced (Dance 177). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 176. 1 (1-1)

**175 Near Eastern Dance** **Two credits**

An introduction to basic Near Eastern dance to condition the body for the controlled, fluid, graceful movements. Finger Zills are presented. Structures of the music and history are discussed. The successful student will present a four-minute class routine utilizing correct posture, body positions, arm movements, hip movements, and foot patterns. This course may be repeated three times for credit. 2 (1-2)

**176 Near Eastern Dance Intermediate** **Two credits**

Intermediate exercises in Near Eastern dance are presented to condition the body. Veil movements and finger Zill combinations are introduced. Improvisation and musical movements of composition are analyzed. The student will design and make a practice costume. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 175. 2 (1-2)

**177 Near Eastern Dance Advanced** **Two credits**

Introduction and practice of advanced Near Eastern dance exercises. Variations of veil technique and Zill rhythms are presented. Composition of a professional dance performance is analyzed. The successful student will design and execute a performance costume. The history, national influences, and social significance of Near Eastern dance are discussed. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 176. 2 (1-2)

**178 Near Eastern Dance Performing** **Two credits**

To prepare the advanced Near Eastern dance student for public performance. The successful student will memorize and practice repertory for several dance pieces and productions; design and make a professional costume; utilize rehearsal, makeup, and projection techniques to create and present a fifteen-minute dance solo; and participate in public performances. Time should be allowed in the student's schedule for additional rehearsals and participation in public performances. This course may be repeated three times for credit. Prerequisite: Audition. 2 (1-2)

**180 Dance Applied** **Three credits 3 (3-0)****181 Dance Secondary** **Two credits 2 (2-0)****182 Dance Elective Minor** **One credit 1 (1-0)**

An opportunity for students to study with instructors in private studios. Credits are determined by the length of instructional period up to three credits. Instructors will administer intense private training adjusted to the needs of the individual student. The student's level of competence and need for private lessons is determined by the department. The students may repeat any one of the courses at the appropriate level until prepared for more advanced work. Prerequisite: Departmental approval. Lab fee.

**183 Magic I** **Three credits**

Beginning techniques of magic, both parlor and stage. The course will focus on beginning card tricks, beginning coin tricks, and sleight-of-hand techniques. History, tradition, and famous personalities are discussed. The course is recommended for dance majors planning to teach at the elementary, high school, and community service levels. 3 (1-3)

**184 Magic II** **Three credits**

Continued instruction in the techniques of magic, both parlor and stage. Advanced card tricks and sleight-of-hand techniques will be demonstrated. The fundamentals of illusion will be discussed. The successful student will prepare a twenty minute performance utilizing techniques presented. The course is recommended for dance majors planning to teach at the elementary, high school, and community service levels. Lab fee. 3 (1-3)

**187 Introduction to Clown** **Three credits**

An introductory course in the art of clowning. Basic clown types, makeup, juggling, balloonology and beginning magic are examined. The student will develop a clown character including costume and makeup. The course is recommended for dance majors planning to teach at the elementary, high school, and community service levels. Lab fee. 3 (1-3)

**188 Clown Intermediate** **Three credits**

An intermediate course in the art of clowning. Unique clown types, advanced clown makeup, juggling, balloonology and sleight-of-hand tricks are examined. The student will create an original clown character including costume, makeup and appropriate skits. Projection and performance will be emphasized. The course is recommended for dance majors planning to teach at the elementary, high school, and community service levels. Prerequisite: DNC 187. 3 (1-3)

**190 Modern Dance Practicum I** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movements, and reinforcement of techniques presented in Modern Dance Beginning I (Dance 101). This course may be repeated three times for credit. 2 (1-1)

**191 Modern Dance Practicum II** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Modern Dance Beginning II (Dance 102). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 2 (1-1)

**192 Improvisation** **Two credits**

Designed as an experimental course for students with some dance experience to explore the process and techniques of improvisation. The course will stress the exploration of personal resources, talent, and solution of improvisational problems leading to a studio performance demonstrating improvisation. This course may be repeated three times for credit. Prerequisite: Instructor approval. 2 (1-1)

**193 Beginning Ballet Practicum I** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Beginning Ballet I (Dance 107). This course may be repeated three times for credit. 2 (1-1)



**194 Beginning Ballet Practicum II****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Beginning Ballet II (Dance 108). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 107. 2 (1-1)

**195 Adagio****Three credits**

To provide instruction for advanced ballet, modern, or jazz students in the techniques of partnering. The course will apply techniques of duets, solos, lifts, and precision timing between dancers to improve their ability to relate physically to each other. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: Instructor approval. 3 (2-1)

**196 Modern Dance Intermediate Practicum****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Modern Dance Intermediate I (Dance 103) and Modern Dance Intermediate II (Dance 201). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 103. 2 (1-1)

**197 Modern Dance Advanced Practicum****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Modern Dance Advanced I (Dance 202) and Modern Dance Advanced II (Dance 203). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 201. 2 (1-1)

**198 Intermediate Ballet Practicum****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Intermediate Ballet I (Dance 109) and Intermediate Ballet II (Dance 207). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 109. 2 (1-1)

**199 Advanced Ballet Practicum****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Advanced Ballet I (Dance 208) and Advanced Ballet II (Dance 209). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 207. 2 (1-1)

**200 Pointe Practicum****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Pointe Technique (Dance 210). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: Instructor approval. 2 (1-1)

**201 Modern Dance Intermediate II****Three credits**

Exercises for the training of the body are increased in complexity and duration. Subtle patterns of movement increase the dancer's technical skill and ability to remember movement designs. Improvisation exercises present more complicated technical demands as well as opportunities to use the imagination. Students will execute intermediate exercises to increase body strength, stretch, and balance. Sequences in loco-motor, turning, aerial movements, correct placement, flexibility, and awareness of line are practiced. Successful students will compose and perform a two-minute movement pattern. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 103. 3 (2-1)

**202 Modern Dance Advanced I****Three credits**

A continuation of modern dance training dealing with difficult turns, balance exercises, foot patterns, rhythmic patterns, and demanding extensions of the body. Improvisational techniques will also increase in difficulty. Traditional modern dance productions and performances will be studied. The successful student will prepare and perform a two to three-minute dance composition, and may rehearse a composition for public performance. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 201. 3 (2-1)

**203 Modern Dance Advanced II****Three credits**

A review, evaluation, and further advanced development of modern dance exercises and techniques. Improvisation, rehearsal techniques, and composition for performance will be stressed. Successful students will rehearse an advanced modern dance composition which will be presented for public performance. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 202. 3 (2-1)

**204 Modern/Men****Two credits**

An introduction to basic modern and ballet movements for men. The course is beneficial for dancers, singers, actors, and athletes who wish to increase body control, physical strength, and agility. The course will stress movement to rhythms and music. May be repeated three times for credit. Prerequisite: Instructor approval. 2 (1-1)

**207 Intermediate Ballet II****Three credits**

Intermediate ballet exercises for the development of strength, balance, and coordination. Intermediate barre and centre combinations are practiced. Piqué, chaînes, and pirouettes will be demonstrated and practiced. Basic skills and terms found in the International Vocabulary of Ballet are discussed and used in class. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 109. 3 (2-1)

**208 Advanced Ballet I****Three credits**

Variations from the repertory of classical ballet are added to advanced barre and centre exercises. Complicated turns and aerial combinations are introduced as well as extensive patterns of adagio and allegro movements. Students will begin pointe techniques and execute fundamentals of partnering as part of course work. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 207. 3 (2-1)

**209 Advanced Ballet II****Three credits**

Additional variations from the repertory of classical ballet are combined with more advanced barre and centre exercises. Complicated turns and aerial combinations are practiced as well as extensive patterns of adagio and allegro movements. Skills necessary for professional performance are demonstrated. Students will practice pointe techniques, and execute advanced partnering techniques. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 208. 3 (2-1)

**210 Pointe Technique****Three credits**

Instruction for the advanced female ballet dancer in pointe technique. The course stresses practice for development of strength in feet and ankles; elongated line; and the classical technique. This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: Instructor approval. 3 (2-1)

**211 Choreography Workshop****Three credits**

Designed for students interested in creating a dance composition for performance. The successful student will research, develop, and compose a dance presentation; locate, audition and select dancers; choreograph, rehearse and develop all creative aspects of the chosen work for public viewing. The course is held in conjunction with Performance Workshop (Dance 212). Students are not required to perform in their own compositions, but should be prepared to schedule additional rehearsal time; be available for dress/technical rehearsals and all scheduled performances. This course may be repeated three times for credit. Prerequisite: Dance 110/departmental approval. 3 (2-1)

**212 Performance Workshop****Two credits**

Designed to provide dance production, rehearsal, and performance experience. The successful student will memorize a repertory for a student production; practice rehearsal techniques; utilize makeup, costuming, and projection techniques for public viewing. The course is held in conjunction with Choreography Workshop (Dance 211). Students should be prepared to schedule additional rehearsal time; be available for all dress/technical rehearsals and all scheduled performances. This class may be repeated three times for credit. Prerequisite: Instructor approval. 2 (1-2)

**213 Lanswingers/Dance****One credit**

Designed to provide choreography, staging, and visual techniques for the Lanswingers performing company. This class may be repeated three times for credit. Prerequisite: Audition. 1 (1-1)

**214 Anatomy/Dance****Three credits**

Instruction in anatomy/physiology for the dancer, actor, or athlete. Students will examine skeletal, muscular, respiratory, and nervous systems; discuss principles of good nutrition; analyze and practice correct body placement to prevent injuries. 3 (2-1)

**215 Repertory I****One credit 1 (0-2)****216 Repertory II****Two credits 2 (1-2)****217 Repertory III****Three credits 3 (2-1)**

Repertory classes focus on the preparation of dances for performance. The student concentrates on memorization, projection, character training, and polishing as preparation techniques for public performance. Students should allow adequate time in their schedules to attend all arranged rehearsals and tech/dress rehearsals, and to appear in all public performances scheduled. This course may be repeated three times for credit.

**221 Tap Practicum I****Two credits**

Designed to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Tap I (Dance 133). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 2 (1-1)

**222 Tap Practicum II****Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Tap II (Dance 134). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 133. 2 (1-1)

**223 Tap Practicum III** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Tap III (Dance 135). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 134. 2 (1-1)

**224 Jazz Beginning Practicum** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Jazz Dance Beginning (Dance 140). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. 2 (1-1)

**225 Jazz Intermediate Practicum** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Jazz Dance Intermediate (Dance 170). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 140. 2 (1-1)

**226 Jazz Advanced Practicum** **Two credits**

A practice and development course to provide additional hours of body conditioning, review of movement, and reinforcement of techniques presented in Jazz Dance Advanced (Dance 170). This course may be repeated three times for credit. Placement in Technique levels will be determined with Dance Advisor and will be consistent with previous training. Prerequisite: DNC 170. 2 (1-1)

**231 Dance Accompaniment I** **One credit****232 Dance Accompaniment II** **Two credits****233 Dance Accompaniment III** **Three credits**

Designed to provide music students with instruction and experience in accompanying dance classes and performances. Students study with a professional accompanist and provide musical accompaniment for a class in ballet, modern, jazz or tap dance. Approval of the instructor and skill in playing an instrument suitable for dance accompaniment are prerequisites for this course. May be repeated three times for credit. Prerequisite: Instructor approval

**240 Pre-classical and Medieval Dance Forms** **Three credits**

To acquaint the student with styles of movement and dances from the eleventh to the seventeenth centuries. Floor patterns, rhythms, and combinations will be introduced. General history will be included regarding the development of dance during these periods. This course may be repeated three times for credit. 3 (2-1)

**260 Dance for Elementary Teachers** **Four credits**

The course will focus on personal growth in dance and familiarity with basic dance forms to enable the elementary teacher to present dance to children and to develop classroom projects. The student will practice exercises to develop good body conditioning, posture, and improved breathing. Beginning exercises in modern dance, ballet, folk dance, and mime will be demonstrated. The successful student will develop two elementary dance projects to be taught to the class. Prerequisite: Some experience. 4 (3-1)

**265 Makeup Dance/Theatre** **Three credits**

Designed to provide practical knowledge of makeup; applying makeup properly; effectively using supplies and techniques, and evaluating the large assortment of makeup on the market. 3 (2-1)

**266 Makeup Dance/Theatre Practicum** **Two credits**

A development course through which the student may practice techniques demonstrated in Makeup Dance/Theater (Dance 265), in which the student receives supervised practice in the application of makeup. 2 (1-1)

**267 Introduction to Modeling** **Three credits**

The introduction of modeling techniques, including projection, visual image and expression. The student will practice modeling turns and formats of introductory modeling movements. Differences between American and European modeling postures will be examined. Requirements, opportunities, and various facets of a professional modeling career will be discussed. 3 (2-1)

**268 Visual Poise/Modeling** **Three credits**

Examination of graces in movement, body posture and control, and coordination of clothing for visual poise in all situations. Etiquette requirements in everyday life environments will be stressed. Coordination and adaptation of personal wardrobe will be discussed. 3 (2-1)

**269 Diet/Exercise for the Model** **Three credits**

An examination of nutrition and exercises for general good health, posture, and figure. The course will stress a consistent exercise program, an individual diet program, and exercise routines concentrating on various figure and posture problems. 3 (2-1)

**270 Personal Grooming/Modeling** **Three credits**

A course stressing aspects of individual personal grooming, coordinating hairstyle, makeup, and wardrobe. The course will examine grooming routines and techniques for the face, hands, and feet. The student will develop an individual personal profile. 3 (2-1)

**280 Ballroom Bronze I** **Three credits**

A beginning course in ballroom dance. The student will be introduced to the five basic ballroom dances: fox-trot, rhumba, swing, cha-cha, and waltz. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold Technique levels will be consistent with previous training. 3 (2-1)

**281 Ballroom Bronze II** **Three credits**

Continuation of beginning ballroom dance. The student will practice steps of Ballroom Bronze I for development of proper combination of arm, posture, and head movement with steps. Students will be introduced to the steps and music of tango, samba, meringue, and mambo. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold Technique levels will be consistent with previous training. Prerequisite: DNC 280. 3 (2-1)

**282 Ballroom Silver I** **Three credits**

Emphasis on the importance of partnership and proper expression of dance. Students will practice leading or following a partner comfortably, and blending patterns smoothly. Steps introduced in previous classes will be reviewed, and students will be introduced to Silver level steps in fox trot, tango, and waltz. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold levels will be consistent with previous training. Prerequisite: DNC 281. 3 (2-1)

**283 Ballroom Silver II** **Three credits**

Introduction of the Silver level of ballroom dancing in rumba, bolero, cha-cha, and samba. Basic patterns are given in each dance with increasing difficulty. The blending of Bronze and Silver steps will be demonstrated. Students will practice toward developing style and versatility in ballroom dancing. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold levels will be consistent with previous training. Prerequisite: DNC 282. 3 (2-1)

**284 Ballroom Gold I** **Three credits**

A continuation and review of ballroom Bronze and Silver levels, additional Gold level steps in fox-trot, tango, and waltz. Ballroom terminology will be discussed. The successful student will perform a solo demonstration and a freestyle demonstration of each dance previously presented in other ballroom levels. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold Technique levels will be consistent with previous training. Prerequisite: DNC 283. 3 (2-1)

**285 Ballroom Gold II** **Three credits**

Introduction of Gold level steps in cha-cha, rumba, samba, and meringue, with an increasing number of patterns for each dance. Students at this level of ballroom dance will begin to develop their own style, and successful students will accomplish succeeding levels of ballroom dance. This course may be repeated three times for credit. Placement in Bronze, Silver, and Gold Technique levels will be consistent with previous training. Prerequisite: DNC 284. 3 (2-1)

**286 Disco** **One credit**

An introduction to the current styles in American jazz/ballroom dance. As new dances are developed, they will be included, as well as standard popular dances. Students will evaluate the differences in movement, rhythms, and techniques of earlier styles contributing to current popular dances. This course may be repeated three times for credit. 1 (0-2)

**287 LCC Disco Express** **Three credits**

A performing company to prepare and rehearse disco/jazz dances for public performances. The course will focus on current ballroom fad dances and jazz techniques. Students will utilize rehearsal techniques, memorize compositions in preparation for public performance, and perform at area ballroom events. Students should allot time in their schedules to participate in additional rehearsals and performances as dictated by the class. This course may be repeated three times for credit. Prerequisite: Instructor approval. 3 (2-1)

**288 Ballroom Competition Team** **Three credits**

Students will utilize rehearsal techniques for preparation of competition routines. The course will focus on preparing compositions for competition at regional and national levels; coordinating clothing, makeup, music; and developing familiarity with rules and regulations of the American Standard and International Standard of hallroom dance. Students will compete in an area ballroom event. This course may be repeated three times for credit. Prerequisite: Instructor approval. 3 (2-1)

**289 Disco Dance II** **One credit**

A continuation of the study of current styles in American jazz/ballroom dance. Students will evaluate the differences in movement, rhythms, and techniques of earlier styles contributing to current popular dance. Technique, style, and presentation will be stressed. This course may be repeated three times for credit. Prerequisite: DNC 286. 1 (0-2)

**290 Free-Style Ballroom** **Two credits**

A course designed for the advanced ballroom dancer to develop and perfect techniques in free-style exhibition. The student will be introduced to the principles of competition dancing. The successful student will select a dance to perform in class, utilizing free-style techniques, poise and advanced movement patterns. Students will perform publicly. This course may be repeated three times for credit. Prerequisite: DNC 283. 2 (1-2)

**291 Swing/Ballroom** **One credit**

Intensive study in the techniques, patterns, music and style of swing dances. Students will evaluate the differences in movement, rhythms, and techniques of contributing styles in the development of the swing dances, and the current popularity of swing in relation to the era that produced it. This course may be repeated three times for credit. 1 (0-2)

**292 Cha-Cha/Ballroom** **One credit**

Intensive study in the techniques, patterns, music and style of the Cha-cha. Students will evaluate the differences in movement, rhythms, and techniques of contributing styles in the development of the cha-cha and its current popularity in relation to the era that produced it. This course may be repeated three times for credit. 1 (0-2)

**293 Samba/Ballroom** **One credit**

Intensive study in the techniques, patterns, music and style of the samba. Students will evaluate the differences in movement, rhythms, and techniques of contributing styles in the development of the samba and its current popularity in relation to the era that produced it. This course may be repeated three times for credit. 1 (0-1)

**294 Tango/Ballroom** **One credit**

Intensive study in the techniques, patterns, music, and style of the tango. Students will evaluate the differences in movement, rhythms, and techniques of contributing styles in the development of the tango and its current popularity in relation to the era that produced it. This course may be repeated three times for credit. 1 (0-2)

**Music Program**

The Music Program at Lansing Community College recognizes the ever-growing need and demand for music of all types in contemporary society.

As an integral part of the community, the Music Program seeks to provide a stimulating environment for the education and cultural life of students on campus as well as for citizens in the community.

The educational program is three-fold: Music Transfer for those students planning to transfer to a four-year institution; Music Transfer/Voice Performance Emphasis—a curriculum designed for transfer voice students desiring to acquire advanced performance skills; Pop Rock Career/Performance or Composition emphasis for those students planning a career in these specialized areas of music.

**Music Transfer**

Through the Music Transfer Program, talented young musicians are provided an opportunity to commence their formal music education in an environment of greater individual attention. The program provides the course work for the first two years of a four-year degree.

**Pop Rock Career/Performance or Composition Emphasis**

Specialized career training is provided in the area of Pop Rock music, with instructors/performers who have been selected to lend attentive, highly individualized instruction. A one-year Certificate or two-year Associate Degree is offered by Lansing Community College in both fields.

**Performing Organizations**

Choral and instrumental ensembles, open by audition to all eligible students in the College, are trained and conducted by members of the department staff. Interested students should apply for membership through the music program office, or by contacting the conductor of the ensemble in which they are interested. The student at Lansing Community College may choose from a wide variety of music organizations.

All Music Theory students are required to engage in at least one activity in the performing music classes; more than one is encouraged for cultural and professional growth and development.

**COURSE DESCRIPTIONS****Music (MUS)****101 LanSwingers** **One credit**

A carefully selected vocal and instrumental ensemble that participates almost exclusively in jazz, swing, and pop choral performance. 1 (0-2)

**102 Lansing Women's Glee Club** **One credit**

An ensemble of female vocalists composed of students and community members which develops general musicianship and provides training in choral singing. Meets Tuesday and Thursday noon. 1 (0-2)

**104 Lansing Men's Glee Club** **One credit**

A choral group composed of students and men within the community performing music from all periods. 1 (0-2)

**106 Lansymphonic Choral Society** **One credit**

A civic-college choral organization whose members learn and perform the master works which have been composed for large chorus or for chorus and orchestra. Prerequisite: Audition. 1 (0-3)

**107 Opera Workshop** **Two credits**

A complete opera performance designed to allow students to observe and understudy advanced singing in operatic roles. Prerequisite: Audition. 2 (1-2)

**108 Opera Workshop—Spring Term** **Two credits**

A course designed to provide opera performance experience for LCC voice majors, with exposure to acting, singing and production techniques. The class is offered spring term and culminates in a student performance of opera or operatic scenes. Prerequisite: Audition. 2 (1-2)

**109 Lansing Concert Choir** **One credit**

Members are selected for their musicianship and quality of voice. The Lansing Concert Choir draws its repertoire from the vast wealth of choral chamber music from the Renaissance to the avant-garde. Prerequisite: Instructor approval. 1 (0-3)

**110 Lansing Tudors** **One credit**

A small selected group of musically and vocally talented students interested in singing Madrigal music of the 14th through the 18th centuries or other music for small ensembles. Prerequisite: Instructor approval. 1 (0-2)

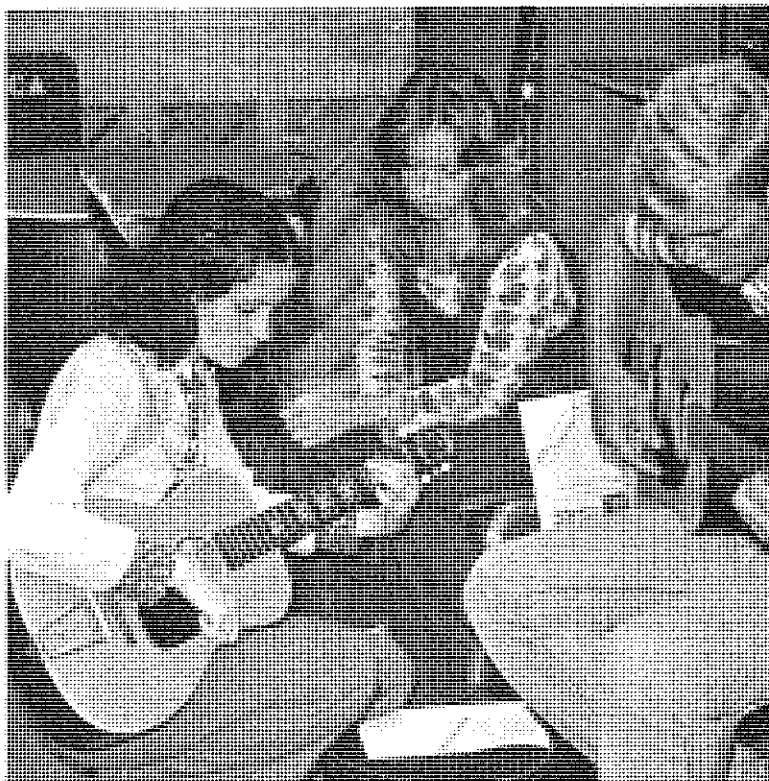
**111 LCC Gilbert & Sullivan** **Two credits**

A performance oriented course for intermediate and advanced singers wishing to acquire practical stage experience in the field of the classical operetta. Students will rehearse and perform at least one work per term. Prerequisite: Audition. 2 (1-2)

- 113 Summer Musical Chorus** **One credit**  
LCC's annual summer musical chorus. Members are selected for their acting as well as singing ability and past performance experience. Prerequisite: Audition. 1 (0-3)
- 114 Career Singers** **One credit**  
A small vocal performing group with choreography and instrumental accompaniment. For mature, experienced singers who will perform individual solos in addition to singing in the ensemble. Prerequisite: Instructor approval. 1 (0-3)
- 115 Barbershop Men** **One credit**  
A course designed to provide choral training in the style of Barbershop. Suggested elective for all Music Education majors. Prerequisite: Instructor approval. 1 (0-2)
- 116 Barbershop Women** **One credit**  
A course designed to provide choral training in the style of Barbershop. Suggested elective for all Music Education majors. Prerequisite: Instructor approval. 1 (0-2)
- 117 Lansing Area Honor's Choir** **One credit**  
A choir designed for outstanding area high school singers interested in further choral and theory study. Prerequisite: Audition. 1 (0-3)
- 118 Lansing Area Honors Band** **One credit**  
A performance class for Lansing area high school band students. The band will meet Saturday mornings, giving performances throughout the school year. The group will play band music from various periods and is geared to the talented high school band student in the area served by LCC. Prerequisite: Instructor approval. 1 (0-3)
- 119 Lansing Concert Band** **One credit**  
A community band composed of people from all walks of life and all ages, serving also as the VFW and American Legion Band. The group holds at least 25 concerts throughout the year, playing all types of music, but concentrating mainly on traditional concert band literature. Prerequisite: Instructor approval. 1 (0-3)
- 120 Musical Comedy Workshop** **Two credits**  
Emphasized will be development of musical comedy vocal, acting, and stage movements skills. Each student will perform in one or more musical comedy numbers as an end-of-term performance project. Prerequisite: Audition. 2 (1-2)
- 121 Lansing Chamber Orchestra** **One credit**  
Music major instrumentalists and community musicians would attend this course for orchestra experience. Prerequisite: Audition. 1 (0-3)

- 122 Jazz Improvisation I** **One credit**  
An ensemble created to develop jazz improvisational skills and techniques. Prerequisite: Some experience. 2 (1-1)
- 123 Jazz Ensemble** **One credit**  
A small group playing in the jazz idiom. Ensemble playing and some soloing. Jazz theory instruction included in the course. Prerequisite: Some experience. 2 (1-1)
- 124 Jazz Combo** **One credit**  
An extension of the jazz ensemble concept. Jazz theory instruction included in the course. Prerequisite: Some experience. 2 (1-1)
- 125 Evening Jazz Group** **One credit**  
A group formed for interested jazz players from within the community. Ensemble playing and some soloing. Prerequisite: Some experience. 2 (1-1)
- 126 Lansing A Cappella Choir** **One credit**  
An advanced performing group, knowledgeable in good tone production, blend, and rhythm. Prerequisite: Instructor approval. 1 (0-3)
- 127 Brass Choir** **One credit**  
This course is directed to more advanced players of brass instruments. The ensemble should have about ten members and plays traditional brass choir music. Prerequisite: Instructor approval. 1 (0-3)
- 128 Musical Comedy Review** **One credit**  
A course designed primarily to select students through audition and produce a staged and choreographed review of musical comedy numbers. 1 (0-3)
- 129 Tent Show Review** **One credit**  
A course designed to produce a show each spring with an "old time tent show" flavor. Students will be auditioned to participate. 1 (0-3)
- 130 Classical Guitar** **Two credits**  
An ensemble class for students of the classic, nylon string guitar. Students will meet together twice a week for 50 minutes. Materials will be drawn from classic guitar artists compositions, etudes and studies of Carcassi, Aguade, Carulli, Sor, Tarrega, etc. Much time will be spent on basic technique, reading music, memorizing music, ear training, building dexterity and speed, and developing tone color and musical phrasing. Prerequisite: Instructor approval. 2 (1-1)
- 133 Folk Guitar I** **Two credits**  
Introduction to various aspects of playing folk guitar. Course material covers fingerpicking techniques in pattern picking, playing melodies, and flat picking techniques for beginning bluegrass guitar styles. Open to students familiar with basic guitar chords. Prerequisite: Instructor approval. 2 (1-1)

- 134 Folk Guitar II** **Two credits**  
Prerequisite: Music 133. 2 (1-1)
- 135 Folk Guitar III** **Two credits**  
Prerequisite: Music 134. 2 (1-1)
- 136 Beginning Banjo** **Two credits**  
For students interested in receiving banjo instruction on the beginners level. Student provides own instrument. 2 (1-1)
- 137 Blue Grass Banjo** **Two credits**  
For students able to play the banjo desiring to be introduced to the Blue Grass style of playing. Student provides own instrument. 2 (1-1)
- 138 Class Piano/Majors** **Two credits**  
Limited to music majors. A course designed to help students gain keyboard facility, skill in sight reading, and ability to transpose. Pieces up to grade two are studied. A basic knowledge of the musical notation is assumed. The electronic piano lab is utilized in both individual and group playing. Prerequisite: Transfer only. 2 (1-1)



- 139 Class Piano/Majors** **Two credits**  
A continuation of 138. Prerequisite: MUS 138. 2 (1-1)
- 140 Class Piano/Majors** **Two credits**  
A continuation of 139. Prerequisite: MUS 139. 2 (1-1)
- 141 Class Piano/Majors** **Two credits**  
A continuation of 140. Prerequisite: MUS 140. 2 (1-1)
- 142 Class Piano/Majors** **Two credits**  
A continuation of 141. Prerequisite: MUS 141. 2 (1-1)
- 143 Class Piano/Majors** **Two credits**  
A continuation of 142. Prerequisite: MUS 142. 2 (1-1)
- 144 Keyboard/Beginner** **Two credits**  
Beginning instruction in an electronic piano lab. Student will progress at own speed. Intended as a beginning piano course for non-majors who have little or no piano background. 2 (1-1)
- 145 Keyboard/Beginner** **Two credits**  
Continuation of 144. Prerequisite: MUS 144. 2 (1-1)
- 146 Keyboard/Beginner** **Two credits**  
Continuation of 145. Prerequisite: MUS 145. 2 (1-1)
- 147 Intermediate Piano** **Two credits**  
Continuation of 146. Prerequisite: MUS 146. 2 (1-1)
- 148 Intermediate Piano** **Two credits**  
Continuation of 147. Prerequisite: MUS 147. 2 (1-1)
- 149 Intermediate Piano** **Two credits**  
Continuation of 148. Prerequisite: MUS 148. 2 (1-1)
- 150 Advanced Piano** **Two credits**  
Continuation of 149. Prerequisite: MUS 149. 2 (1-1)
- 151 Advanced Piano** **Two credits**  
Continuation of 150. Prerequisite: MUS 150. 2 (1-1)
- 152 Advanced Piano** **Two credits**  
Continuation of 151. Prerequisite: MUS 151. 2 (1-1)
- 153 Keyboard Sight Reading** **Two credits**  
Students gain an awareness of the primary musical factors crucial to a musical first reading of a composition. Students increase the fluency and accuracy of their response to these musical factors through four-hand, six-hand, or eight-hand ensemble playing. Prerequisite: Advanced beginners. 2 (1-1)

- 154 Keyboard Sight Reading** **Two credits**  
Continuation of 153. Prerequisite: MUS 153. 2 (1-1)
- 155 Keyboard Sight Reading** **Two credits**  
Continuation of 154. Prerequisite: MUS 154. 2 (1-1)
- 156 Keyboard Skills** **Two credits**  
This course is for the development of greater technical keyboard ability. 2 (1-1)
- 157 Keyboard Skills** **Two credits**  
A continuation of 156. Prerequisite MUS 156. 2 (1-1)
- 158 Keyboard Skills** **Two credits**  
A continuation of 157. Prerequisite MUS 157. 2 (1-)
- 159 Piano Pedagogy** **Two credits**  
Discussion of teaching principles applying to students at elementary and intermediate levels, together with consideration of suitable repertoire. Designed to assist piano majors and area piano teachers. Prerequisite: Advanced skills. 2 (1-1)
- 160 Piano Pedagogy** **Two credits**  
Prerequisite: MUS 159. 2 (1-1)
- 161 Piano Pedagogy** **Two credits**  
Prerequisite: MUS 160.
- 162 Survey/Piano Literature** **Two credits**  
A survey through performance, discussion, and recordings of standard literature for piano. Designed to assist piano majors and area piano teachers. Prerequisite: Advanced skills. 2 (1-1)
- 163 Survey/Piano Literature** **Two credits**  
Prerequisite: MUS 162. 2 (1-1)
- 164 Survey/Piano Literature** **Two credits**  
Prerequisite: MUS 163. 2 (1-1).
- 165 Class Piano/Pop** **Two credits**  
Class piano instruction in an electronic piano lab with emphasis on popular music. Students will progress at their own rate. This course is designed for those enrolled in a career curriculum. 2 (1-1)
- 168 Class Organ/Pop** **Two credits**  
Class organ instruction in an electronic organ lab with emphasis on popular music. Students will progress at their own rate. This course is designed for those enrolled in a career curriculum. 2 (1-1)
- 169 Survey/Piano Literature** **Three credits**  
A course concentrating on familiarizing area piano teachers with suitable piano material for students on all levels. 3 (2-1)

- 170 Music/Independent Study** **Two credits**  
A course designed to provide a broader opportunity for students pursuing studies (research, performing, etc.) in an area not normally offered in regular course work. Prerequisite: Instructor approval. 2 (1-1)
- 171 Music/Independent Study** **Four credits**  
A course designed to provide a broader opportunity for students pursuing studies (research, performing, etc.) in an area not normally offered in regular course work. Prerequisite: Instructor approval. 4 (2-2)
- 172 Fundamentals of Music I** **Three credits**  
A one-term course for students with either limited or no musical training. Notation of pitch and rhythm, musical terminology, and the principles of rhythmic and melodic reading will be stressed, along with a basic introduction to musical scales, key signatures, intervals, and chords. A prerequisite for Music 173. Waiver exam may be taken. 3 (2-1)
- 173 Basic Musicianship 4 (2-3)** **Four credits**
- 174 Basic Musicianship** Prerequisite: MUS 173. 4 (2-3) **Four credits**
- 175 Basic Musicianship** Prerequisite: MUS 174. 4 (2-3) **Four credits**  
A sequence of courses in music theory as a freshman year requirement for a Bachelor of Music or similar four-year college degree including the full series of ear training, sight singing and dictation.
- 176 Advanced Musicianship** Prerequisite: MUS 175. 4 (2-3) **Four credits**
- 177 Advanced Musicianship** Prerequisite: MUS 176. 4 (2-3) **Four credits**
- 178 Advanced Musicianship** Prerequisite: MUS 177. 4 (2-3) **Four credits**  
A sequence of courses in music theory as a sophomore year requirement for a Bachelor of Music or similar four-year college degree including the full series of ear training, sight singing, and dictation.
- 179 Class Voice/Majors** **Two credits**  
The fundamentals of posture and breath control; instruction in the phonetic approach to the pronunciation of English and Italian. The performance of the language utilizes the vocal literature of major composers in the respective field of vocal literature. Voice transfers. 2 (1-1)
- 180 Class Voice/Majors** **Two credits**  
Continuation of 179 with instruction in the phonetic approach to the pronunciation of French designed for singers. The performance of the languages utilizes the song literature of major composers of the French chanson. Prerequisite: MUS 179. 2 (1-1)
- 181 Class Voice/Majors** **Two credits**  
Continuation of 180 with instruction in the phonetic approach to the pronunciation of German designed for singers. The performance of the language utilizes the song literature of major composers of German lieder. Prerequisite: MUS 180. 2 (1-1)



- 182 Class Voice/Non-Majors** **Two credits**  
A classroom approach to the study of singing. Group and individual work on classic literature and study of important vocal techniques such as breathing, tone production, diction, phrasing and style. Some pop music will be included. This class is recommended as a prerequisite to private voice lessons. 2 (1-1)
- 183 Class Voice/Non-Majors** **Two credits**  
Continuation of 182. Prerequisite: MUS 182. 2 (1-1)
- 184 Class Voice/Non-Majors** **Two credits**  
Continuation of 183. Prerequisite: MUS 183. 2 (1-1)
- 185 Class Instrument** **Two credits**  
Designed to prepare students to teach instrumental music. Covers organization of beginning classes, special problems of strings, selection of suitable materials, techniques of teaching, public relations and other areas of interest in the development of orchestras and bands. Special emphasis placed on music for grades 4-9. Prerequisite: Instrument majors only. 2 (1-1)
- 186 Class Instrument** **Two credits**  
Continuation of 185. Prerequisite: MUS 185. 2 (1-1)
- 187 Class Instrument** **Two credits**  
Continuation of 186. Prerequisite: MUS 186/ 2 (1-1)
- 188 Class Guitar I** **Two credits**  
An ensemble class for beginning students of the guitar, or those who have little playing experience. Students will learn note reading and music theory as they learn to play single note melody lead and chord accompaniment. Materials are drawn from the folk, blues, and classical traditions of the instrument. Both "finger-style" and "flat-pick" techniques are introduced. Any type of guitar may be used by the students in the class: nylon string or steel string acoustic, hollow body electric, solid body electric or four- or six-string bass guitar. Student should provide own instrument. 2 (1-1)
- 189 Class Guitar I** **Two credits**  
Continuation of 188. Prerequisite: MUS 188. 2 (1-1)
- 190 Class Guitar I** **Two credits**  
Continuation of 189. Prerequisite: MUS 189. 2 (1-1)
- 191 Class Guitar II** **Two credits**  
Continuation of 190. Prerequisite: MUS 190. 2 (1-1)
- 192 Class Guitar II** **Two credits**  
Continuation of 191. Prerequisite: MUS 191 2 (1-1)
- 193 Class Guitar II** **Two credits**  
Continuation of 192. Prerequisite: MUS 192. 2 (1-1)

- 194 Class Guitar III** **Two credits**  
Continuation of 193. Prerequisite: MUS 193. 2 (1-1)
- 195 Class Guitar III** **Two credits**  
Continuation of 194. Prerequisite: MUS 194. 2 (1-1)
- 196 Class Guitar III** **Two credits**  
Continuation of 195. Prerequisite: MUS 195. 2 (1-1)
- 198 Community Concert Review** **Two credits**  
A course designed for community concert goers seeking to further understand and appreciate the music being performed in various community concerts throughout each term. 2 (2-0)
- 199 Music Appreciation** **Two credits**  
Designed specifically for the non-music major to give a general knowledge of musical structure, composers, compositions, terms, and the relationship of music to other arts. 2 (2-0)
- 200 Basic Music/Elementary Teachers** **Four credits**  
Designed to provide the Elementary Teacher major with the basic skills to teach music in the classroom. Meets State Department of Education certification requirements for elementary classroom teachers. Prerequisite: Pretest. 4 (4-0)
- 201 Orff Methods** **Two credits**  
A supplemental course to MUS 200 designed to give the elementary classroom teacher further musical classroom skills through the demonstration of Orff methods and instruments. Prerequisite: Music 200. 2 (1-1)
- 202 Kodaly Methods** **Two credits**  
A supplemental course to MUS 200 designed to give the elementary classroom teacher assistance in teaching Kodaly methods of music instruction. Prerequisite: Music 200. 2 (2-1)
- 203 Orff/Kodaly Seminar** **Two credits**  
A seminar designed to supplement MUS 200 with Orff and Kodaly instruction. Prerequisite: Music 200. 2 (1-1)
- 204 Beginning Recorder** **Two credits**  
A supplemental course to MUS 200 for elementary classroom teachers, music teachers, and those interested in beginning instruction on the soprano recorder. Prerequisite: Music 200 or 172. 2 (1-1)
- 205 Private Voice/Majors** **Three credits**  
Private voice instruction, once a week, for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 3 (0-5)

**206 Private Voice/Majors** **Two credits**

Ten 40-minute private voice lessons for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term.

All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 2 (0-3)

**207 Private Instrument/Majors** **Three credits**

Ten one-hour private lessons on major instrument for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 3 (0-5)

**208 Private Instrument/Majors** **Two credits**

Ten 40-minute private lessons on major instrument for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 2 (0-3)

**209 Private Keyboard/Majors** **Three credits**

Ten one-hour private piano or organ lessons for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 3 (0-5)

**210 Private Keyboard/Majors** **Two credits**

Ten 40-Minute lessons. Private piano or organ lessons for transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 2 (0-3)

**211 Private Guitar/Majors** **Three credits**

Ten one-hour private guitar lessons for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 3 (0-5)

**212 Private Guitar/Majors** **Two credits**

Ten 40-minute private guitar lessons for music transfer students only. Acceptance into this level will be by audition only. Auditions will occur the first Friday of fall and winter term or may be requested during juries, fall and spring term. All students not accepted into the MUS 205 or 206 level must take private lessons for non-majors and reaudition when capable of meeting the established criterion. 2 (0-3)

**213 Private Voice/Non-Majors** **Three credits**

Designed for non-major voice students desiring one hour of private voice instruction. Acceptable elective credits for curriculum codes 942 and 943. 3 (0-5)

**214 Private Voice/Non-Majors** **Two credits**

Designed for non-major voice students desiring 40 minutes of private voice instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 2 (0-2)

**215 Private Voice/Non-Majors** **One credit**

Designed for non-major voice students desiring 30 minutes of private voice instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 1 (0-1)

**216 Private Instrument/Non-Majors** **Three credits**

Designed for non-major instrumental students desiring one hour of private instruction weekly. Acceptable elective credits for curriculum codes 942 and 943. 3 (0-5)

**217 Private Instrument/Non-Majors** **Two credits**

Designed for non-major instrumental students desiring 40 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 2 (0-3)

**218 Private Instrument/Non-Majors** **One credit**

Designed for non-major instrumental students desiring 30 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 1 (0-1)

**219 Private Keyboard/Non-Majors** **Three credits**

Designed for non-major keyboard students desiring one hour of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 3 (0-5)

**220 Private Keyboard/Non-Majors** **Two credits**

Designed for non-major keyboard students desiring 40 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 2 (0-3)

- 221 Private Keyboard/Non-Majors** **One credit**  
Designed for non-major keyboard students desiring 30 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 1 (0-1)
- 222 Private Guitar/Non-Majors** **Three credits**  
A course for non-major guitar students desiring one hour of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 3 (0-5)
- 223 Private Guitar/Non-Majors** **Two credits**  
A course for non-major guitar students desiring 40 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 2 (0-3)
- 224 Private Guitar/Non-Majors** **One credit**  
A course for non-major guitar students desiring 30 minutes of private instruction weekly throughout the term. Acceptable elective credits for curriculum codes 942 and 943. 1 (0-1)
- 225 Introduction to Opera** **Three credits**  
A course designed for the student with little knowledge or background in opera. Various types of opera, operetta, and musical comedy will be studied using films, records, and other source materials to facilitate presentation. Acceptable elective credits for curriculum codes 942 and 943. 3 (3-0)
- 227 Conducting/Majors** **Two credits**  
Fundamentals of baton technique, score reading, interpretation of instrumental and vocal music, and rehearsal techniques. Prerequisite: Sophomore majors only. 2 (1-1)
- 228 Conducting/Majors** **Two credits**  
Continuation of 227. Prerequisite: 227. 2 (1-1)
- 229 Conducting/Majors** **Two credits**  
Continuation of 228. Prerequisite: 228. 2 (1-1)
- 230 Church Choir Conducting** **Two credits**  
Designed for area church choir conductors, giving practical information concerning improved conducting techniques and church choir literature review. Acceptable elective credits for curriculum codes 942 and 943. 2 (1-1)
- 231 Church Choir Conducting** **Two credits**  
Continuation of 230. Prerequisite: MUS 230. 2 (1-1)
- 232 Music Seminar** **One credit**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum codes 942 and 943. Prerequisite: Departmental approval. 1 (1-0)

- 233 Music Seminar** **Two credits**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum codes 942 and 943. Prerequisite: Departmental approval. 2 (1-1)
- 234 Music Seminar** **Three credits**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum codes 942 and 943. Prerequisite: Departmental approval. 3 (2-1)
- 235 Harmonica** **One credit**  
A basic introductory course demonstrating the sound techniques employed in the mastery of the harmonica. Acceptable elective credit for music education majors. 1 (0-1)
- 236 Bagpiping** **Two credits**  
A beginning course in the art of Scottish bagpiping. Acceptable elective credit for music education majors. 2 (1-1)
- 237 History/Musical Comedy** **Three credits**  
A practical overview of the American Musical Comedy. Students will read and study 12 musical comedies written between 1900-1970. 3 (3-0)
- 238 Musical Theatre Movement** **Two credits**  
A practical workshop in theatre technique. Includes work in body alignment, theatre games, and role preparation. Develops spatial and group awareness, onstage focus, theatrical truthfulness and spontaneity, etc. Interrelation of music and dramatic validity and ability to deal effectively with individual problems. Required course for curriculum code 943. Suggested elective for 942. 2 (1-1)
- 239 Musical Theatre Movement II** **Two credits**  
Continuation of 238. Prerequisite: MUS 238. 2 (1-1)
- 240 Music History I** **Three credits**  
A thorough study of music from Ancient Greece through Romanesque and Gothic periods, concluding with the Renaissance, Greek theory and "ethos"; age of plain song, development of polyphony. Required course for all transfer music majors. Prerequisite: Sophomore transfers. 3 (3-0)
- 241 Music History II** **Three credits**  
Baroque and classical periods with special attention to fugue, opera, oratorio, sonata, and symphony. Characteristic works analyzed. Prerequisite: MUS 240. 3 (3-0)
- 242 Music History III** **Three credits**  
Romantic, impressionistic, and contemporary periods studied. A comprehensive final examination is administered covering MUS 240, 241, and 242. Prerequisite: Music 241. 3 (3-0)

- 245 Pop Rock Theory** **Three credits**  
An introduction to the patterns behind chords, scales and harmonic movement. Learn to read music. 3 (3-0)
- 246 Pop Rock Theory** **Three credits**  
Begins with a review of major and minor scale construction, the circle of fifths and basic harmonic progressions. The course leads the student through modulations, secondary dominant chords and a deeper understanding of chord movement. Prerequisite: MUS 245. 3 (3-0)
- 247 Pop Rock Theory** **Three credits**  
Topics include chord construction (review), harmonic continuity, chord symbols, open harmony, and four part harmonization of a given melody. Prerequisite: MUS 246. 3 (3-0)
- 248 Pop Rock Theory** **Three credits**  
Studies in black harmonization, melodic analysis, chord tones, non-chord, non-approach tones, scalewise approach tones, chromatic approach tones, rhythmic anticipation, open voicing of modern harmonization, tensions-resolves. Prerequisite: MUS 247. 3 (3-0)
- 249 Pop Rock Theory** **Three credits**  
Principles of background writing. Topics include chord note lead, unresolved tensions in lead, approach notes, sequence and background styles. Prerequisite: MUS 248. 3 (3-0)
- 250 Pop Rock Theory** **Three credits**  
Advanced principles of harmonic progression. Topics include substitute chords, cadence, repetition of the I-I-V progression, passing diminished chords, deceptive cadences. Prerequisite: MUS 249. 3 (3-0)
- 251 Lennon/McCartney** **Two credits**  
A historical survey of musical analysis of the most influential songwriting team of the 1960's. Topics include stylistic evolution, social context, musical roots, and the continuing influence of the Beatles. 2 (2-0)
- 252 History of Rock** **Two credits**  
A different lecturer each term will examine an aspect of the roots of rock'n roll. Topics include a history of recorded blues and music and social change. 2 (2-0)
- 253 Business of Music** **Three credits**  
Varied lectures throughout the term by professional musicians, booking agents, union officials, recording artists, etc. with the intent of assisting the students in understanding the pitfalls of the profession, how to avoid them, and how to succeed. 3 (3-0)
- 254 Business of Music** **Three credits**  
Continuation of MUS 253. Prerequisite: MUS 253. 3 (3-0)

- 255 Class Voice/Pop** **Two credits**  
A classroom approach to the study of singing. Class and individual work on assigned pop music and study of important vocal techniques. Pop, jazz, and rock music. This class is recommended as a prerequisite to private voice lessons. 2 (1-1)
- 256 Class Voice/Pop** **Two credits**  
Continuation of MUS 255. Prerequisite: MUS 255. 2 (1-1)
- 257 Class Voice/Pop** **Two credits**  
Continuation of MUS 256. Prerequisite: MUS 256. 2 (1-1)
- 258 Rock 'N Roll Piano** **Two credits**  
An introduction to the keyboard and reading music. Principles of improvisation. Topics include chord construction, voicing and playing from chord symbols, major, minor, and blues construction. 2 (1-1)
- 259 Rock 'N Roll Piano** **Two credits**  
Continuation of MUS 258. Prerequisite: MUS 258. 2 (1-1)
- 260 Rock 'N Roll Piano** **Two credits**  
Continuation of 259. Prerequisite: MUS 259. 2 (1-1)
- 261 Songwriting** **Three credits**  
Leads the beginning songwriter through notation practice, song form, harmonization of original melodies, text setting and lead sheetwriting to the creation of background music for a documentary film and feature music. Prerequisite: MUS 245. 3 (2-1)
- 262 Songwriting** **Three credits**  
Continuation of MUS 261. Prerequisite: MUS 261. 3 (2-1)
- 263 Arranging** **One credit**  
Planning and writing an arrangement. Topics include discussions of ranges and technical possibilities of brass, strings, reeds, and electric instruments, their voicing possibilities and performance considerations. Prerequisite: Instructor approval. 1 (1-0)
- 264 Pop/Rock Independent Study** Instructor Approval 2 (1-1) **Two credits**
- 265 Pop/Rock Independent Study** Instructor Approval 4 (2-3) **Four credits**
- 266 Pop/Rock Independent Study** Instructor Approval 6 (3-3) **Six credits**  
These courses provide a broader opportunity for pop/rock students in pursuing studies, research, etc., than would normally be offered in regular course work. The student chooses a topic of concentration which must be approved by the Music Program Director.

- 267 Performers Band** **Two credits**  
The performance band for pop/rock students. Emphasis will be placed on developing and upgrading student competence and effectiveness as a "pop" performer. Prerequisite: Audition. 2 (0-3)
- 268 Writers Band** **Two credits**  
For songwriters/performers, this ensemble performs only original material. Composers learn to arrange their material for rock band instrumentation. Prerequisite: Instructor approval. 2 (2-0)
- 269 Recording Band** **Two credits**  
This group rehearses and records in an eight-track recording studio where such recording techniques as overdubbing, performing to click tracks, mixing and editing, etc. are covered. Prerequisite: Audition. 2 (0-3)
- 270 Rock Guitar I** Prerequisite: None 2 (1-1) **Two credits**
- 271 Rock Guitar II** Prerequisite: MUS 270 2 (1-1) **Two credits**  
Consecutive courses of classroom guitar instruction for the beginner or intermediate to advanced pop rock guitarist. Learn to take solos from records and perform pop guitar ensemble music in the classroom.
- 272 Pop Vocal Ensemble** **Two credits**  
A Pop Rock performing group, the ensemble will concentrate on contemporary pop rock vocal arrangements and the art of backup singing. Prerequisite: Audition. 2 (0-4)
- 273 Pop Rock Seminar** **One credit**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum code 945. Prerequisite: Departmental approval. 1 (1-0)
- 274 Pop Rock Seminar** **Two credits**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum code 945. Prerequisite: Departmental approval. 2 (1-1)
- 275 Pop Rock Seminar** **Three credits**  
The subject matter will vary from term to term according to special needs of the students. All seminars will be approved in advance by faculty. Offered on demand. Acceptable elective credits for curriculum code 945. Prerequisite: Departmental approval. 3 (2-1)
- 276 Lyric Writing** **Three credits**  
The art of text setting in pop rock music examined through its lyrics. Reflections of social and technological change will be studied and original material will be critiqued and made available to songwriters. 3 (3-0)

- 277 Private Songwriting Lessons** **One credit**  
Professional coaching for the songwriter wishing to write and copyright original compositions. The student receives individual attention and suggestions regarding harmony, chord substitution, and formal design. 30 minutes per week. Prerequisite: MUS 245 or 276. 1 (0-1)
- 278 Private Songwriting Lessons** **Two credits**  
Professional coaching for the songwriter wishing to write and copyright songs. The student receives individual attention and suggestions regarding harmony, chord substitution, and formal design. 40 minutes per week. Prerequisite: MUS 245 or 276. 2 (0-3)
- 279 Private Songwriting Lessons** **Three credits**  
Professional coaching for the songwriter wishing to write and copyright songs. The student receives individual attention and suggestions regarding harmony, chord substitution, and formal design. 1 hour per week. Prerequisite: MUS 245 or 276. 3 (0-5)
- 280 Rock Percussion** **Two credits**  
An introductory class in basic percussion techniques with emphasis on rock rhythms and concepts. 2 (1-1)
- 281 Advanced Rock Percussion** **Two credits**  
A continuation of 280. Prerequisite MUS 280. 2 (1-1)
- 282 Private Voice/Pop** **One credit**  
Private vocal instruction emphasizing pop production. One half hour lesson per week for eleven weeks. 1 (0-1)
- 283 Private Voice/Pop** **Two credits**  
Same as 282. 40-minute lesson per week for eleven weeks. 2 (0-3)
- 284 Private Voice/Pop** **Three credits**  
Same as 282. 60-minute lesson per week for eleven weeks. 3 (0-5)
- 285 Private Instrument/Pop** **One credit**  
Private instrumental instruction emphasizing pop technique and style. One half hour lesson per week for eleven weeks. 1 (0-1)
- 286 Private Instrument/Pop** **Two credits**  
Same as 285. 40-minute lesson per week for eleven weeks. 2 (0-3)
- 287 Private Instrument/Pop** **Three credits**  
Same as 285. 60-minute lesson per week for eleven weeks. 3 (0-5)

### Theatre Program

Theatre at Lansing Community College offers the student a variety of theatrical learning experiences. Performing groups include Suitcase Theatre, Childrens Theatre, Street Theatre, and the Boarshead Players.

Classes are offered in diverse facets of theatre from acting/directing and a wide range of technical courses to opportunities in the performing groups. In addition, many of the courses are offered in collaboration with the Boarshead Players, thus providing learning and classroom experiences in the atmosphere of a professional theatre.

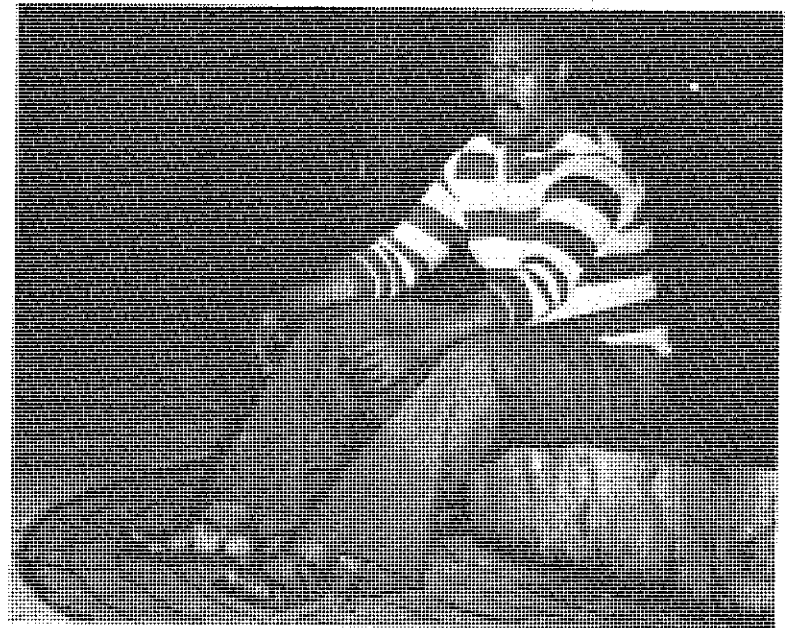
The Theatre Program offers a variety of degrees including the Theatre Technician Associate Degree for transfer, designed for the student who wishes to develop a knowledge of technical theatre and continue education in theatre at a four-year institution. There are two career-oriented Associate Degree programs: the first, the Performing Arts Career Course, offers an Associate Degree in career training, with emphasis on acting and performing; the second, the Theatre Technician Associate Degree—Career, offers intense training for practical productions at LCC and local establishments.

### COURSE DESCRIPTIONS

#### Theatre (THR)

- 105 Introduction to Theatre** **Three credits**  
An introduction to the various elements in theatre including the audience, the playwright, the director, the actors, and the technical aspects. Students will examine theatre production and the methods by which it should be evaluated. 3 (3-0)
- 115 Play Production** **Three credits**  
Designed to introduce the practical problems of producing a play for an audience. The course will emphasize the fundamental production principles of a play for church, school, or community. 3 (3-0)
- 120 Technical Theatre I** **Three credits**  
An introduction to the equipment and technology of fundamental stage scenery construction with emphasis on tool usage and safety. The course will cover the scenic elements of a play production, analysis of the beginning basic forms of visual design, and application of basic elements of scenery construction. 3 (2-2)
- 121 Technical Theatre II** **Three credits**  
An introduction to the lighting elements of play production. The student will analyze the basic fundamentals involved in stage lighting, theatre electrical systems, and cueing for productions with lighting plot interpretations. Students will receive instruction in stage electrical systems, dimmer systems, lighting instruments used for stage lighting, and the use of light plots and cueing for stage productions. Prerequisite: Theatre 120 or approval. 3 (2-2)

- 122 Technical Theatre III** **Three credits**  
An introduction to the elements of scene painting for theatre. Students will examine the styles of past and present scenic artists, mixing of color mediums, and the techniques of scene painting from designer's elevations and renderings. Prerequisite: Theatre 121 or approval. 3 (2-2)
- 135 Performing Arts Practicum** **Three credits**  
An introduction to the methods, techniques, and resources necessary for securing professional employment in the performing arts. Students will compile a resume of performing experience and photographic composite. Discussions will be held on "show business" periodicals and resources, contracts, salaries, unions, and the audition procedure. Prerequisite: Instructor approval. 3 (2-1)
- 136 Production Crew Call** **Four credits**  
A practice course to give students experience with the actual duties of the technical theatre worker. 4 (3-1)
- 137 Drafting Theatre Design** **Three credits**  
An introduction to the fundamentals of theatrical design and the communication of design. Students will draw a rough sketch of a set design or lighting design, and convert the sketch and/or renderings into scale floor plans and construction drawings. 3 (2-1)
- 139 Sketching for Theatre** **Three credits**  
A studio course covering the basic drawing techniques and materials used in the theatrical design process. 3 (2-2)



**141 PACC-Theatre I****Six credits**

Development of the physical, vocal and improvisational skills necessary to sustain public performance. This includes directly relevant skills, such as improvisation, vocal production, articulation and stage fencing. The combined approach: acting, voice, fencing, emphasizes in lab hours the physical strength necessary for a characterization. The student should be able, upon completion, to concentrate fully upon the acting task at a fundamental level; to generate and sustain full vocal tone; to perform adequately the rudimentary positions of stage fencing. At the conclusion of this term the student should be aware of physical limitations and of the sincerity of commitment to the craft. Daily attendance and performance in class and related duties within a professional theatre structure will introduce the disciplines and customs of the field. Prerequisite: Departmental approval. 6 (3-6)

**142 PACC Theatre II****Six credits**

Continuation of THR 141. Improvisational techniques advance to more complicated role playing; vocal control will expand to include correct breathing for poetry and prose; standards of pronunciation will be introduced; fencing will expand to timed stage fights under controlled conditions. At the conclusion of the term, the student should be able to concentrate on the solution of more complex stage problems; to speak in a controlled manner with standard American diction; to follow simple fencing choreography; be more secure in the performance of all stage techniques, and deeply committed to the solution of any remaining personal problems; thoroughly disciplined and reliable, working well in lab situations, and actively seeking out additional duties within professional company. Prerequisite: THR 141. 6 (3-6)

**143 PACC-Theatre III****Six credits**

The nature of in-class work changes in the third term to application of improvisational techniques to the theatre texts. Vocal control having been achieved, the student is asked to apply those techniques in character analysis. Fencing moves into the choreography of stage fighting and includes other kinds of weapons: rapier and dagger, quarter staff, mace and chain, and hand-to-hand; as well as proper handling of stage firearms. At the conclusion of the first year the student will be prepared physically and vocally to move into intensive study and into advanced classes in movement, tumbling, and pantomime. Prerequisite: THR 142. 6 (3-6)

**144 PACC-Theatre IV****Six credits**

In acting/directing, the year begins with material from the acting sequence of THR 143 with emphasis upon improvisational skills applied to dramatic texts. Vocal interpretation and character analysis are reviewed and expanded. New material is introduced with directing, intensive reading of dramatic texts and related material with emphasis on methods of analysis and research. For physical development the student will be involved in tumbling and pantomime. At the conclusion of the term, the acting/directing student should have mastered the fundamentals of the craft, physically and vocally, and be prepared for application of those fundamentals to increasingly difficult performance tasks. Prerequisite: THR 143. 6 (3-6)

**145 PACC-Theatre V****Six credits**

The acting/directing sequence now turns to scene study: the application of learned skills to a series of scenes rehearsed and performed in the class. The students are led through many interpretations of each scene, utilizing their physical and vocal techniques to make each interpretation effective. Directing students bring into these class situations various readings, interpretations, research materials and other relevant matter and begin to work with the acting students, under careful control, enabling the beginning director to become aware of the physical, vocal and psychological make-up of the actors in the scene and how to emphasize the strengths and minimize the weaknesses of the actors to achieve the goals of the script. The students are introduced to make up, working on particular problems related to the scenes being studied and performed in class. In this term the students are organized into a performance group and present a play for public performance. Prerequisite: THR 144. 6 (3-6)

**146 PACC-Theatre VI****Six credits**

In the final term, acting/directing students finish intensive scene study and perform a series of short plays under their control for faculty and staff evaluation. The only new material introduced will involve period acting, the various posture and movement patterns typical of major historical periods. Costumes and make up will lead the student to certain behavior patterns; research and practice complete the course. The students will present a final play for public performance this term, under their complete supervision. Prerequisite: THR 145. 6 (3-6)

**152 Voice for the Stage I****Two credits**

An introduction to the basic techniques in expressive speech, vocal projection, and other stage-related communication techniques. Students will examine the major psychological features of the speaking voice, breathing control through abdominal breathing, practice use of the phonetic alphabet, and recite short passages using standard American diction and pronunciation. 2 (2-0)

**153 Voice for the Stage II****Two credits**

A continuation of Theatre 152 with emphasis on more sophisticated style of voice for the stage involving individual production requirements. Prerequisite: THR 152. 2 (2-0)

**154 Specialized Stage Movement****Two credits**

An introduction to various types of special physical skills required to enable the actor/actress to perform a large variety of roles. The student will practice simple forms of stage violence, techniques involving unarmed and armed combat, application of dramatic structure to stage violence scenes, and simple gymnastic movements required in farce, slapstick, and other comic roles. 2 (2-0)

**156 Improvisation for the Theatre****Four credits**

An acting class using improvisational techniques in a laboratory-stage environment, designed to prepare the student to take a realistic approach to the creation of a given role, and to gain a precise understanding of the character's purpose. Emphasis is on developing skills in concentration as a performer, building the character, and action and reaction with other characters while in performance.

The student will experience individual, group, instructor-initiated, and class-initiated improvisational situations; mental and physical concentration exercises; character study, and discussion and application of actions and purpose. 4 (4-2)

**161 Display I****Three credits**

This course introduces the student to the basic understanding of display used in commercial advertising. It will cover the materials, tools, hardware, finishes, rigging, and fabrics used in the area of free-standing, motionless, and moving window and background displays. 3 (2-2)

**162 Display II****Three credits**

This course deals with display projects in application, such as designing windows for clothing, merchandise, restaurants, etc. Models will be required. Includes an introduction to basic techniques in lighting. Prerequisite: THR 161. 3 (2-2)

**163 Display III****Three credits**

Students enrolled in this course will deal with lighting, planning budgets, and purchasing for displays used in commercial advertising. Also covers special problem projects in display, such as malls, traveling displays, and museums. Prerequisite: THR 162. 3 (2-2)

**175 Theatre History Review****Three credits**

An examination of the history of drama from primitive times to the present. Students will be introduced to the overall pattern of theatre history from a European/American viewpoint. 3 (3-0)

**180 Street Theatre****Four credits**

An introduction to the basic techniques of performing in free space and writing topic theatre. Students will practice techniques, compose a short piece of material drawn from class discussion, and perform written material in a class review. 4 (2-4)

**183 Advanced Street Theatre****Four credits**

A continuation of Theatre 180. Students will practice more complicated skills of street theatre and presentation of acting techniques. Students will write, rehearse, and perform a play of approximately 20 minutes. Prerequisite: Theatre 180. 4 (2-4)

**210 Production Sound I****Three credits**

An introduction to sound equipment and its operation. Students will practice operation of sound equipment, examine installation and design of basic public address systems, and study design and layout for sound systems. Prerequisite: Theatre 123 or approval. 3 (1-2)

**223 Production Tech-Advanced****Four credits**

Continued training in technical theatre. Students will be introduced to more sophisticated levels of techniques involving special effects and new materials available to the theatre world. The course will also cover specialization areas in "on-stage" special effects. Prerequisite: Theatre 123. 4 (0-8)

**224 Production Management****Three credits**

Designed to introduce students to various aspects of production management in theatre, such as stage organizing, rental of facilities, overall scheduling, and management of a production. 3 (2-2)

**225 Stage Management****Two credits**

An introduction to the basic techniques of stage management. The course will emphasize the stage manager's responsibilities, the relationship of stage manager to the producer, director, designer, crew, cast; techniques to work up production and rehearsal schedules, contact sheets, scene breakdowns, blocking notations, and cueing of a show. 2 (1-1)

**226 Advanced Stage Management****Two credits**

Designed to give the student practical experience in stage work. The student will be assigned to stage manage or assist the stage manager in a stage production. Prerequisite: Theatre 225. 2 (1-1)

**227 Set Design-Dance****Three credits**

A studio course emphasizing basic design elements and rendering techniques particularly related to ballet and modern dance. Prerequisite: Theatre 139. 3 (2-2)

**230 Apprentice Theatre Workshop****Twelve credits**

An apprentice experience in the principles of theatrical production using the professional facilities of a summer theater as a laboratory. Students will be involved in most aspects of a summer theatre production company. In addition, they will participate in daily acting classes, voice and movement exercises, and children's theatre rehearsal. Prerequisite: Departmental approval. 12 (5-15)

**231 Technical Theatre Workshop****Six credits**

A workshop course designed to give practical experience in the technical aspects of theatre. Students will work in several areas of technical theatre as part of a production crew, including scene design, lighting design, stage production, and management. Prerequisite: Departmental approval. 6 (2-10)

**235 Theatre: Special Projects****Two credits**

Designed to enable the student to recognize and overcome the problems inherent in putting together a theatrical production, through first-hand experience. Working under the supervision of an instructor, the students are given the opportunity to write, direct, perform in, and produce their own presentations for both community and college functions.

The student is guided in understanding the play, directing, acting, and staging; acquiring a background in lighting, costuming, scene design/construction, and makeup; and developing a rapport between the artistic performer and the audience. Prerequisite: Instructor approval. 2 (1-2)



- 236 Theatre: Special Projects** **Four credits**  
Advanced theatre work in the development of techniques acquired in THR 235. Prerequisite: Instructor approval and THR 235. 4 (2-4)
- 237 Theatre: Special Projects** **Six credits**  
Advanced theatre work in the further development of techniques acquired in THR 235 and THR 236. Prerequisite: Instructor approval and THR 235, THR 236. 6 (3-6)
- 251 Acting I** **Three credits**  
A study of the vocal and physical skills necessary to sustain public performance. The fundamentals of acting, including rehearsal techniques, character analysis, scene study, and production are covered. 3 (2-2)
- 252 Acting II** **Three credits**  
A continuation of the fundamental skills of acting. Students will review techniques presented and add more complicated skills as abilities increase. Prerequisite: Theatre 251. 3 (2-2)
- 253 Acting III** **Three credits**  
Continued training in the fundamentals of acting. Students will review and practice skills demonstrated, adding more sophisticated techniques as abilities increase. Prerequisite: Theatre 252. 3 (2-2)
- 255 Stage Makeup** **Three credits**  
A study in the application of stage makeup to develop a character and assist the actor in sustaining the character in performance. The course will emphasize skills in the use of different kinds of makeup, hairstyling, and appearance changes utilizing various chemical compounds. 3 (1-2)
- 256 Follow-Spot Operations** **Three credits**  
A practice course examining the various varieties of equipment and styles of follow-spots. The course will emphasize operation capabilities to two styles of follow-spots: the carbon arc, and the incandescent. Prerequisite: Theatre 122 or Instructor approval. 3 (2-2)
- 257 Stage Lighting Design I** **Three credits**  
An introduction to the basic drafting techniques involved in lighting design. Students will examine various types of staging arrangements and lighting techniques, lighting "hookup" procedures, lighting plots, drafting and paperwork and the role of lighting in production. Prerequisite: Theatre 121 or approval. 3 (2-2)
- 258 Stage Lighting Design II** **Three credits**  
The course will cover basic theory of color selection and the effects of color filters. Various lighting situations will be demonstrated such as lighting for musical comedy, straight drama, opera, ballet, and modern dance. Prerequisite: Theatre 257. 3 (2-2)

- 259 Stage Lighting Design III** **Three credits**  
Continued training in stage lighting design emphasizing special lighting effects such as outdoor theatre, rock and roll concerts, touring shows, and special effects for various plots. Prerequisite: Theatre 258. 3 (2-2)
- 260 Directing** **Three credits**  
A study of the theories and practice in directing for the stage. The students will examine the principles and terms used in dramatic analysis, prepare written character analysis, develop a comprehensive rehearsal schedule, conduct rehearsals with goals selected in each rehearsal. Prerequisite: Theatre 251 or instructor approval. 3 (2-2)
- 261 Lighting Design-Dance** **Three credits**  
An introduction to the specialties of lighting for dance performance. Students will explore special lighting effects used in dance regarding movement, placement of lighting instruments, and proper level setting. 3 (2-2)
- 262 Scene Design I** **Three credits**  
A workshop course in developing rough sketches to finished renderings of stage designs. The student will analyze scripts and director's concepts for visual themes; represent those themes and concepts in a visual presentation; develop final plans and evaluations, and present a completed design. Prerequisite: Theatre 139. 3 (2-2)
- 263 Scene Painting** **Three credits**  
A workshop course introducing the student to materials and techniques of large scale visual reproduction. 3 (2-2)
- 265 Costume Design/Construction I** **Three credits**  
A workshop course introducing basic sewing skills for theatrical costuming. Students will examine theatrical costuming designs, the importance of color, skills and techniques in constructing costumes, the use and treatment of fabrics. 3 (2-1)
- 266 Costume Design/Construction II** **Three credits**  
A continuation of costume design/construction training emphasizing costume theory, technique, and style in constructing costumes and experimenting with design techniques. Students will review techniques and apply more complicated skills. Prerequisite: Theatre 265. 3 ( - )
- 267 Costume Project** **Three credits**  
A workshop course through which students apply theories and techniques of costuming for an entire production. Prerequisite: Theatre 266 or instructor approval. 3 (2-1)
- 275 Children's Theatre** **Three credits**  
Designed for the director of theatre for young people. The course will emphasize guidelines for finding materials, selecting actors, rehearsal times, technical aspects, getting sponsors and audiences, performance aspects, and forming a long-term company. 3 (2-1)

**276 Advanced Children's Theatre****Three credits**

Continuing experience in directing and acting in shows for young people. Sharpening skills and specific projects for the actor and director. In-depth research into aspects—costuming, staging, make-up, rehearsal periods, music, sponsors, audiences and forming a company. Prerequisite: 275 or approval of instructor. 3 (2-2)

**279 Scene Design II****Three credits**

A continuation of training in scene design. Students will review and practice techniques solving more complicated problems as ability increases. Prerequisite: Theatre 262. 3 (2-2)

**280 Scene Design I****Three credits**

Continued training in theatre design. Students will review and practice skills demonstrated with an emphasis on creating and designing the student's own project under the supervision and advice of the instructor. Prerequisite: Theatre 279. 3 (2-2)

**281 Directed Independent Study****Six credits 6 (3-6)****282 Directed Independent Study****Four credits 4 (2-4)****283 Directed Independent Study****Two credits 2 (1-2)**

A series of intership courses allowing the student to concentrate on specific areas of theatre for advanced or specialized training. Prerequisite: Departmental approval, or audition by the instructor.

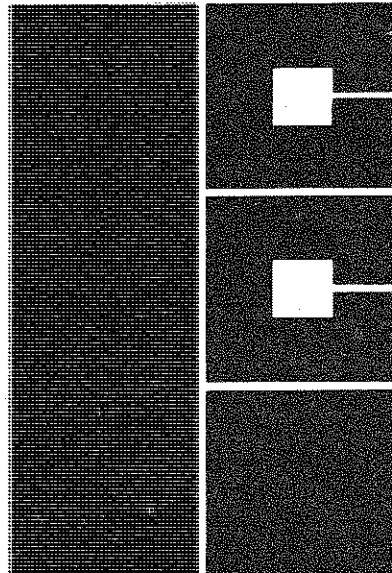
**299 Suitcase Theater****Five credits**

Designed for the exceptionally talented high school student to participate in a performing arts production company. The group performs locally and participates in an international tour demonstrating "democracy in action" through a racially integrated production about life in America. Prerequisite: Audition. 5 (0-10)



# ADMINISTRATION

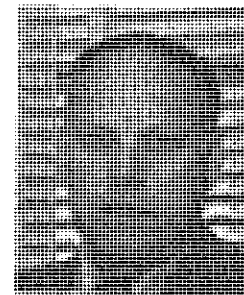
President's Council  
Faculty and Staff Directory



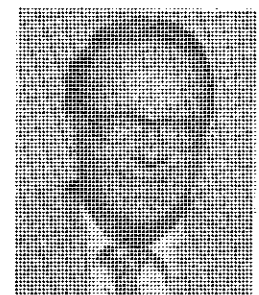
## PRESIDENT'S COUNCIL



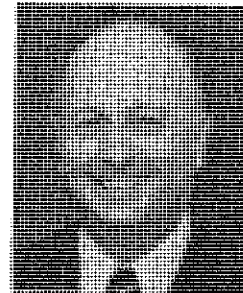
**Dale Herder**  
Administrative Assistant  
to the President



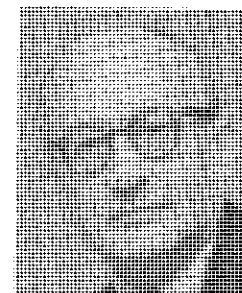
**William Schaar**  
Dean  
Student Personnel  
Services



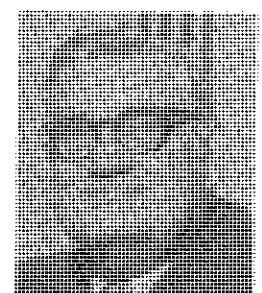
**Bruce Newman**  
Business Manager



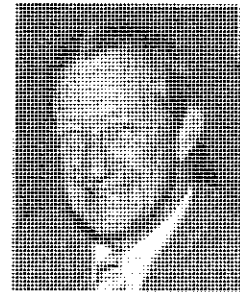
**Norman Cloutier**  
Dean  
Division of Business



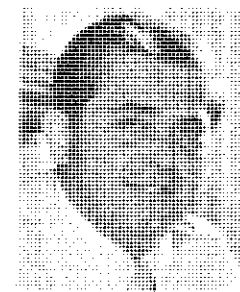
**Sam Kintzer**  
Dean  
Division of  
Arts and Sciences



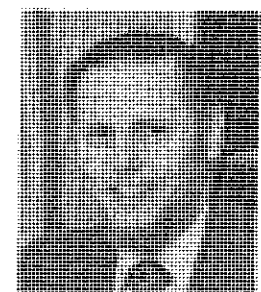
**William Monroe**  
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Division of  
Applied Arts and Sciences



**Wesley Van Maisen**  
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Public Relations



**Ronald Dove**  
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**James Platte**  
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# INDEX

## A

Academic Advising	48
Academic Calendar	14-16
Academic Status	43-45
Accounting, Associate Degree and Certificate	168
Accounting, Course Descriptions	171-176
Accounting and Office Programs, Department of	167-190
Administration	444-464
Administrative Assistant	169
Admissions	31-40
Air Force ROTC	82-84
American Government	149
Anthropology, Sociology and	153-154
Application for New Students	31
Application for Transfer Students	34
Applied Arts and Sciences, Division of	241-442
Applied Technology, Associate Degree and Certificate	297-301
Applied Technology General, Course Descriptions	301-334
Apprenticeship Training	295
Architectural Technology	249-255-256
Army ROTC	81-82
Art	378-396
Articulation, College Transfer	48
Articulation, High School	32
Arts, Performing and Creative	377-441
Arts and Sciences Associate Degree Programs	110
Arts and Sciences Curriculum Code List	112-113
Arts and Sciences, Division of	107-162
Arts and Sciences Seminar Series	110
Assessment Administration, Associate Degree and Certificate	192
Associate Degree Programs	110
Astronomy	143
Athletics	65
Attendance	42
Audio-Visual Nursing Practice Laboratory	336
Audio-Visual Tutorial Instruction: Business Division	168
Auditing	17
Automotive Technology Associate Degree and Certificate	298
Automotive Technology, Course Descriptions	311-318
Aviation Technology	264-274

## B

Banking, A.I.B. Courses	200-201
Banking Management, Associate Degree and Certificate	192
Biology, Course Descriptions	135-138
Board of Trustees	4-5
Broadcasting	95-99
Building Trades, Course Descriptions	319-323
Business, Division of	163-240

## C

Calendars	10-13
Career Planning and Placement	48-61-62
Cashier-Checker Training	177
Center for Aging Education	85-87
CETA Educational Training Unit	49
Chartered Life Underwriter	189-187-188
Chemistry	140-142
Child Development	157
Civil Technology	273
Civil Technology, Course Descriptions	273-275
College Transfer Articulation	48
Commitments, Goals and Objectives	8-9
Communication, Department of	114-123
Community Services, Health Careers	371-373
Composition	117-118
Computer Science	146
Continuing Health Education	367-370
Cooperative Internship	166
Corrections, Associate Degree	198
Cosmetology Management, Associate Degree	193
Counseling Services	48
Course and Department Codes	42-46-47
Course Numbers	42
Court and Conference Reporting, Course Descriptions	169
C.P.A. Review Courses	174
Credit by Evaluation	38-39
Credit by Examination	21
Credit-No-Credit Grading	20
Credits, Transfer of	38
Curriculum Code List, Arts and Sciences	112-113
Cytotechnology, Associate Degree	355-357

## D

Dance	396-416
Data Processing, Associate Degree and Certificate	196
Data Processing, Course Descriptions	207-211
Degrees	42
Dental Assistant	346-348
Dental Hygiene	343-346
Department of Accounting and Office Programs	168-190
Department of Applied Technology	294-334
Department of Communication	114-123
Department of Engineering Technology	248-293
Department of Health Careers	335-375
Department of Humanities	123-129
Department of Instructional Media	94-106
Department of Library Services	91-94
Department of Management and Marketing	191-240
Department of Mathematics	130-134
Department of Performing and Creative Arts	377-442
Department of Physical Education and Athletics	65-80
Department of Science	135-148
Department of Social Science	149-163
District, Map of	2
Division of Applied Arts and Sciences	244-442

Division of Arts and Sciences	107-162
Division of Business	163-240
Division of Learning Resources	89-106
Division of Student Personnel Services	29-87
Dual Enrollment	20-37-109
<b>E</b>	
Economics	185
Education	158
Electro-Mechanical Technology	252
Electronics Technology	253
Electronics Technology, Course	
Descriptions	278-285
Emergency Medical Services	
Technician	364-366
Engineering Technology,	
Department of	248-293
English	114-115-125
Evaluation of Transcripts	39-40
<b>F</b>	
Faculty and Staff Directory	446-464
Film Production	100-104
Financial Aid	59-60
Fine Arts Cultural Program	63
Fire Science Technology	285-287
Foreign Languages	122-123
French, Course Descriptions	122
<b>G</b>	
General Clerical, Certificate	169
General Information	17-28
General Technology, Course	
Descriptions	292-294
Geology	143-144
Geography	150
Gerontology	85-87
Graduation Requirements	42
Guest Applications	35
<b>H</b>	
Handicapped Students	28
Health Careers, Department of	335-376
Heating, Air Conditioning and	
Refrigeration	323-326
High School Articulation	32
Honor Points	17
Honors Program	110
Horticulture	145-146
Hotel-Motel-Food Service Management,	
Associate Degree and Certificate	196-197
Hotel-Motel-Food Service Management,	
Course Descriptions	211-218
Human Services	154
Humanities, Course Descriptions	124-129
<b>I</b>	
Industrial Drafting	
Technology	253-287-289
Industrial Management	299-327-328
Instructional Media, Department of	94-106
Instrumental Groups, Course	
Descriptions	418-419
Insurance	186-188
International Students	36-38
Investing	205-207
<b>J</b>	
Journalism, Course Descriptions	120-122
Journeyman Courses, Building Trades	319
<b>K</b>	
Key Punch Training	184

<b>L</b>	
Labor Relations	193
Labor Relations, Course	
Descriptions	226-227
Labor Studies	300
Languages, Course Descriptions	122-123
Law, Course Descriptions	188-190
Law Enforcement, Associate Degree	
and Certificate	198
Law Enforcement, Course	
Descriptions	218-226
Learning Resources, Division of	89-106
Legal Assistant, Associate Degree	170
Legal Secretary, Associate Degree	170
Library Services, Department of	91
Library Media Technology, Course	
Descriptions	92-94
<b>M</b>	
Management, Associate Degree	
and Certificate	192-193
Management, Course Descriptions	227-236
Management Development Center	194
Management and Marketing,	
Department of	191-240
Marketing, Course Descriptions	237-241
Marketing, Associate Degree	
and Certificate	195
Mathematics, Course Descriptions	130-134
Mechanical Technology	272-273
Media Technology	96-99
Medical Secretary, Associate Degree	170
Medical Transcriptionist, Certificate	170
Meteorology	143
Michigan Competitive Scholarships	60
Microbiology	135-138
Mid-Michigan Law Enforcement Center	199
Migrant Students	33-34
Military Science	80-84
Mini-terms	14
Music	416-433
<b>N</b>	
Natural Science, Course	
Descriptions	144-146
Nuclear Medicine Technology	352-354
Nursing, Associate Degree	337-340
Nursing, Audio-Visual Practice	
Laboratory	336
Nursing, Practical	341-343
<b>O</b>	
Oceanology	144
Occupational Safety and Health	290-292
Operating Room Technology	361-363
<b>P</b>	
Performing and Creative Arts,	
Department of	377-442
Philosophy, Course Descriptions	128
Photography	99-106
Photography Center	95
Physical Education	65-80
Physics, Course Descriptions	147-148
Planetarium	90
Political Science, Course	
Descriptions	150-151
Pre-Business Administration,	
Associate Degree	199
President's Council	445
President's Message	7
Probation	18

Property Valuation and	
Assessment	192-206-207
Psychology, Course Descriptions	151-152
Public Service, Course Descriptions	159-160
<b>R</b>	
Radiologic Technology, Associate	
Degree	348
Radiologic Technology, Course	
Descriptions	349-351
Reading, Course Descriptions	119
Real Estate	199-239-240
Refrigeration, Heating and Air	
Conditioning	323-326
Refund Policy	37
Registrarinn Procedures	37
Religion, Course Descriptions	129
Repeat Courses	18
Residency	92
Respiratory Therapy	357-361
ROTC, Air Force	82-84
ROTC, Army	81-82
<b>S</b>	
Scholarships	59-60
Secretarial Science, Associate Degree	170
Seminar Series, Arts and Sciences	110
Social Science	149-182
Social Work, Course Descriptions	160-161
Solar Technician	259-260
Spanish, Course Descriptions	123
Speech, Course Descriptions	120
Stenographic	171
Structural Technology	275
Student Activities	63-64
Student Development Center	49

Student Development Services, Course	
Descriptions	51-59
Student Government	64
Student Newspaper	64
Student Organizations	64
Student Personnel Services	31
Student Radio Stations	64
Surveying Technology	275-276
System of Grades	17
<b>T</b>	
Table for Determining Academic	
Status	43-45
Television	97-99
Term Grade Reports	18
Testing Services	49
Theatre	434-442
Title IX Resolution	27
Traffic Technology	276-277
Transcript Evaluation	39-40
Transfer of Credits	38
Transfer Programs	38
Transportation and Traffic Management,	
Associate Degree	194
Transportation Training	252
Tuition and Fees	37
Tutorial Services	49
<b>V</b>	
Veterans Services	62
<b>W</b>	
Wastewater Technology	277-278
Welding, Course Descriptions	332-334
Women's Resource Center	50
Writing	117-118



