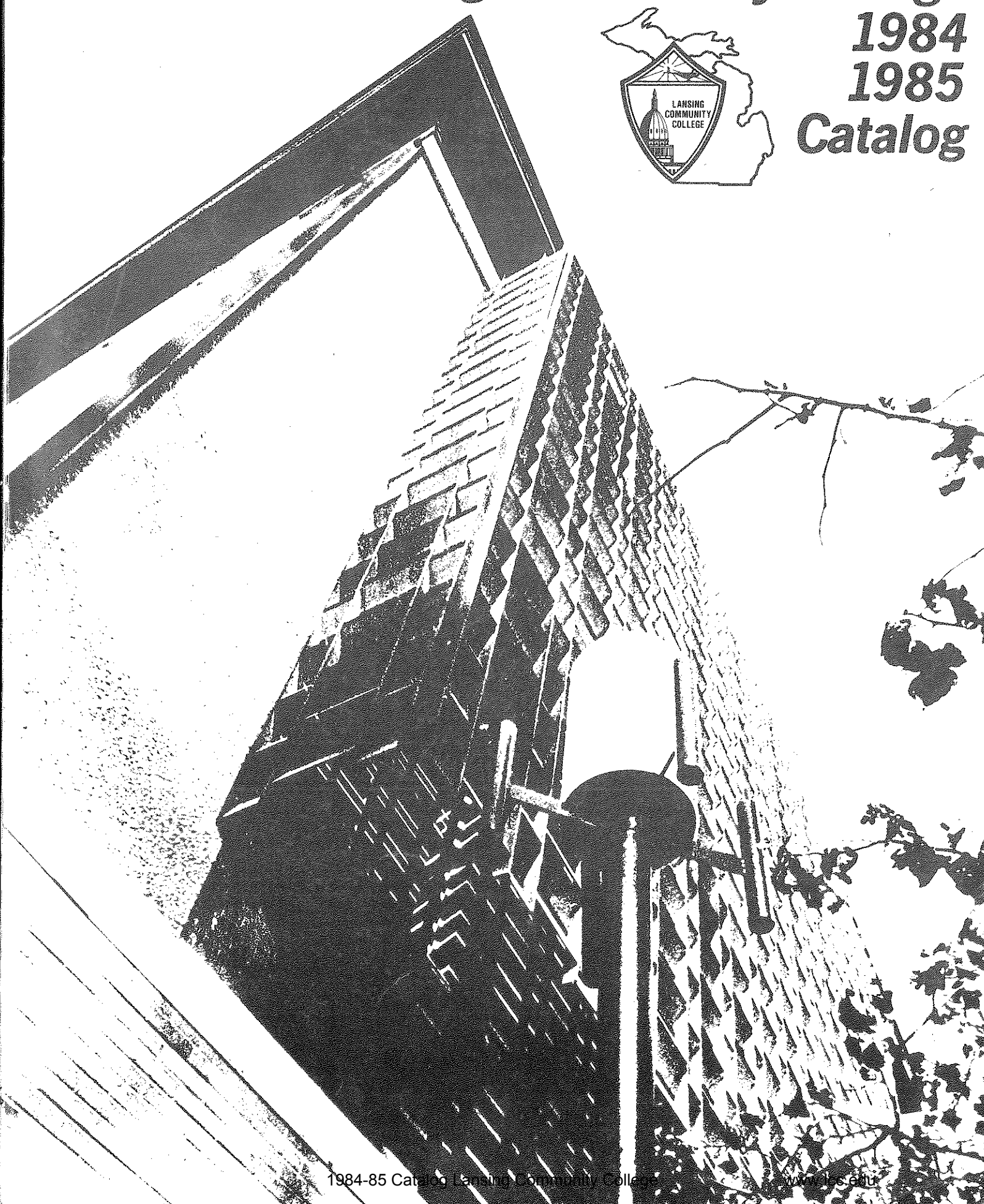
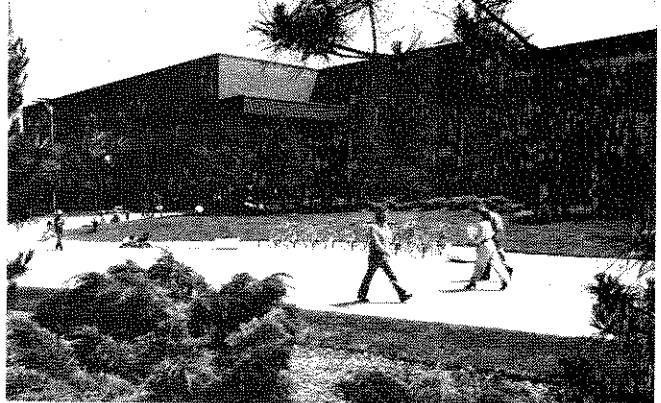
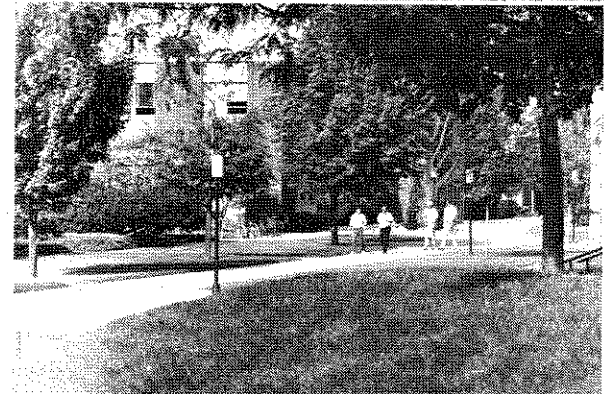
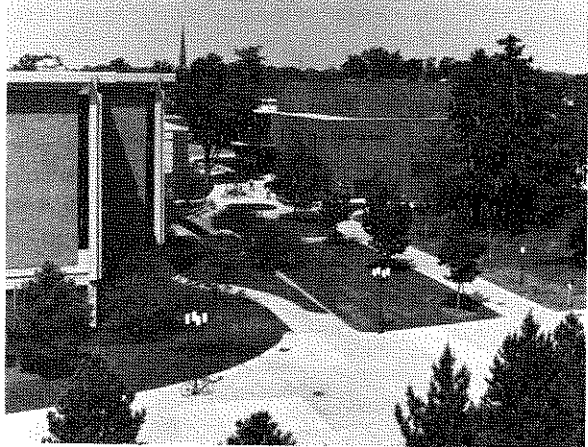
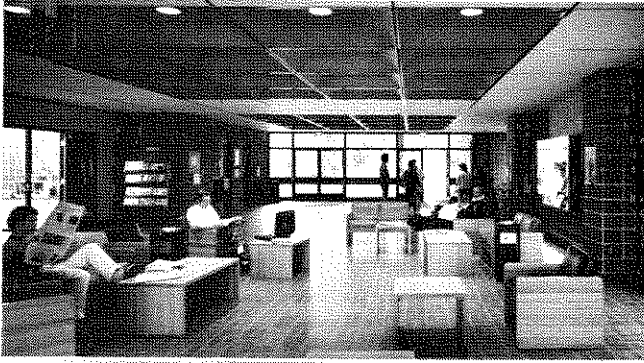


# Lansing Community College 1984 1985 Catalog

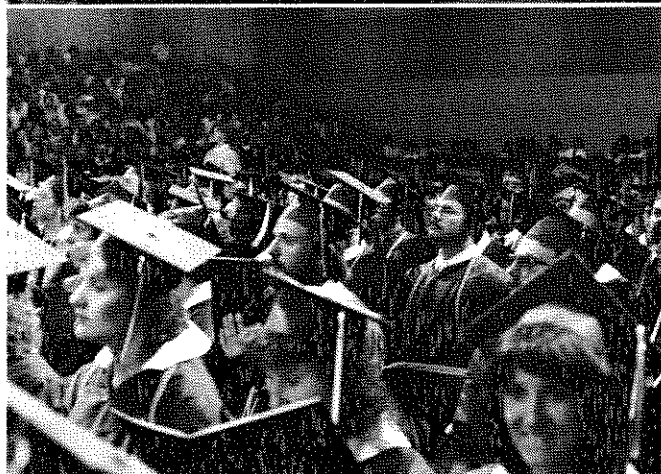
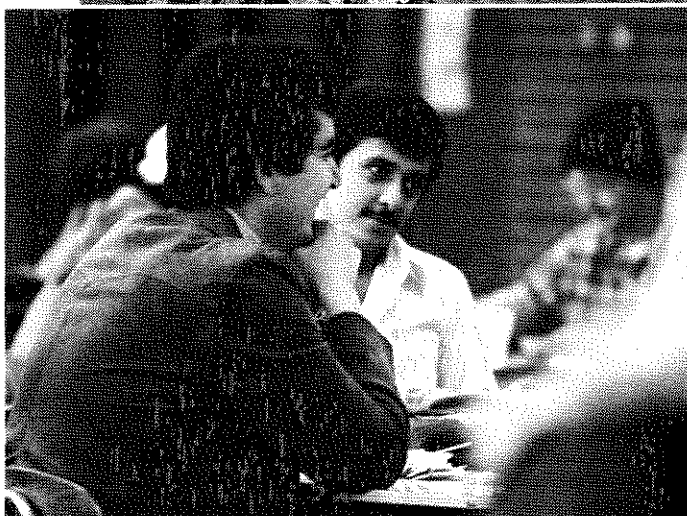
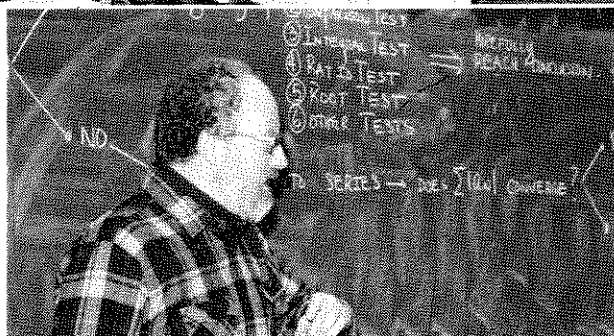
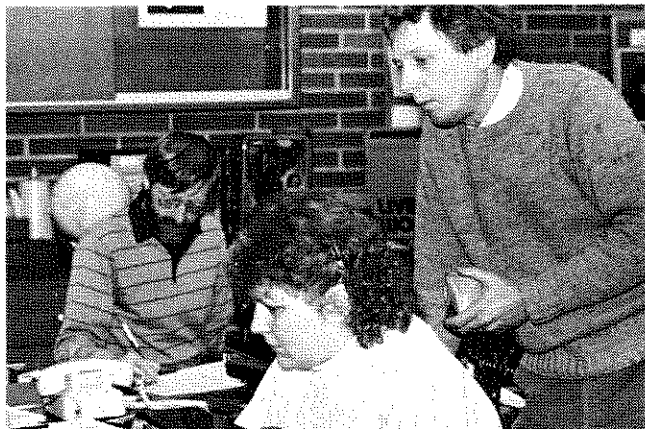




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## COMMITMENTS

Lansing Community College has evolved from a partnership of the community, students, faculty and staff. The College is committed to the idea that education today is a life-long process. With their diverse personal and career needs, students demand from the educational marketplace relevant instruction, flexible scheduling, and individualized services. The College believes it must respond to these students with instruction that has quality, timeliness and relatively low cost. To meet this commitment the College works closely with business, industry, labor, government, community agencies and educational institutions. The College measures its vitality by how well it responds to the students and community.

The College recognizes that in this world of economic and technological change there is a growing interdependence of this metropolitan community with other communities throughout the world. The challenge is to be effective in that larger community, enhancing understanding and cooperation through international education and networking of resources.

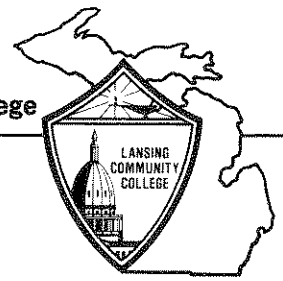
The College is committed to career training programs, college transfer programs, basic skills programs, personal and professional seminars, business and industry support programs, and community service programs. The College is also committed to the idea that the individual and the community are best served when the programs and courses assist students to integrate learning with experience. Programs and courses are designed to help students achieve career, social and personal competencies through the mastery of skills and the study of contemporary and historical human values.

The College has committed itself by purpose, structure and resources to a learning environment that is both traditional and non-traditional. This environment is supported by an experienced faculty and staff or professional educators and specialists from business, industry, labor and government. Because the urban campus is complemented by a network of learning centers cooperating with schools and business throughout the service area, the programs and services are more accessible to students. Through its open admissions policy, the College pledges equal educational opportunity to all in its service area.

## GOALS

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

1. To maintain continuous review and evaluation of the essentials of an effective learning environment—instruction, resources, and facilities—so that the learning programs have quality and relevance to the individual and the community.
2. To support an educational environment that permits a person not only to acquire a mastery of skills for career goals but also to enhance self identity and clarify personal values.
3. To develop and support faculty and staff committed to academic excellence and professional competence in instructional development and delivery.
4. To provide student services including counseling, employment placement, financial assistance, informational services, tutorial assistance, and college entry services according to the student's academic, vocational, and personal needs.
5. To provide opportunities for students to develop leadership and social interaction skills through formal and informal student activities.
6. To make available a general education program to students.
7. To provide developmental programs for students to achieve basic competencies in reading, writing and mathematics and to update those skills necessary to function in this highly technical world.
8. To provide career oriented courses and programs for students now employed or contemplating employment.
9. To provide courses and curricula in the arts, sciences, business, and other preprofessional programs that will articulate with degree programs at other colleges.
10. To confer certificates and associate degrees.
11. To develop and offer specialized training through consultative relationships with business, labor, industry and government.
12. To provide learning resources and instructional support services that meet the diverse information needs of students, staff and community.
13. To provide programs and activities that enhance the community's cultural life and economic well being.



400-600 North Washington Square  
P.O. Box 40010 Lansing, MI 48901  
Area Code 517 Telephone 483-1957

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



David L. Froh  
Chairperson



David D. Diehl  
Vice Chairperson



Shirley M. Rodgers  
Secretary



Erik O. Furseth  
Treasurer



William C. Hollister  
Trustee



David F. Machtel, Jr.  
Trustee

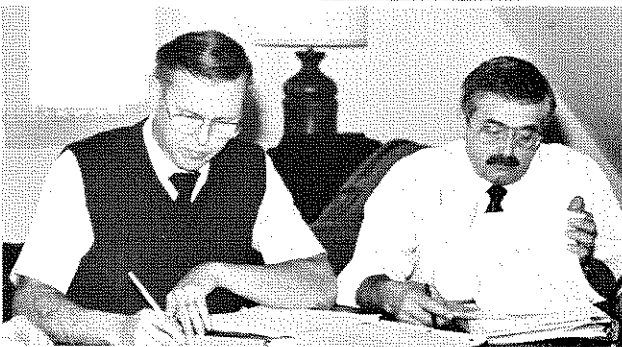


Phyllis I. McKesson  
Trustee

Lansing  
Community  
College  
**BOARD  
OF  
TRUSTEES**

Lansing Community College is an equal opportunity college. Discrimination on a basis of race, color, religion, sex, national origin, age, height, weight, marital status, or handicap is prohibited. Title IX/Section 504 Coordinator: Room 101, Administration Building.

Courses are shown as they existed at the time of preparation of this publication, but are subject to change.



### CENTRAL ADMINISTRATION DIVISION

The Central Administration Division provides leadership and support to the College through the services of the President's Office, and offices of College Services, Personnel, Community Relations, Institutional Research, Equal Opportunity/Affirmative Action, Professional Development, Continuing Education, and the College Foundation. Planning, management, and review of College instruction and services as well as maintaining a balanced institutional budget are part of the overall services of Central Administration.

The President's Council serves as executive staff to the President and is comprised of the following people:

- Philip J. Gannon, President
- Dale M. Herder, Vice President for Administration
- Bruce G. Newman, Vice President for Business and Finance
- Jacqueline D. Taylor, Vice President for College and Community Relations
- Ronald E. Dove, Director of Personnel
- Sam Kintzer, Dean, Division of Arts & Sciences
- James E. Person, Dean, Division of Business
- Norman L. Cloutier, Executive Director, Business and Industry Institute
- Robert J. Bouck, Executive Director, Lansing Community College Foundation
- William G. Schaar, Dean, Division of Student Personnel Services
- William R. Darr, Dean, Division of Technology and Applied Sciences
- James P. Platte, Dean, Division of Telecommunication and the Arts

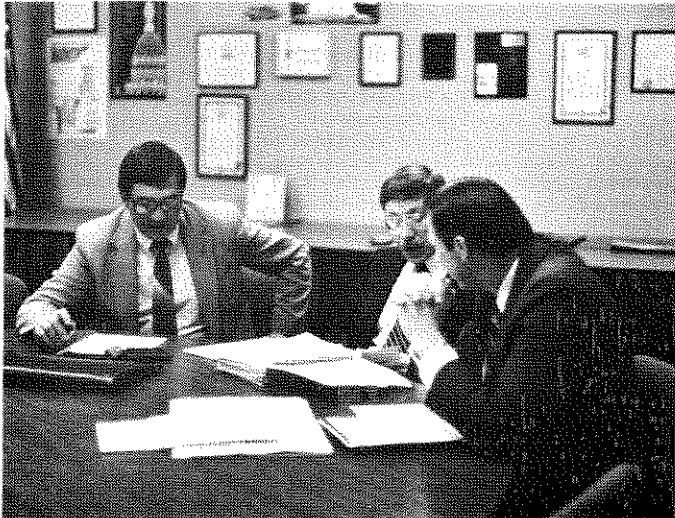
### COLLEGE SERVICES DIVISION

Bruce Newman, Vice President for Business and Finance

The College Services Division provides support to the College through the services of the Business Office, Resource Development, Information and Computer Services, and the Departments of Public Safety, Business Services, Accounting and Payroll, Purchasing and Physical Plant.

The objectives of the College Services Division are as follows:

- Maintain the general accounting, property accounting, internal audit, timekeeping, payroll and record management
- Develop and administer the College-wide budget
- Purchase all supplies, materials and furnishings
- Assist the President and the various divisions in the development of the College's information systems and computer services, including all applications of electronic data processing equipment
- Plan, develop and maintain all physical facilities in support of academic programs and support service programs
- Provide dependable services for U.S. mail, courier mail, furniture moving, warehousing and inventory procedures
- Develop and operate the public safety program to provide a safe and secure campus
- Develop State and Federal grant applications in support of the College's academic and supportive service programs
- Coordinate with SAGA Foods of Michigan, Inc. to provide food services for students and staff in the Arts & Sciences Building and Gannon Vocational Technical Center
- Provide other business related services such as College insurance packages and the preparation and execution of contracts with vendors, other institutions and agencies, and consultants.



## BUSINESS AND INDUSTRY INSTITUTE

Norman L. Cloutier, Director

The Business and Industry Institute, in concert with the College's academic divisions, offers or facilitates a wide array of training and information sources designed to enhance local, regional and state economic well-being. The Institute is designed to be both flexible and rapidly responsive in meeting the needs of business, industry, labor, government and education.

Clients may draw upon the resources of the Institute: a Training and Development Center which provides customized management and industrial training; small business information and community leadership development; consultancy services in integrated management systems, business computer applications and overseas business and industrial technical planning and advice; an International Trade and Export Center which focuses on information relative to Michigan products and international marketplace opportunities; and a system of international education and training programs concentrating on academic endeavors with selected countries in Asia, Europe, Central and South America, and North America.

The Business and Industry Institute's operations are carried out by using its own inventory of skills and expertise, and by cooperatively utilizing those of the College's academic divisions. On those occasions where it is appropriate, and in the client's best interest, the Institute may obtain the services of external specialists.

### INTERNATIONAL EDUCATION

In order to provide an opportunity for students to learn the languages, cultures and business practices of other countries, the College, in cooperation with Biwako Kisen Steamship Company, Ltd., in Japan, has developed a unique student academic work-study program called "The Japan Adventure." Students selected for this program study Japanese language, culture, history, society, and business practices in the Lansing Community College Educational Center in Otsu, Shiga Prefecture, Japan. They are immersed in the culture for a nine-month period, and, in addition to their academic studies, are provided an opportunity to work in hospitality services aboard the "Michigan," a cruise ship owned by Biwako Kisen Steamship Company, Ltd.

Lansing Community College has also established sister college affiliations with colleges in Belize, Republic of China (Taiwan), Japan and the Republic of Korea. Visiting faculty and staff from these sister colleges have participated as visiting scholars at LCC. Lansing Community College students, faculty, and staff have been involved in educational exchange programs in sister colleges. Affiliations have been established with the following sister institutions:

**Central America**  
St. Johns College  
Belize

**Japan**  
Shiga Prefectural Junior College  
Shiga, Japan

**Republic of China (Taiwan)**  
Ming Chuan College  
Taipei, Taiwan

**Republic of Korea**  
Kongju Teachers' College  
Kongju, Korea

National Taichung Institute of Commerce  
Taichung, Taiwan

Kyung-Nam Technical Junior College  
Pusan, Korea

National Taipei Institute of Technology  
Taipei, Taiwan

Myongji Junior College  
Seoul, Korea

## Lansing Community College Foundation

Robert J. Bouck, Executive Director

Lansing Community College Foundation is a nonprofit, tax exempt corporation, administered by an independent board of community volunteers, all concerned and dedicated to the continuing excellence of Lansing Community College. Although it is autonomous, the Foundation exists to help the College achieve its educational purposes.

The Officers and Directors are

James Reutter, Chairperson  
Hortense Canady, Vice Chairperson  
Louise Werbelow, Secretary  
William Hollister, Treasurer

David Brogan, CLU  
James Bullock, MD  
Frank Cherf, CPA  
Jack Davis  
Philip Gannon  
Joan Hartwig

Allan Maar  
Dale Martin  
Leonard McConnell  
William Porter, Jr.  
Edward Vogt  
Herbert Wolford, DDS



Dear Student:

Each of us is a part of a learning society. By being partners in this learning society we define the role and responsibilities of Lansing Community College. Stereotypes of past days regarding the role of a college student, a teacher, or a president are just not today's reality. As President of Lansing Community College, it is as important for me to be involved in a learning environment as it is for you, the student. I find my role a constant mix of administrator, student, teacher and community worker.

We are partners in an adventure that we have not totally planned, with responsibilities that have been thrust upon us and others that we have accepted. We no longer live in a national marketplace, but in an international marketplace, making economic choices on materials produced across the world by workers who compete for our jobs as we compete with them. In a fast changing world there are few social and technological choices that do not involve the individual in continual learning. This learning is necessary from the standpoint of employment and a rich avocational environment, for to work without music is to miss the song of life.

Your institution is a part of the fabric of this nation, state and particularly your community, and you as a partner with the institution, make up what we call Lansing Community College. We are proud that over 40,000 citizens of this metropolitan area attend the College each year and that most of the people who live and work in our community have been partners with the College in the last few years.

Learning is a joy if it has purpose and direction. When we combine this with an institution that is open and friendly, it becomes a wonderful place to learn, to become a partner and to find some answers in a very complex society. It is a time of great excitement with opportunities that call for new rigor and discipline.

As we share our College together, please stop by and say "hello."

Sincerely,

*Philip J. Gannon*

Philip J. Gannon  
President





## ACADEMIC YEAR 1985-1986

### SPRING TERM, 1985

Registration Days	March 27, 28
Preparation/Records Day	March 29
Classes Begin	April 1
Memorial Day	May 27
Graduation Day	June 9
Last Class Day	June 16

### SUMMER TERM, 1985

Registration Day	June 21
Classes Begin	June 24
Independence Day	July 4
Last Class Day	August 18

### FALL TERM, 1985

Preparation & Faculty/ Administration Days	September 19, 25
Registration Days	September 20, 23, 24
Classes Begin	September 26
Thanksgiving Recess	November 28, 29
Last Class Day	December 15

### WINTER TERM, 1986

Registration Days	January 2, 3
Preparation/Records Day	January 6
Classes Begin	January 7
Last Class Day	March 24

### SPRING TERM, 1986

Registration Days	March 28, 31
Preparation/Records Day	April 1
Classes Begin	April 2
Memorial Day	May 26
Graduation Day	June 8
Last Class Day	June 17

### SUMMER TERM, 1986

Registration Day	June 20
Classes Begin	June 23
Independence Day	July 4
Last Class Day	August 17

### LANSGIRL COMMUNITY COLLEGE

General Information  
Telephone 483-1957

#### OFFICE OF THE REGISTRAR

Student Personnel Services Bldg.  
Telephone 483-1266

#### OFFICE OF ADMISSIONS

Student Personnel Services Bldg.  
Telephone 483-1252

#### OFFICE OF STUDENT DEVELOPMENT SERVICES

Student Personnel Services Bldg.  
Telephone 483-1184

#### OFFICE OF STUDENT FINANCIAL SERVICES

Student Personnel Services Bldg.  
Telephone 483-1296

#### CAREER PLANNING AND PLACEMENT CENTER

Gannon Vocational Technical Bldg.  
Telephone 483-1172

#### OFFICE OF THE PRESIDENT

Administration Building  
Telephone 483-1851

#### OFFICE OF COLLEGE & COMMUNITY RELATIONS

Administration Building  
Telephone 483-1880

#### OFFICE OF CONTINUING EDUCATION

528 Office Building  
Telephone 483-1860

#### DIVISION OF ARTS & SCIENCES

Arts & Sciences Building  
Telephone 483-1010

#### DIVISION OF BUSINESS

Old Central Building  
Telephone 483-1522

#### DIVISION OF STUDENT PERSONNEL SERVICES

Student Personnel Services Bldg.  
Telephone 483-1162

#### DIVISION OF TECHNOLOGY & APPLIED SCIENCES

Gannon Vocational Technical Bldg.  
Telephone 483-1317

#### DIVISION OF TELECOMMUNICATION & THE ARTS

Office Unit F Building  
Telephone 483-1621

#### EVENING COLLEGE OFFICE

Arts & Sciences Building  
Telephone 483-1011

#### EVENING COLLEGE OFFICE

Old Central Building  
Telephone 483-1527

#### EVENING COLLEGE OFFICE

Gannon Vocational Technical Bldg.  
Telephone 483-1324

## GENERAL INFORMATION

### ADMISSIONS

Lansing Community College is an "open door" community college designed to extend service to applicants possessing appropriate preparation to benefit from programs and courses offered at the College. The Admissions Department's main objective is the smooth, uncomplicated processing of qualified applicants into these courses and programs. Determination and judgment of an individual's preparation and readiness to benefit from a course or program at Lansing Community College are the responsibilities of College professional personnel.

Persons who are 18 years of age or older or who have graduated from high school are eligible to attend Lansing Community College. Those who do not meet these requirements may still attend LCC in special circumstances. High school students may be admitted to LCC under the dual enrollment program explained later in this section.

The admissions application must be completed as early as possible prior to enrollment so that potential students can gain the courses they wish in the time periods they want them. Directions for completing the admissions application are:

1. Complete all items requested in the application for admission.
2. Attach a \$10 application fee (check or money order made payable to LCC) 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. Freshman applicants in high school or those who graduated from high school in the last year, should forward the application and fee to their high school. Your counselor or principal will complete the lower portion of the application and mail it and your high school records to Lansing Community College.
4. Other applicants may forward the application and fee to Admissions (located on the first floor of the Student Personnel Building at Lansing Community College).
5. Lansing Community College suggests a starting point in English, mathematics, and/or reading courses from our placement test scores. Placement tests may be taken at the following locations: English and Reading—Communication Department Laboratory located on the third floor of the Arts & Sciences Building. Math—Mathematics Laboratory located in Room 015 of the Arts & Sciences Building.

Admissions decisions that require evaluations of special circumstances, including the ability to benefit from attendance, will be considered on an individual basis for the following categories:

Dual Enrollment—Special Admission  
International Students  
Handicapped Students  
Health Career Applicants  
Aviation Technology Applicants  
Human Services Applicants  
Other Special Circumstance Applicants

All questions and requests for specific information regarding these special circumstance admissions procedures should be directed to the Office of Admissions, Lansing Community College, 430 N. Capitol Ave., P.O. Box 40010, Lansing, Michigan 48901, or call (517) 483-1252.

### INTERNATIONAL STUDENT ADMISSIONS

Lansing Community College admits international students within the following guidelines, designed to create a maximum positive experience for the international student, the service community, and the College community.

In submitting a request for admission to Lansing Community College, international students should:

1. Complete and sign the admissions application which may be obtained from the Admissions Office at the following address:  
Admissions Office  
Lansing Community College  
Box 40010  
Lansing, MI 48901
2. Make arrangements to send an official academic record which has been translated into English. Copies of high school and any college work completed should be included.
3. Provide evidence of written and oral English competency by submitting official copies of test results from the Michigan State University test of English as a foreign language. Lansing Community College requires a minimum equated score of 75 to admit a student.
4. Students whose tuition and fees will be paid by a sponsoring agency must include a letter of authorization for billing. All others must submit proof of at least \$2,000 available on deposit in a local bank, to cover tuition and fees and living expenses for initial entry into LCC, in addition to a financial statement indicating the ability to cover all expenses for their stay in the United States.

5. Mail the completed application, academic and language records, and statement of sufficient funds to attend the college along with a \$10 non-refundable application fee to the above address.
6. Students applying will be notified when the materials have been received. A personal interview with the Director of Admissions or his representative is necessary before any decisions can be made. An I-20 will be issued following the personal interview if the applicant is accepted.
7. It is the applicant's responsibility to schedule the personal interview at least five (5) weeks prior to the first day of the term in which admission is being sought. Interviews will not be scheduled until we have a completed and signed application, official copies of academic records, an official copy of language test results, the proof of support referred to in Item 4, and the \$10 non-refundable fee.
8. When appearing for the admission interview, an applicant must present a valid passport and U.S. Immigration Form I-94. Transfer applicants must have an official representative of the college or university from which he/she is transferring sign the new I-20 form. Because this approval sometimes takes three (3) months, the admission procedure to LCC for F-1 visa students must be completed three (3) months prior to the term he/she wishes to attend. If the applicant is accepted by LCC upon completion of the admission interview and a proper screening of English language competencies, we will assist him/her in completing the necessary immigration forms.
9. Each student must submit a completed International Student Agreement Form which is available in the Lansing Community College Admissions Office. This form should be signed by the applicant and by a Notary Public. The International Student Agreement Form must be updated each year.
10. The academic status of international students will be determined in accordance with the table reflecting standards of progress printed in this publication. In addition, requirements of the United States Immigration Service will be upheld. All international students on an F-1 visa must successfully maintain full-time student status, twelve (12) or more credits each term.
11. Lansing Community College charges an administrative fee for international students admitted under Federal, State or local governmental, and private agency, individual, or group contracts. This fee covers the costs of special services to international students such as accounting services, agency reports, emergency funding, personal assistance, and contract implementation. This administrative fee is currently \$125 per student for each academic term.

These procedures are subject to review by the International Student Services Committee. Any changes made will be brought to the attention of the students, Admissions Office, International Student Counselor, faculty and administrative staff.

These requirements are to provide a positive educational experience for the international students at Lansing Community College.

An International Student Services Committee has been established in the Division of Student Personnel Services with the following membership:

1. Director of Admissions
2. Representative from Communication Department
3. Advisor to International Students
4. An appointed faculty member who has shown interest in foreign students
5. Dean of Student Personnel Services

The function of this Committee will be:

1. To serve as a body to review guidelines for English proficiency required for the admission of international students.
2. To serve as a body to review and evaluate the program of services to international students, such as sponsor documentation, transcript evaluation and academic advising.
3. To serve as an appeal and review body for granting admission to international students.
4. To serve as an appeal and review body for withdrawal from the College based on noncompliance with immigration regulations.

International students who wish to meet with a counselor should contact Claude Beavers, Room 105, Arts & Sciences Building, telephone: (517) 483-1191.

### ADMISSION TO HEALTH CAREER PROGRAMS

Applicants to any of the Health Career Programs at Lansing Community College should contact the Admissions office for specific information concerning the process and prerequisites. You may call (517) 483-1252 or write: Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901-7211.

**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 \$10.00 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. This college credit will count toward a degree program at Lansing Community College. High school credit may or may not be granted according to the discretion of the participating high school. Dual enrollment affords students educational enrichment in specific areas where they have displayed unusual interest and ability in high school.

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.
3. Applicant must have written recommendation from his/her high school principal or his/her representative.
4. The final decision for acceptance rests with Lansing Community College.

Applicant procedures for Dual Enrollment:

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

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

**APPEAL OF COLLEGE ADMISSION**

Any applicant denied admission to the College may appeal this decision to the Director of Admissions. The decision to admit or uphold denial of admission will be based on the individual merits of each appeal. The decision shall be given to the applicant, in writing, within seven calendar days of the date of appeal.

In the event that the Director of Admissions does not admit an appealing applicant, that applicant may carry his/her appeal to the Admissions Board of Review. This petition must be made in writing within seven calendar days, but not later than through the fourth day of the term of application. The board will be convened in an expeditious manner, and a decision will be rendered within seven calendar days of the date of the applicant's written appeal. Members of the Admissions Board of Review are: Director of Admissions, Chairperson, Administrative Assistant to the Dean of Student Personnel Services, a counselor to be named by the Dean of Student Personnel Services.

If the applicant is not satisfied with the decision of the Admissions Board of Review, an appeal may be made 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 applicant's receiving the decision of the Admissions Board of Review, but not later than through the fifth day of the term of application.

Members of the Board of Appeals are: Dean of Student Personnel Services, Chairperson, the Dean of the Division of the applicant'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 applicant 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 applicant's appeal. The decision of the Board of Appeals is final.

The decisions of the Admissions 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 record) regarding the decision(s) of these Boards. The applicant will be notified in writing of the decision(s) of the Boards.

**RESIDENCY****I. Eligibility for Paying Resident Tuition**

A. Before acceptance into College—(A student must be an American citizen and meet one of the following qualifications before being eligible to pay resident tuition. International students are not eligible to pay resident tuition.)

1. Student is under 18 years of age
  - a. 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. Student is married and has resided within the LCC district at least six months immediately prior to the first day of classes.
  - c. 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 Acts 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.
2. Student is over 18 years of age
  - a. Student has resided within the LCC district at least six months immediately prior to the first day of classes.
  - b. The student is an employee of a business or industrial firm within the LCC district, and the employer, by written agreement, agrees to pay directly to the College all tuition and fees of the sponsored student for employer-approved classes.
  - c. The student is enrolled under the provisions of Act 245, Public Acts of 1935, as amended by Act 371, Public Acts of 1965 (students receiving benefits under the Michigan Veterans' Trust Fund.)

B. After acceptance into College—student must meet one of the following qualifications to be eligible to pay resident tuition.

1. Student is under 18 years of age
  - a. Student's parent or guardian has established residence within the LCC district for at least six months immediately prior to the date of petitioning for a change in residence status.
  - b. Student is married and has established residence within the LCC district for at least six months prior to the date of petitioning for a change in residence status.
  - c. Student is unmarried and is recognized as "emancipated" and has established residence within the LCC district for at least six months prior to the date of petitioning for a change in residence status.

**II. Petitioning for a Change in Residency Status**

A. Upon acceptance into the College a student shall be notified of his/her residency status. If he/she can substantiate that he/she has been mistakenly identified as a non-resident, he/she may offer proof, and residency status shall be changed.

B. After acceptance into the College and attendance by the student under a non-resident code, the student can change his/her residency if he/she meets one of the qualifications above.

1. Student must fill out appropriate form available in Registrar's Office.
2. Student must submit proof of residency claim.

**III. Adjustments in Tuition**

A. If applicable for the term petition turned in, the student shall be refunded the difference of resident and non-resident tuition.

B. Any adjustments in tuition due to a change in residency are not retroactive.

IV. Non-resident owning property in LCC District will receive credit for property taxes paid in support of the College by himself/herself or his/her 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. To obtain this credit the student must provide the Registrar's Office with the property tax paid receipt.

V. 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 the student's guardian must reside on the property.

**HOUSING**

Lansing Community College maintains no housing units for students, nor does it enter into third party contracts or supervise off-campus housing.

## ACADEMIC STANDING POLICIES GRADING SYSTEM

The following numerical system is used at Lansing Community College to evaluate academic work:

College Standard	Recommended Narrative Equivalent	Guideline for Performance Achievement of Objectives
4.0	Excellent	91% to 100%
3.5		86% to 90%
3.0	Good	81% to 85%
2.5		76% to 80%
2.0	Satisfactory	71% to 75%
1.5		66% to 70%
1.0	Poor	60% to 65%
0.0	Failure	0% to 59%

Instead of a numerical grade, students may receive an alphabetical letter for their coursework if they have audited a course (X), withdrawn from a course (W), did not complete coursework (I) or were returning to the course (R). Specific regulations regarding these alphabetical letters are as follows:

An "I" (incomplete) designation is temporary. It is not a grade. An instructor may approve a student-initiated request for an incomplete if 80 percent of the course work has been completed and if, in the instructor's judgment, there was good reason why the student could not complete the balance of the required work during the time of enrollment. The student must complete the requirements of the course no later than the closing date of the next term of attendance or by an earlier deadline set by the instructor. "I" grades will not be counted toward the establishment of an earned grade point average (G.P.A.) or toward graduation from Lansing Community College. If the request for an incomplete is not approved, the grade earned consistent with the course requirements will be assigned when the final grades are submitted.

A "W" grade indicates a withdrawal from a course with achievement in the course above the failure level at the time of withdrawal. If a request for withdrawal is received by the Registrar any time before the end of the fourth week of the term, no grade will be recorded on the student's academic record. Approved requests for withdrawal received by the Registrar after the last day of the fourth week of the term will result in the student's record reflecting a "W." If the request for withdrawal is not approved, a grade earned consistent with the course requirement will be assigned by the instructor when final grades are submitted.

An "X" grade is given when a student chooses to audit. No credit is granted, but enrollment is reflected on the student's academic record.

An "R" grade indicates that a student will be returning to a course later. No credit is granted for such designations. They are used for "open lab" courses only.

## COMPUTING GRADE POINT AVERAGE

A student's grade point average is determined on the following basis:

Numerical Grade	Honor Points
4.0	4.0
3.5	3.5
3.0	3.0
2.5	2.5
2.0	2.0
1.5	1.5
1.0	1.0
0.0	0.0

"W," "X" and "I" grades are not included in figuring grade point averages. Thus, a student who receives 5 credit/hours of 4.0, 5 credit/hours of 3.0 and 5 credit hours of 2.0 would have a total of 45 honor points. To compute the grade point average (G.P.A.), the number of honor points earned is divided by the number of credit/hours taken during the term.

## CREDITS FOR COURSE WORK COMPLETED

A full-time student schedule is 12 or more credit hours per term. In general, a class meets one hour each week for each credit earned. However, more time is required for courses with laboratory work. A full-time student taking laboratory work, should plan on approximately 20 hours of class attendance each week.

The credit hour value of each course is included in this catalog and each term's class schedule booklet.

## GRADE REPORTS

An official academic grade report will be mailed to the student approximately one week after the close of each term.

The grade report will be withheld if the student has a financial obligation to the College that has not been fulfilled.

## STUDENT OFFICIAL ACADEMIC RECORD

The Office of the Registrar maintains the official permanent academic record of every student who attends the College. Each student's record is updated at the close of each term.

## 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. When repeating a course the highest grade earned will be used in computing the cumulative grade point average. An updated copy of your academic record will be mailed when the repeat grade has been processed.

## AUDITING

A student who desires to attend a class regularly, but does not wish to take final examinations or receive an achievement grade and credit may register as an auditor. Credit for auditing a class cannot be established beyond the last day of 100% refund for classes. Beyond the last day for 100% refund, auditors cannot change their status to that of a credit student. Students who are non-auditors cannot change their status to an auditor after last day of 100% refund. Status as an auditor must be requested by the student through the Registrar.

## CREDIT BY EXAMINATION (COMP. EXAMS)

A student may obtain credit for certain courses at the discretion of an instructor and department chairperson by passing comprehensive examinations only during the term in which the student is regularly enrolled. The procedure a student uses to obtain comprehensive examination credit is:

1. The student picks up an application for credit by examination at the Office of the Registrar.
2. The student completes the required information on the application and takes the application to the department for instructor and chairperson signatures of approval.
3. After obtaining the required signatures, the signed application is returned to the Cashier's Office in the Student Personnel Services building for payment of tuition.
4. The student will complete an examination for each course in which he/she is to receive credit.
5. An examination will not be given by the instructor until the student presents the appropriate payment receipt. No more than one examination will be given for a single payment.
6. The examination, evaluated by the instructor, will be maintained on file in the department chairperson's office.
7. The Office of the Registrar will contact the department and request the grade which was earned upon completion of the examination. A grade will be recorded for each comprehensive examination given.
8. The student will receive an official notice of the grade earned at the end of the term in which the examination was taken or when processing has been completed.

## TRANSFER OF CREDITS

Official transcripts of a student's record at Lansing Community College will be mailed to another institution at the written request of the student. An "official transcript" is one which is signed by the Registrar, has the school seal placed over the signature and gives the date of graduation if a degree has been granted.

A fee of \$2 is charged for each transcript. All transcript requests require 48 hours notice.

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

## ACCEPTANCE AND EVALUATION OF TRANSFER CREDITS FROM OTHER INSTITUTIONS

Credit will be given for courses transferred from accredited institutions. The credit value of each of these courses will be determined by Lansing Community College. Credits only, not grades, are transferred for "C" or better courses. When the over-all Grade Point Average of a transferring student is at or above a 2.00 on a 4.00 scale, the 1.0-1.5 or "D" credits will be accepted. When the transferring overall Grade Point Average is below a 2.00 on a 4.00 scale, the student may petition the chairperson of his/her academic department to waive a requirement(s) in which he/she has previously earned a 1.0-1.5 or "D." Waiver of a course requirement does not provide credit for a course. The chairperson of the department concerned will notify the Registrar and a notation of the course waiver will be indicated on the student's permanent record.

Upon receipt of a transcript from a non-accredited institution, the Office of the Registrar will forward the transcript in question to the chairperson of the department in which the student has enrolled. The department chairperson has the following four prerogatives available in evaluating transcripts issued by non-accredited institutions and granting credits toward graduation from Lansing Community College:

1. Credit may be granted with demonstration by the student of skills commensurate with the performance required for satisfactory completion of existing courses.
2. Credit may be granted upon review of the content, goals and objectives of a particular course with determination of whether 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 upon demonstration of proficiency in a particular existing course by a comprehensive examination.
4. Credit may not be granted.

The department 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 chairperson or chairpersons. When two or more departments are involved, the written reply to the Office of the Registrar will include the signatures of each respective departmental chairperson.

#### CREDIT EVALUATIONS FOR TRANSFER STUDENTS

1. Freshman and sophomore level courses are accepted in transfer. Higher level credits are accepted if they correspond to a specific course at LCC.
2. Credits only, not grades, are transferred for "C" (2.0) or better courses. When the overall Grade Point Average of a transferring student is at or above a 2.00 on a 4.00 scale, the 1.0-1.5 or "D" credits will be accepted. When the transferring overall Grade Point Average is below a 2.00 on a 4.00 scale, the student may petition the chairperson of his/her academic department to waive a requirement(s) in which he/she has previously earned a 1.0-1.5 or "D." Waiver of a course requirement does not provide credit for a course. The chairperson of the department concerned will notify the Registrar and a notation of the course waiver will be recorded on the student's permanent academic record.
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, but it is ordinarily assumed that the student is pursuing an entirely different curriculum and will not need previous course work.
4. Credits from non-accredited institutions are evaluated by the department chairperson of the area in which the student enrolled. If the student changes his/her curriculum, he/she should notify the Office of the Registrar, as there may be a difference in the evaluation made.
5. A student may request a change in the evaluation, if he/she feels that a course description differs from the way in which it was evaluated. Verification of the change will be made with the department chairperson concerned.
6. Any course in which the student received a "C" (2.0) or better will be considered for evaluation. In most cases the course will be accepted for a corresponding LCC course or an elective credit. In cases where LCC has no department or area similar to the courses on incoming transcripts, no credit will be given.
7. Only official transcripts will be evaluated. Student grade reports or student copies of the record are not acceptable.
8. Transfer credits granted will be shown on the student's academic record.

#### CREDIT FOR PREVIOUSLY ACQUIRED KNOWLEDGE AND LEARNING EXPERIENCE

Lansing Community College has an agreement that learning outside of the classroom is valid. Therefore, it is the College's function to assess extra-institutional learning as part of its credentialing responsibility.

To obtain credit for work experience and/or training, a student may make application at the Office of the Registrar by using the following procedure.

1. Application Procedures  
Relevant aspects of personal and professional experience gained through actual job-related activities and special training experiences, may be applied to an academic program. These experiences may be translated into academic credit provided they are directly related to the program (curriculum) or degree being pursued at Lansing Community College. These experiences must have been obtained from a non-academic source or not otherwise be available for academic credit through the transfer process outlined earlier.

Any student who is currently enrolled at Lansing Community College may apply for experiential learning credit by obtaining an Experiential Learning Processing Form from the Office of the Registrar, Student Personnel Services Building, (517) 483-1266. Prior to payment of the processing fee and submitting the portfolio of supporting documents, the student is requested to review with the academic department in which credit is being sought the probability of credit being granted. Students must then submit the completed Experiential Learning Processing Form to the Registrar, including as much supporting documentation as possible. Payment of a \$25 processing fee must accompany submission of the form and portfolio. The student must also attest by his or her signature that the information submitted is true, to the best of their knowledge. The processing fee is non-refundable.

A fee of the resident tuition rate per credit hour will be charged for those credits which are determined awardable and which apply to the student's program (curriculum). Fees are subject to change by the Board of Trustees without prior notice.

#### 2. Division Assessment Committee:

The completed Experiential Learning Processing Form and portfolio of supporting documents will be forwarded by the Registrar to the chairperson of the respective Divisional Experiential Learning Assessment Committee. The chairperson will assign the portfolio to an appropriate and impartial assessor for review and credit assessment. Assessors, composed of a cross-section of faculty and administrators, have the responsibility for evaluation and assignment of academic credit for experiential learning.

In the evaluation process the assessor will verify the accuracy and validity of the information stated on the Experiential Learning Processing Form and the accompanying supporting documents by contacting various references and former employers whose names have been provided. If all is in order the committee member will determine whether the student's experiential learning fits into appropriate competency and subject areas within the student's educational program (curriculum) at Lansing Community College. The assignment of credit must be stated in terms of equivalent courses which are offered by the respective divisions of Lansing Community College.

#### 3. Documentation:

All experiential learning must be documented by the student. "Documentation" may be defined as (but not limited to) complete job descriptions, copies of course materials and outlines, certificates, training reports, signed supervisory verifications and evaluations on letterhead, and any other descriptive information that may provide a clear understanding of a student's background and competencies. Lansing Community College requires certification that the work or training experience is the student's own. The portfolio containing the Experiential Learning Processing Form and all supporting documents will be retained by the College. A maximum of 60 term hours of experiential learning may be applied towards an LCC Associate Degree. (Thirty credits must be earned at Lansing Community College to comply with the College's residency requirements.)

NOTE: Lansing Community College's decision to award credit for experiential learning does not obligate any other institution to accept such credits in transfer. Receiving institutions reserve the right to assess transcripts of incoming students, and award credit as they see fit.

Credits received by student based on experiential learning may not be used for financial aid or veteran's benefits eligibility.

#### 4. Applicability of Credit:

The Divisional Assessment Committee, alone, will determine what credit granted can be applied to the student's program on an LCC course equivalency basis. In determining whether it is appropriate to accept a student's experiential learning for credit, the major considerations should be the student's educational objective and extra-institutional learning achievement. Credit for experiential learning will be recorded on a student's official transcript on the basis of a course-by-course equivalency, and shall be prominently identified as credit for experiential learning.

#### 5. Student Appeal Procedures:

Students who believe their evaluation of experiential learning is incorrect may file a written appeal to the dean of the division in which the experiential learning credit is being sought. Appeals must be received within six months from the date the credit authorization was approved. In such instances the dean will conduct a procedural review to insure that the student has been treated in a fair and non-discriminatory manner. The decision of the dean shall be final.

#### CREDIT/NO-CREDIT GRADING

The credit (P)/no credit (Z) grading system has been established as a divisional option. This system is reserved for special course offerings where a credit/no-credit grading system is most appropriate for the goals and objectives of the course.

- Course prerequisites and other criteria for enrolling in courses offered on the P-Z grading system shall be determined by the department or division offering the course.
  - Courses offered on the P-Z grading system will be published as being graded only on the P-Z grading system and the course syllabus will be explicit regarding this fact.
  - Courses graded on the P-Z system may be counted toward an associate degree or certificate based on approval of the appropriate dean. A maximum of 10 percent of the total credits required for a degree or certificate may be acquired on the P-Z system.
- Grading procedure of the credit/no-credit system:
- Grades on the P-Z system are not included in computing the term or cumulative grade average.
  - The grades granted on the P-Z system are determined with definition of P and Z as follows:
    - (P) credit—represents a level of performance equivalent to a regular number grade of 2.00 or above on a 4.00 system.
    - (Z) no credit—represents a level of performance less than a 2.00 on a 4.00 system; no credit is granted.
- All courses attempted on the P-Z grading system will appear on the student's academic record.

42	1.99 and above	1.50 - 1.98	1.49
43	1.99 and above	1.51 - 1.98	1.50
44	1.99 and above	1.53 - 1.98	1.52
45	2.00 and above	1.54 - 1.99	1.53
46	2.00 and above	1.56 - 1.99	1.55
47	2.00 and above	1.58 - 1.99	1.57
48	2.00 and above	1.59 - 1.99	1.58
49	2.00 and above	1.61 - 1.99	1.60
50	2.00 and above	1.62 - 1.99	1.61
51	2.00 and above	1.64 - 1.99	1.63
52	2.00 and above	1.66 - 1.99	1.65
53	2.00 and above	1.67 - 1.99	1.66
54	2.00 and above	1.69 - 1.99	1.68
55	2.00 and above	1.70 - 1.99	1.69
56	2.00 and above	1.72 - 1.99	1.71
57	2.00 and above	1.74 - 1.99	1.73
58	2.00 and above	1.75 - 1.99	1.74
59	2.00 and above	1.77 - 1.99	1.76
60	2.00 and above	1.78 - 1.99	1.77
61	2.00 and above	1.80 - 1.99	1.79
62	2.00 and above	1.82 - 1.99	1.81
63	2.00 and above	1.83 - 1.99	1.82
64	2.00 and above	1.85 - 1.99	1.84
65	2.00 and above	1.86 - 1.99	1.85
66	2.00 and above	1.88 - 1.99	1.87
67	2.00 and above	1.90 - 1.99	1.89
68	2.00 and above	1.91 - 1.99	1.90
69	2.00 and above	1.93 - 1.99	1.92
70	2.00 and above	1.94 - 1.99	1.93
71	2.00 and above	1.96 - 1.99	1.95
72	2.00 and above	1.97 - 1.99	1.96
73	2.00 and above	1.97 - 1.99	1.96
74	2.00 and above	1.97 - 1.99	1.96
75	2.00 and above	1.97 - 1.99	1.96
76	2.00 and above	1.97 - 1.99	1.96
77	2.00 and above	1.97 - 1.99	1.96
78	2.00 and above	1.97 - 1.99	1.96
79	2.00 and above	1.97 - 1.99	1.96
80	2.00 and above	1.97 - 1.99	1.96
81	2.00 and above	1.97 - 1.99	1.96
82	2.00 and above	1.97 - 1.99	1.96
83	2.00 and above	1.97 - 1.99	1.96
84	2.00 and above	1.97 - 1.99	1.96
85	2.00 and above	1.97 - 1.99	1.96
86	2.00 and above	1.97 - 1.99	1.96
87	2.00 and above	1.97 - 1.99	1.96
88	2.00 and above	1.97 - 1.99	1.96
89	2.00 and above	1.97 - 1.99	1.96
90	2.00 and above	1.97 - 1.99	1.96
91	2.00 and above	1.97 - 1.99	1.96
92	2.00 and above	1.97 - 1.99	1.96
93	2.00 and above	1.97 - 1.99	1.96
94	2.00 and above	1.97 - 1.99	1.96
95	2.00 and above	1.97 - 1.99	1.96
96+	2.00 and above	1.97 - 1.99	1.96

**TABLE FOR DETERMINING ACADEMIC STATUS**

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 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	Good Standing Cumulative G.P.A.	Warning Range Cumulative G.P.A.	Withdrawal Range Cumulative G.P.A.
1-11	1.88 and above	1.00 - 1.87	.99 - or less
12	1.89 and above	1.00 - 1.88	1.00
13	1.89 and above	1.03 - 1.88	1.02
14	1.89 and above	1.05 - 1.88	1.04
15	1.90 and above	1.06 - 1.89	1.05
16	1.90 and above	1.08 - 1.89	1.07
17	1.90 and above	1.10 - 1.89	1.09
18	1.91 and above	1.11 - 1.90	1.10
19	1.91 and above	1.13 - 1.90	1.12
20	1.91 and above	1.14 - 1.90	1.13
21	1.92 and above	1.16 - 1.91	1.15
22	1.92 and above	1.18 - 1.91	1.17
23	1.92 and above	1.19 - 1.91	1.18
24	1.93 and above	1.21 - 1.92	1.20
25	1.93 and above	1.22 - 1.92	1.21
26	1.93 and above	1.24 - 1.92	1.23
27	1.94 and above	1.26 - 1.93	1.25
28	1.94 and above	1.27 - 1.93	1.26
29	1.94 and above	1.29 - 1.93	1.28
30	1.95 and above	1.30 - 1.94	1.29
31	1.95 and above	1.32 - 1.94	1.31
32	1.95 and above	1.34 - 1.94	1.33
33	1.96 and above	1.35 - 1.95	1.34
34	1.96 and above	1.37 - 1.95	1.36
35	1.96 and above	1.38 - 1.95	1.37
36	1.97 and above	1.40 - 1.96	1.39
37	1.97 and above	1.42 - 1.96	1.41
38	1.97 and above	1.43 - 1.96	1.42
39	1.98 and above	1.45 - 1.97	1.44
40	1.98 and above	1.46 - 1.97	1.45
41	1.98 and above	1.48 - 1.97	1.47

**"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, Tutorial Services, and the 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.

#### **SATISFACTORY PROGRESS FOR VETERANS BENEFITS ELIGIBILITY**

In compliance with Veterans Administration statutory requirements of subparagraph 56, section 1775 of chapter 36, Title 38 U.S. Code, Lansing Community College student veterans benefits recipients will not be certified as eligible for benefits when their academic progress (cumulative grade point average) places them in the academic warning range (probation) beyond two terms of enrollment. Re-certification of eligibility for benefits will not be considered until after the term in which the student regains academic good standing (see Academic Standing Scale).

#### **COMPLETION OF CREDITS ATTEMPTED**

In addition to the above, and beginning with the second term of attendance, a student who does not complete 50 percent 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: 4.0, 3.5, 3.0, 2.5, 2.0, 1.5, 1.0, and X. Grades such as I and W 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 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), 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 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.

#### **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, academic work completed, 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 45 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 by 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 Officials of Lansing Community College. Academic and Administrative Officials are defined as those members of the College who act in the student's educational interest within the limitations of the official's need to know. Officials may include faculty, administration, clerical, and professional employees and other persons who manage student record information.

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.
6. Accrediting organizations carrying out their accrediting function.
7. Persons in an emergency, if the knowledge of the information in fact is necessary to protect the health or safety of students or other persons.
8. Parents of a student who have established that student's status as a dependent according to Internal Revenue Code of 1954, Section 152.

Those individuals, agencies or organizations, external to the College, who desire access to student records and files and who fall in the exclusions above, shall sign a written form indicating specifically the legitimate interest for seeking the information. The forms shall include the names and addresses of the individual and/or agency requesting the information. These forms shall be maintained in the student's files.

Records of request and student file disclosures need not be maintained for those requests made by academic and administration officials of the College. Each academic and administrative official of the College is subject to the requirements of the Family Educational Rights and Privacy Act of 1974, as amended, which prohibits the release of personally identifiable information from student files without the student's written consent.

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.

#### **GRADUATION REQUIREMENTS AND DEGREES**

##### **HOW TO APPLY FOR THE ASSOCIATE DEGREE OR CERTIFICATE OF COMPLETION**

Associate Degrees and Certificates are granted to all who meet graduation requirements. A minimum of 90 credit hours is required for an Associate Degree and 45 credit hours for a certificate. A student completing the requirements 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 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 one or 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 an application for graduation one term preceding the term of graduation.
5. Have completed a course in Political Science, required by LCC (Social Science 103, Political Science, 104 American Government and 105 State and Local 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.

The student's Application for Diploma/Certificate is sent to the appropriate departmental chairperson and divisional dean for final review and approval. The student is informed of this action. This final review process takes from four to six weeks. After the application has been returned to the Registrar's Office, the student is notified of program completion or remaining requirements, if any. The application is held on file until the current term grades are recorded and successful completion of the term verified. Diplomas are

mailed within two months after the last day of the term. Applications for students who do not successfully complete a term are recycled and are held on file until all requirements are met. Soon after the end of a term, an official copy of the student's LCC transcript, noting the degree and date of completion, will be sent to the student. This is official notification that all requirements for the program have been met.

**CRITERIA FOR THE ASSOCIATE DEGREE  
IN ARTS AND SCIENCE,  
DIVISION OF ARTS AND SCIENCES**

- I. Requirements Effective Fall Term, 1985.
- 90 credits
  - G.P.A. of 2.0 or higher
  - 30 credits in attendance at LCC
  - Completion of SS 103, or 104, or 105
  - 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.
    - It is recommended that the requirement of 12 credits in Humanities be fulfilled by the sequence in World Civilizations: HUM 211, 212, 213. 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 five areas:
      - Art and Music History* (HUM 101, 150, 151, 152)
      - History* (HST 104-296)
      - Literature* (ENG 201-296 and HUM 102)
      - Philosophy and Religion* (PHL 101-296; REL 150-296; and HUM 104)
      - Interdisciplinary Humanities* (HUM 121-123) may be substituted as a whole or in part for HUM 211-213.

Please note that World Civilizations courses (HUM 211, 212, 213) are counted as History courses when only one or two of them are taken to fulfill general education requirements.
    - 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 must elect a third course from 200-level offerings in Communication, Writing and English.

- The 12 required credits in Social Science must include either SS 103, or 104 or 105. The remaining eight credits may be selected from any two of the following: SS 101, 102, psychology 200, or geography 201. PSY 200 and GEO 201 cannot be used as core general education courses for psychology or geography majors respectively.
  - The twelve (12) credits in Science can be fulfilled by a combination of science and math courses or only science courses. Only one math course, selected from College Algebra & Trigonometry, Calculus, or Statistics, can be used for partial fulfillment of this requirement. Science courses selected must be those that provide laboratory experience. Students must select at least four credits in a biological science and at least four credits in a physical science.
- F. 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.
- G. In choosing electives, no more than eight credit hours may be submitted from the 100-level Arts and Sciences Seminars, beginning with the designation "Seminar" in the title, offered by any of the departments in the Arts and Sciences Division. These courses may not be used to fill core-course requirements.
- H. All courses listed on any single Arts and Sciences curriculum guide are acceptable towards either an Arts or Sciences Degree, whichever is appropriate when such a 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. Acceptable lists of elective courses in other divisions are available from Counseling or the Dean's Office, Division of Arts and Sciences.
- I. Courses coded beginning with "O" will not be included in the 90-credit total.
- J. Effective date of implementation: Academic year 1985-86.
- 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 General Council of the Arts and Sci-

ences 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 a student representative.

**CRITERIA FOR THE ASSOCIATE DEGREES  
IN APPLIED ARTS AND SCIENCES,  
DIVISION OF TELECOMMUNICATION AND THE ARTS.**

These requirements pertain to the following degrees:

- Associate - Applied Arts
- Associate - Applied Sciences

To receive one of the associate degrees listed above, a student must meet the following requirements:

- Completion of course requirements of specific programs for specialized study areas outlined in the curriculum guides of each department.
- Completion of minimum of 90 credits.
- G.P.A. of 2.0 or better.
- 30 credits in attendance at LCC.
- Completion of four credits of American Government or State and Local Government (SS 103, SS 104, or SS 105).

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 (517-483-1191) in order to achieve maximum transferability.

**CRITERIA FOR THE ASSOCIATE DEGREES  
IN APPLIED SCIENCES,  
DIVISION OF TECHNOLOGY AND APPLIED SCIENCES**

These requirements pertain to the following degrees:

- Associate - Applied Sciences
- Associate - Applied Science, General Technology

To receive one of the associate degrees listed above, a student must meet the following requirements:

- 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.
- Completion of minimum of 90 credits.
- G.P.A. of 2.0 or better.
- 30 credits in attendance at LCC.
- Completion of four credits of American Government or State and Local Government (SS 103, SS 104, or SS 105).

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 (517-483-1191) in order to achieve maximum transferability.

**CRITERIA FOR THE ASSOCIATE DEGREE IN BUSINESS,  
DIVISION OF BUSINESS,  
DIVISION OF BUSINESS**

To receive the Associate Degree in Business through the Division of Business, a student must meet the following requirements:

- Complete a minimum of 90 credits.
- G.P.A. of 2.0 or higher with a minimum of 30 credits in attendance at LCC.
- 30 credits in attendance at LCC.
- Completion of SS 103 or SS 104 or SS 105 or LR 208.
- Completion of requirements of specific programs within area of study as established by respective Program Areas to meet the needs and interest of students' instructional objectives.

The student who completes the requirements for the Associate Degree in Business may or may not have completed the basic studies requirements of those colleges which are co-signers of the MACRAO Articulation Agreement of 1972 (Michigan Association of Collegiate Registrars and Admissions Officers).



Universities throughout the United States differ widely in courses they accept for transfer. Transferability depends upon the university and the program in which the student wishes to enroll. Students planning to transfer to other colleges should consult with the Office of Transfer Application in the Department of Student Development Services in order to achieve maximum transferability.

**CRITERIA FOR THE ASSOCIATE DEGREE  
IN BUSINESS AND TECHNOLOGY,  
DIVISION OF BUSINESS AND DIVISION OF TECHNOLOGY  
AND APPLIED SCIENCES**

To receive the Associate Degree in Business and Technology a student must meet the following requirements:

1. Complete a minimum of 90 credits.
2. G.P.A. of 2.0 or higher.
3. Completion of the required core courses and the required courses for the area of specialization.
4. Elective credits to complete the required 90 credits may be selected from the recommended elective course list or other Business Technology Associate Degree specialty required course lists.
5. The LCC institutional American Government course requirement must be met. This course may be SS 103, SS 104, SS 105, or LR 208.
6. All credits used in meeting the Business and Technology Associate Degree core and specialty requirements must be earned credit or recognized accredited institutional transfer credit.
7. A maximum of 20 credits from training institutions may be used. (This shall include military and experiential learning credit.)

Universities throughout the United States differ widely in courses they accept for transfer. Transferability depends on the University and the program in which the student wishes to enroll. Students planning to transfer to another college should consult with the counseling staff in the Department of Student Development Services in order to achieve maximum transferability.

**REGULATION FOR THE GRANTING OF ADDITIONAL  
ASSOCIATE DEGREES**

Any student who has received an Associate Degree from Lansing Community College or any other accredited community college may be awarded a second Associate Degree subject to the following stipulations:

1. For each additional Associate Degree, a minimum of 15 credit hours must be completed at LCC in the division in which the degree is sought, nonrepetitive of previously earned credits.
2. All requirements for an Associate Degree in either Arts, Applied Arts, Business, Science, or Applied Science must be met.
3. No additional degree will be granted in the same program or curriculum in which the first degree was earned.
4. An additional degree must be within a specific program or curriculum, if the first degree was not.
5. Exceptions to the above should be appealed to the office of the respective dean.

**REGULATION FOR GRANTING AN ASSOCIATE DEGREE  
WHEN THE STUDENT HAS AN EARNED BACHELOR'S DEGREE**

A student who has earned a Bachelors Degree from a regionally accredited American college or university which has a general education requirement may be awarded an Associate Degree at Lansing Community College, subject to the following requirements:

1. For each Associate Degree, a minimum of 15 credit hours must be completed at Lansing Community College in the division in which the Associate Degree is sought. The Lansing Community College cumulative grade point average must be at or above a 2.0 level.
2. All requirements for an Associate Degree in either Arts, Applied Arts, Business, Science, or Applied Science must be met.
3. The College's requirement of completing a Political Science course is waived.
4. The Associate Degree must be within a specific program or curriculum.
5. Exception to the above should be appealed to the office of the dean of the division in which the Associate Degree is sought.

**EXAMINATIONS**

Students are required to take examinations at the appointed time and place in order to receive credit for a course.

Generally, examinations are given during the regularly scheduled class period during the last week of the 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.

**DROPS AND ADDS**

Dropping and adding courses involves procedures which must be completely carried out by the student so the Office of the Registrar may keep an accurate account of records.

During the first week of the term a student may make changes in his/her schedule beginning with the first day of on-campus registration. A student may withdraw from a course before the end of the fourth week without academic penalty. No drops will be processed after the last day of the term.

The student is entirely responsible for carrying out the following procedure:

1. Pick up drop-add form at Registrar's Office.
2. Fill out the form completely with information requested. Departmental signatures are not required until after the fourth week of the term.
3. Return form to Registrar's Office for proper recording and wait until all entries have been completed. Do not leave the office until all matters relating to the drop-add have been completed.

**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.

**TERM CLASS SCHEDULES**

Each term Lansing Community College publishes a class schedule booklet which identifies all courses offered for that term. This booklet includes general information on the dates, time and location of registration. There is no charge for the schedule booklet.

**PAYMENT OF TUITION AND FEES**

All students attending Lansing Community College must pay tuition and fees at the time of registration. Tuition and fees are as follows:

Tuition, Resident Students	
Per credit hour	\$17.00*
Tuition, Non-Resident Students	
Per credit hour	\$24.00*
Tuition, Out of State Students	
Per credit hour	\$34.50*
Tuition, International Students	
Per credit hour	\$35.50*
Tuition for apprenticeship student varies according to the program of study.	
Fees, all students	
Application fee (new students, non-refundable)	\$10.00*
Application fee (guest)	\$10.00*
College activities fee (each term)	
1-6 credit hours	\$ 1.00*
7-11 credit hours	\$ 3.00*
12 or more credit hours	\$ 5.00*

Laboratory fees vary according to the course of study. Tuition and fees may change through action of the Board of Trustees.

Non-sufficient fund (NSF) check handling fee \$10.00\*

\*Costs listed are those in effect at the date of this publication, and are subject to change by the Board of Trustees. Specific lab fees for individual courses are listed in the class schedule book each term.

**REFUND POLICY**

Fall, Winter, Spring and Summer Terms
Withdrawal during first week of term
100% of tuition and fees
Withdrawal during second week of term
50% of tuition only
Withdrawal after second week of term
No refund

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.

#### ATTENDANCE

A student is expected to attend all sessions of each course in which he/she is 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 extenuating reasons which he/she feels is appropriate, he/she has the responsibility to notify the class instructor. This can be done by telephoning the departmental office in which the instructor is a member and leaving a message for that instructor. Department telephone numbers are published in the front of the term class schedule booklet.

#### WITHDRAWAL

##### I. Student self-initiated withdrawal

- A. If a student finds it necessary to withdraw from the College, he/she should contact the Registrar's Office immediately and complete a drop form.
- B. 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 drop form is maintained.
- C. If a student withdraws after the end of the fourth week of class, a grade is issued by the instructor at the time of the withdrawal. A grade will be placed on the final grade report and recorded on the academic record.
- D. A student withdrawing will receive a refund if the withdrawal takes place within the established refund period for each term.

##### II. College initiated "Administrative Withdrawal"

- A. A student may be withdrawn from a class or a group of classes for the following reasons:
  1. Non-attendance
  2. Lack of proper prerequisites for the particular course
  3. Student behavior that interferes with the instructional process.
- B. A student who is withdrawn prior to the end of the fourth week will not receive a grade and no record of attempting class will appear on the academic record. A copy of the administrative withdrawal form is maintained.
- C. A student who is withdrawn after the end of the fourth week of class, will be given a grade at the time of withdrawal. This same grade will be placed on the final grade report and be recorded on the academic record.
- D. A student who is administratively withdrawn may appeal the withdrawal. (See Administrative Withdrawal Statement.)

##### III. Administrative Withdrawal Statement

There are situations where it may be in the best interest of the student and/or College community that the student be withdrawn from a class or a group of classes. This process is known as "administrative withdrawal."

An "administrative withdrawal" may be initiated by a classroom instructor through the fourth week in accordance with written procedure and criteria established by each department and with the co-recommendation of the respective departmental chairperson. An "administrative withdrawal" may be based on: (A) student non-attendance, (B) lack of prerequisites for a particular course, and (C) student behavior that interferes with the instructional process.

When a classroom instructor interprets that it would be in the best interest of a student and/or the College community to initiate an "administrative withdrawal," the following steps are taken:

- A. In the case where a student consistently fails to meet the attendance requirements of the class the instructor may initiate an "administrative withdrawal" through the Office of the Registrar.
  1. Upon receipt of a recommendation for an "administrative withdrawal," the Registrar will notify the student in writing that the student is being administratively withdrawn and the basis for the "administrative withdrawal" decision. The first level of appeal is to the departmental chairperson or to the dean of the division in which the class is being taught. All appeals must be in writing and signed by the student requesting the appeal hearing.
  2. If a student decides to appeal an "administrative withdrawal" to the dean of the appropriate division, the student will receive a written notification of the time and place of the appeal. If the student decides not to attend the appeal conference, the dean will review the appeal in the student's absence. The dean will

notify the student in writing of the recommendation of the review and of the reasons for the recommendation. The dean will forward a copy of the student's written notification to the Office of the Registrar for disposition.

3. A student who desires to appeal the decision to the dean may appeal in writing to the Chairperson of the Judicial Board. The processes employed in this appeal are listed under the heading of "Due Process" in the Student Guidebook.
- B. In the case where a student does not have the prerequisites for a particular course, the classroom instructor consults with the student regarding the potential of "administrative withdrawal." In this case the "withdrawal" action is normally limited to the first two weeks of the term.
  1. The instructor may recommend that the student withdraw from the particular course. If the student chooses not to withdraw, the instructor may initiate an "administrative withdrawal" through the Office of the Registrar.
  2. Upon receipt of the recommendation for an "administrative withdrawal," the Registrar will notify the student in writing that the student is being administratively withdrawn and the basis for the "administrative withdrawal" decision, in writing to the dean of the division in which the class is being taught.
  3. If a student decides to appeal an "administrative withdrawal" to the dean of the appropriate division, the student will receive a written notification of the time and place of the appeal. If the student decides not to attend the appeal conference, the dean will review the appeal in the student's absence. The dean will notify the student in writing of the recommendation of review and of the reasons for the recommendation. The dean will forward a copy of the student's written notification to the Office of the Registrar for disposition.
  4. A student who desires to appeal the decision of the dean may appeal in writing to the Chairperson of the Judicial Board. The processes employed in this appeal are listed under the heading of "Due Process" in the Student Guidebook.
- C. In the case where a student behaves in a manner that interferes with the instructional process, the classroom instructor consults with the student regarding the potential of "administrative withdrawal" and establishes guidelines for retaining enrollment in the class.
  1. If the guidelines are not satisfactorily met by the student, or if the student does not respond to an invitation to meet with the classroom instructor, the classroom instructor with the co-recommendation of the appropriate departmental chairperson may recommend to the Registrar in writing that the student be administratively withdrawn.
  2. The classroom instructor with the co-recommendation with the appropriate departmental chairperson may recommend that the Chairperson of Student Development Services meet with the classroom instructor and the student. The purpose of the meeting would be to review the circumstances of the student's behavior and to work out a possible alternative.
  3. Upon receipt of a recommendation for an "administrative withdrawal," the Registrar will notify the student in writing that the student is being administratively withdrawn and the basis for the "administrative withdrawal." The Registrar will also notify the student in writing that the student may appeal the "administrative withdrawal" decision, in writing to the dean of the division in which the class is being taught.
  4. If a student decides to appeal an "administrative withdrawal" to the dean of the appropriate division, the student will receive a written notification of the time and place of the appeal. If the student decides not to attend the appeal conference, the dean will review the appeal in the student's absence. The dean will notify the student in writing of the recommendation of the review and of the reasons for the recommendation. The dean will forward a copy of the student's written notification to the Office of the Registrar for disposition.
  5. A student who desires to appeal the decision of the dean may appeal in writing to the Chairperson of the Judicial Board. The processes employed in this appeal are listed under the heading of "Due Process" in the Student Guidebook.

##### IV. Procedure for Resolving Health-Related Student Problems

In a situation in which a serious (physical or emotional) health-related problem is evident, the College's responsibility is to offer to assist the student in the removal of the behaviors that interfere with the student's performance and involvement while at Lansing Community College. In such event, the following procedures shall be followed:

- A. Call the Department of Public Safety and the Assistant to the Dean of Student Personnel Services if:
  1. Emergency health services are required, or
  2. It appears that there has been a violation of the law.
- B. Call only the Assistant to the Dean of Student Personnel Services if it appears that there has been a violation of a College regulation that is not also a violation of the law.

- C. If there is no apparent violation of the law or College regulation, and no emergency exists, the student should be encouraged to seek help from an appropriate office or agency, on or off campus. The assistance of the Office of the Dean of Student Personnel Services and/or the counselors is available, if desired.
- D. If there appears to be a violation of the law or a College regulation, the Assistant to the Dean of Student Personnel Services shall contact the Chairperson of the Student Development Services Department. Counseling staff will meet with the student and recommend:
  1. Continued counseling if the problem is within the ability of the department to handle.
  2. Referral back to the Assistant to the Dean where no health-related problem is evident or it is determined that the department can be of no further service.
  3. Referral to other appropriate professional assistance if the problem is beyond the ability of the department to handle. If professional assistance is not sought and the previous behavior significantly compromises the rights or safety of other persons, or if a professional recommendation of withdrawal is made, the Assistant to the Dean of Student Personnel Services may institute procedures for administrative withdrawal of the student from the College until evidence of the ability to function constructively in the College setting is available. The student may appeal this decision to the Board of Appeals.
  4. Whenever possible, the counseling staff working with the student's physician or relatives shall make a recommendation to the student as to his future course of action.

#### VETERANS' AFFAIRS

Veterans' Affairs helps the veterans file applications for education, counseling, loans, tutorial assistance and/or any other entitlements all owed 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 veterans wishing advance payment, should apply at the Veterans' Affairs 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 service people in having access to, and completing College programs, has been designated as a Servicemember's Opportunity College.

In addition, the College participates in the Army College Fund, Michigan National Guard Co-op, Air Force, and Army ROTC programs.

#### STUDENT RIGHTS

The most basic necessity for the achievement of the College's goals is freedom of expression and communication. Since knowledge is as broad and diverse as life itself, the need for freedom is equally broad. Yet, absolute freedom in all aspect of life means anarchy, just as absolute order means tyranny. Both anarchy and tyranny are antithetical to the purposes and necessities of the College. By providing an environment most conducive to teaching and learning, the College strives to strike a balance between maximum freedom and necessary order.

Each right of an individual places a reciprocal duty upon others: the duty to permit the individual to exercise the right. The student, as a member of the academic community, has both rights and duties. Within that community, the student's most essential right is the right to learn. The College has a duty to provide for the student those protections, opportunities and environment which best promote the learning process in all its aspects. The student, in turn, has duties to his fellow members of the College—the most important of which is to refrain from interference with those rights that promote the essential purposes and processes of the College.

The student is not only a member of the academic community; he/she is also a citizen of the larger society. As a citizen, he/she retains those rights, protections and guarantees of fair treatment which are held by all citizens, and neither the academic community nor the College may deny them to him/her. The enforcement of the student's duties to the larger society is the

responsibility of the authorities duly established for that purpose and not that of the academic community or the College. But as is always the case if the student's conduct is such as to detrimentally affect the College, the College reserves the right to take action that seems appropriate.

More specifically, Lansing Community College operates within the framework of a basic philosophy, stated purposes, laws and regulations of the city and state and the expectations of the community in which we are located. The College assumes that students, while attending this College, will conduct themselves as responsible citizens of the community in which we live.

We must understand our rights if we are to use them properly. They include personal rights and a range of significant liberties such as freedom of speech and the press. They include economic rights of property and contract and political rights. Each person, moreover, is assured that there will be no interference with his/her freedom of worship according to his/her conscience. In addition, there are rights of counsel, jury trial and other safeguards to protect individuals with "due process of law."

Coinciding with these rights are duties and responsibilities which every student citizen should study, understand and fulfill. One is to obey the laws and help in law enforcement. These responsibilities are basic to our principle of living together in a democratic society. Another duty is that of performing military service and other lawfully ordered work in defense of the country and our liberties. A third is the duty of meeting squarely one's share in the cost of government. A fourth is that of taking a responsible and active part in community affairs, including of course, the activities of our College. As part of the privilege attendant upon academic freedom, students are expected to act with a high-mindedness which integrates self into the well-being of the total community.

Membership in the College community, like membership in any community, means more than privileges. It means responsibilities, too. In the matter of your responsibilities in these areas, some things are expected of you in your behavior and conduct.

#### STUDENT EVALUATION OF INSTRUCTIONAL QUALITY

Because students expect quality in their learning experiences, Lansing Community College provides opportunities for students to participate in the evaluation and improvement of instruction. The College is committed to the idea that individuals do provide valuable insights as students. These opportunities include:

1. Students are asked to complete Student Evaluation Forms at the conclusion of each course. The forms are distributed by a person other than the instructor, and the instructor is not present at the time the students complete the forms.
2. Students are invited to present suggestions regarding instructional quality to their instructors, their instructor's department head or the instructor's divisional dean. These written or verbal suggestions are also reviewed by the College to improve instruction and assess instructional effectiveness.
3. Students are invited to serve on various councils, boards and committees of the College in order to provide input and student perspective in the development and evaluation of both instructional and support-service programs. These councils, boards and committees are located in the various divisions of the College. Those students who have interests in serving on or contacting members of these bodies may contact the Office of Student Government or the office of the dean in the appropriate divisions. Examples of these councils, boards and committees can be found in other sections of this catalog.

Specific questions regarding student participation in the evaluation of instruction may be directed to the Office of the Dean of Student Personnel Services for clarification or appropriate referral.

#### STUDENT RESPONSIBILITIES

##### 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 for any reason, including illness or late registration, 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 of 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 telephoning the departmental office in which the instructor is a member and leaving a message for that instructor.

##### CONDUCT

The College prohibits acts which cannot be tolerated because they seriously interfere with the basic purposes, necessities and processes of the academic community and the College, or because they deny the essential rights of other members of that community of the College.

**LAWS**

Students shall obey the laws enacted by federal, state and local governments.

It is appropriate that the students be aware of Act 26 of the Public Acts of 1970:

"Sec. 1. A person is guilty of a misdemeanor, punishable by a fine of not more than \$500.00, or by incarceration in the county jail for not more than 30 days, or both:

- (a) When the chief administrative officer of a publicly owned and operated institution of higher education, or his/her designee, notifies the person that he/she is such an officer or designee and that the person is in violation of the properly promulgated rules of the institution; and
- (b) When the person is in fact in violation of such rules; and
- (c) When, thereafter, such officer or designee directs the person to vacate the premises, building or other structure of the institution; and
- (d) When the person thereafter wilfully remains in or on such premises, building or other structure; and
- (e) When, in so remaining therein or thereon, the person constitutes (1) a clear and substantial risk of physical harm or injury to other persons or of damage to or destruction of the property of the institution, or (2) an unreasonable prevention or disruption of the customary and lawful functions of the institution, by occupying space necessary therefore or by use of force or by threat of force.

Sec. 2. A person is guilty of a misdemeanor, punishable by a fine of not less than \$200.00 and not more than \$1,000.00, or by incarceration in the county jail for not more than 90 days, or both, who enters on the premises, building or other structure of a publicly owned and operated institution of higher education, with the intention to, and therein or thereon does in fact, constitute (a) a clear and substantial risk of physical harm or injury to other persons or of damage to or destruction of the property of the institution, or (b) an unreasonable prevention or disruption of the customary and lawful function of the institution, by occupying space necessary therefore or by use of force or by threat of force.

Sec. 3. This act shall take effect August 1, 1970."

**CITY OF LANSING ORDINANCES  
(ARTICLE II., SECTION 26-A.)**

No person shall damage, destroy or deface any College building, or any building occupied by the College, or the grounds, out-buildings, fences, trees or other appurtenances or fixtures belonging thereto.

No person shall wilfully or maliciously make, or assist in making, any noise, disturbance or improper diversion, by which the peace, quietude or good order of the College is disturbed.

No person shall use profane, indecent or immoral language or indulge in indecent or immoral conduct in any building or on any property adjacent to any building occupied by the College.

No person shall interfere with the academic or operational functions in college buildings or on the surrounding campus; and a person shall leave immediately when so directed by the president or by any other person designated by the president.

No person, other than a regularly enrolled student or guest having legitimate business at the College, faculty member or other employee, shall enter and remain in any College building for any reason whatever unless such person has received permission from the College officers to be in any such building. Nothing herein shall prevent any interested citizen from viewing and touring the campus and its College buildings at such times and in such manner as would not interfere with the normal operation of the College.

No person, regularly enrolled student, or guest, shall have in his or her possession on the surrounding campus or in the College buildings, either concealed or not concealed, weapons described as, but not limited to, rifles, shotguns, revolvers, knives, firebombs or explosives of any kind, or any other dangerous weapon.

Any person found guilty of violating any of the above provisions shall be guilty of a misdemeanor punishable by a fine of not more than one hundred dollars (\$100.00) or imprisonment in the city jail for not more than thirty (30) days, or by both such fine and imprisonment, at the discretion of the court.

**ASSEMBLY**

No person or persons shall assemble in a manner which obstructs the free movement of persons about the campus or the free and normal use of College buildings and facilities, or prevents or obstructs the normal operations of the College.

**MEETINGS**

"American parliamentary law is built upon the principle that rights must be respected: rights of the majority, of the minority, of individuals, of absentees, and rights of all these together."<sup>1</sup>

Therefore, Robert's Rules of Order (Revised), will be followed in any meetings held upon the College campus.

**COLLEGE PROPERTY**

College policy specified that the property of the College as well as that of individuals should be respected. Theft of any kind, whether of money or other property, is prohibited. The destruction or mutilation of books, magazines, or other library material in College libraries is another type of conduct which is prohibited. Equally so is unauthorized use of, damage to, or destruction of College buildings, equipment and property. Tampering or misuse of fire alarm systems or firefighting equipment is prohibited.

**FIGHTING**

Fighting on College property is prohibited except for a boxing, sparring or wrestling match, contest, or exhibition held or sponsored by the College or a recognized College organization.

**SEXUAL HARASSMENT**

Sexual harassment is not acceptable behavior on the College campus or at College-sponsored events off the campus. Violation of this regulation by students or College employees can result in disciplinary action.

**DEFINITION OF SEXUAL HARASSMENT**

Sexual harassment is defined in the Michigan Civil Rights Act as follows: "...Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications of a sexual nature when:

1. Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations or public services, education or housing.
2. Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or public services, education or housing.
3. Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, education or housing, or creating an intimidating, hostile, or offensive employment, public accommodations, public services, education, or housing environment.

For the purpose of the above regulation the College interprets the unwelcome to mean:

- A) Conduct or communication which a reasonable person in a similar circumstance would consider unwelcome.
- B) Conduct or communication which continues after notice is given that the conduct or communication is unwelcomed.

**DISCRIMINATION**

Lansing Community College affirms its commitment to the practice of no discrimination on the basis of race, color, religion, sex, national origin, age, height, weight, marital status or handicap.

The above commitment has evolved from efforts to comply with several laws and public acts that pertain to the area of no discrimination. Notable of these acts and laws are the following:

- 1) Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin.
- 2) Title IX of the Educational Amendment of 1972 prohibits discrimination on the basis of sex.
- 3) Section 504 of the Rehabilitation Act of 1973 prohibits discrimination on the basis of handicap.
- 4) Michigan's 'Elliott-Larson Civil Rights Act' MCL. 37.2101, et seq, as amended prohibits all forms of discrimination and defines sexual harassment.

**HOW STUDENTS CAN FILE A COMPLAINT  
OR A FORMAL GRIEVANCE  
FOR DISCRIMINATION OR SEXUAL HARASSMENT:**

The difference between a complaint and a formal grievance is the method of processing; a complaint will be handled informally while a formal grievance will involve investigation and may result in a formal hearing.

Complaints and grievances should be made promptly while facts are still fresh. Most formal grievance procedures have time limits published as part of the procedure and these time limits are an important consideration. If a student files a complaint, the student may later file a grievance provided applicable time limits are met.

Students who feel aggrieved because of any form of discrimination, including sexual harassment, have several ways to make their concerns known. Normally, a student would be expected to directly inform the person engaging in discrimination or sexually harassing behavior by telling that person that the behavior is offensive and requesting that the offensive behavior stop.

A student who feels aggrieved because of discrimination or sexual harassment is also advised to seek out one of the College's counselors to assist

in the interpretation of this procedure and the alternatives available to the student in solving the student's concern.

#### INFORMAL COMPLAINT

If the student who feels aggrieved feels it is inappropriate to communicate directly with the person whose conduct is offensive or if direct communication has not solved the student's concern, the student may contact Ms. Ilse Burke in the College Affirmative Action Office located in the 528 Office Building (483-1858) or the Office of the Dean of Student Personnel Services located in the Student Personnel Services Building (483-1162) to deal informally with the student's concern. The informal complaint process may call for an informal investigation of the issues or the concerns by the appropriate official within the Affirmative Action Office or the Office of the Dean of Student Personnel Services (depending on the student's choice of referral).

#### FORMAL GRIEVANCE

If the student is not satisfied with the results of the informal complaint or if the student wishes to bypass the informal process, there are two places available for the student to process formal grievances.

- 1) The student may request a formal hearing before the Judicial Board of the College. The procedures and guidelines for the functioning of the Judicial Board are listed in the catalog. This request should be made to the Office of the Dean of Student Personnel Services located in the Student Personnel Services Building (483-1162).
- 2) The student may process a formal grievance through the College's Affirmative Action Office utilizing the appropriate formal grievance procedure for the alleged discrimination or sexual harassment. The College's Affirmative Action Office is located in the 528 Office Building (483-1858).

Students who feel aggrieved by discrimination or sexual harassment should not feel deterred in making a complaint if the student does not wish to testify. The informal process listed earlier may solve the student's concern. Where discipline, discharge of employees, or suspension or dismissal of students is possible and where evidence is not available from other sources, the College will request the cooperation of the aggrieved student to testify. The cooperation of the aggrieved student to provide evidence is a key factor in upholding the "due process" to which the person complained of is entitled.

#### OBSTRUCTING AND JOSTLING

The following acts are prohibited on College property.

Obstruction of or threatening to obstruct, without express permission from an administrative official of the College, any street, sidewalk, hallway, stairway, classroom, elevator, doorway, vestibule, entry, building, annex, wing, patio, balcony, or any other College property by impeding or threatening to impede the free and uninterrupted passage of vehicles or individuals, or interfering in any way with the free and uninterrupted use of College property.

Jostling or roughly crowding persons in or on any of the above-mentioned locations.

#### ASSAULTS

Assault and/or battery on College property is prohibited. For the purpose of this regulation, assault is defined as an attempt or offer, with force and violence, to do corporal hurt to another, with apparent present means of carrying out the attempt. Battery is an injury which results from an assault. Battery is an injury, regardless of intent, actually done to a person by another in an angry, revengeful, rude or insolent manner.

#### RECORDS

It is the responsibility to give honest and complete replies to all questions included in application forms and other documents required by the College.

#### FINANCIAL RESPONSIBILITY

Students owing money to the College in respect to such matters as fees, loans, library fines, bookstore accounts, driving or parking penalties, etc. will be subject to disciplinary action if such accounts are not paid when due. In particular, it should be noted that if any accounts are outstanding at the end of an academic quarter, the publication of the student's grade report and/or official transcripts will be delayed and the student will not be permitted to register for a succeeding quarter until such accounts are paid.

#### IDENTIFICATION CARDS

All Lansing Community College students are issued an identification card. Students are expected to show their I.D. card whenever they check out books at the library, cash checks on campus, vote in student elections, etc., or when they are requested by a member of the faculty or staff of the College. Misuse of College identification to obtain privileges to which the student or to which others are not entitled under existing regulations is a College offense.

#### CHEATING

Each student is expected to be honest in his/her work. Dishonesty in assignments, examinations or other academic work is considered an extremely

serious offense by the faculty and students and the student is subject to disciplinary action.

#### PLAGIARISM

A student is guilty of plagiarism who fails to give credit for any ideas or material taken from another for either written or oral presentation. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgement also is considered plagiarism. Plagiarism is considered by the faculty and students as an extremely serious offense for which the student may be subject to disciplinary action.

#### SMOKING

Smoking is prohibited in all College rooms or facilities where "No Smoking" signs are posted. These areas include, but are not limited to, classrooms, teaching laboratories, shops, lecture halls, seminar rooms and elevators.

#### EXPLOSIVES

Explosives, firecrackers, firearms and devices intended to be used as weapons are not permitted on College property. Provided, however, that the foregoing shall not prohibit fencing foils and other athletic equipment intended for such use, nor shall it apply to persons holding concealed weapons permits and duly constituted police officers who are authorized by law to carry weapons.

#### ALCOHOLIC BEVERAGES

Drinking, being under the influence of, or possessing intoxicating beverages on College property is prohibited.

#### DRUG USAGE AND DISTRIBUTION OF DRUGS

Using, possessing or distributing illegal drugs (such as narcotics, hallucinogens, stimulants, depressants, etc.) on campus or at College-sponsored events, is prohibited. Lack of a legal conviction of the drug laws is not a defense in a charged violation of this rule.

#### DRESS

Students are expected to dress in an appropriate fashion, having in mind the activity in which they are engaged, while on College property and when attending College-sponsored events. Specific attire not limited to but including appropriate footwear, safety glasses, safety hats, shields and aprons may be required when the health and safety of the individual student or other members of the College community are to be protected.

#### GAMES AND RECREATIONAL ACTIVITIES

Gambling in any form is prohibited at all times on College property.

Games of any kind may only be played in the recreational or athletic facilities which have been designated to be used for such games. Applications for permission to play any game other than in an area designated for that purpose must be obtained from the Director of Student Activities.

#### PETS

In order to protect the health and safety of the members of the College community and preserve order on the campus, no pets, including but not limited to, dogs, cats, birds and rodents, shall be permitted within the buildings of Lansing Community College. This is not intended to exclude seeing eye dogs used by the visually handicapped or animals designated for laboratory experimentation purposes.

#### GUEST SPEAKERS

College regulations with respect to the participation of guest speakers are outlined in the Policy for Guest Speakers. The College requires orderly conduct, non-interference with College functions or activities, and identification of the sponsoring groups or individuals. Under no circumstances are members of the College community to be forced to be involuntary audiences.

#### ORGANIZATIONS

No student or student organization may use campus facilities, solicit funds, business, or support on the College campus unless such a student or student organization has been approved by the Lansing Community College Student Government and has been authorized by the administrative officials of the College. (See Establishment of Student Organizations at Lansing Community College.)

Approval of College clubs and organizations must be in accordance with the Student Government Bylaws and Constitution.

#### FIELD TRIPS

Field trips must be planned, organized and approved according to the Student Activities Policies and Procedures for Student Organizations, and where applicable the parking and transportation services unit of the Public Safety Department.

**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. Requirements 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 ACTIONS**

In situations involving minor offenses, disciplinary action may be taken by an appropriate officer of the College and no report for further proceedings are 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.

**USE OF STUDENT LITERATURE TABLE PROCEDURAL REGULATIONS**

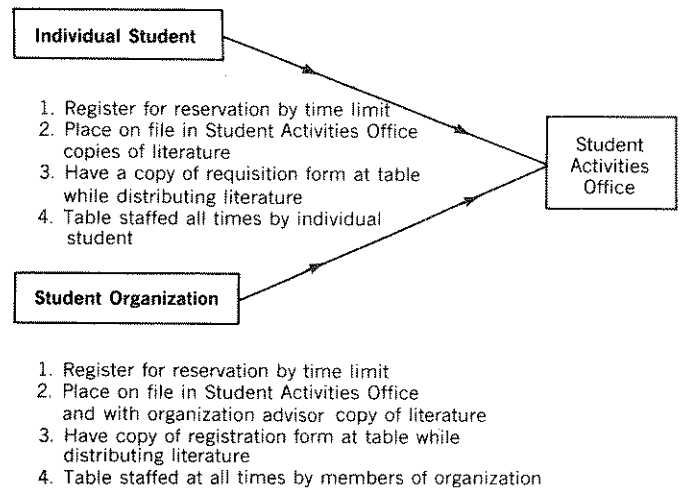
Lansing Community College is continually aware of and supportive of the concepts of freedom of expression, particularly those provided by the First Amendment of the Constitution of the United States. The College also perceives that one of its functions is to provide a wide range of learning experiences and learning opportunities for the students of the College. At the same time, the College is mandated to provide orderly processes which avoid material disruption, protect public and private property and provide for the general safety and welfare of students, faculty and College staff.

The following statements are designed to facilitate student distribution of literature within the College facilities, while providing students and College personnel and property reasonable protection from commercial exploitation and legal actions. Court rulings have determined that College buildings while considered a "public trust" are not considered "public property" subject to unregulated use by any and all individuals. The procedural regulations below are designed to facilitate the legislated instructional mission of the College to serve the citizens of the College community. The following procedural regulations shall be followed:

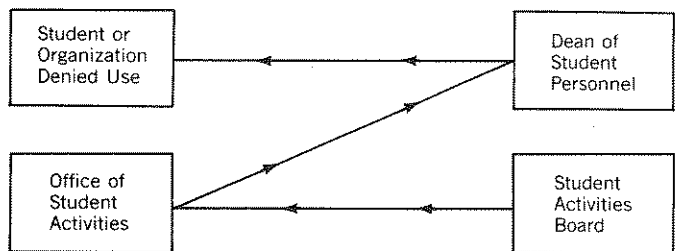
1. The distribution of literature within College buildings by students shall be limited to student literature tables made available for such distribution. Student literature tables will be made available in the following areas within the College buildings.
  - a. In the entry lobby within the second floor cafeteria of the Arts and Sciences Building.
  - b. In the Washington Avenue Mall lobby between the Health Physical Education Building and the Applied Arts and Sciences Building.
  - c. In the second floor lobby area of the Old Central Building.
 At least two single tables will be available in each of these areas. The maximum number of tables made available in any area will be determined in a reasonable manner based on the use of the area and regulations regarding fire safety and student welfare.
2. Only registered students and College-recognized student clubs and organizations shall have access to the student literature tables. (As in the past, non-students who wish to use college facilities must gain permission by following procedures established for this purpose through the appropriate instructional Offices or the office of the Vice President of the College.)
3. The student literature tables will be available Mondays through Thursdays from 8 a.m. to 10 p.m. and Fridays 8 a.m. to 5 p.m. during the days of regularly scheduled terms.
4. While no prior College approval of the materials to be distributed is required, registered students and College-recognized clubs and organizations are required to register for the use of the student literature tables with the Student Activities Office at least 24 hours prior to the time of desired use. Registrations will be accepted on a first request-first serve basis. Individual students and recognized student clubs or organizations may register for the use of a table for three consecutive days. If there are no pending requests, a registration may be renewed at the end of a previous registration. If there are no pending requests, a recognized student club or organization may request the use of more than one table or more than one location. If during the use of multiple tables or locations, additional students or recognized student groups request the use of a table or location, and additional tables or locations

- are not available, the multiple user or users will be required to give up the multiple use of tables and locations to provide for the new request.
5. A copy of the completed registration form obtained from the Student Activities Office must be available at the student literature table while distribution is taking place.
  6. In order to determine accountability, a sample of the material to be distributed must be placed on file with the Student Activities Office at the time of the registration for use. In addition, a recognized student club or organization must have a copy of the material to be distributed on file with the club's or organization's advisor.
  7. The student literature table will be staffed at all times by the individual student, or members of the recognized student club or organization registered for the use of the tables while the distribution of materials is taking place. The registered student or recognized club or organization will have the responsibility to ensure that the distribution process is orderly at all times and that the general area surrounding the student literature tables is not littered.
  8. Individuals shall have the option to pick literature from the tables or receive a copy from the individuals sitting at the tables. No literature shall be forced upon any individual nor shall there be any obstructions created in the path of the general flow of traffic.
  9. Individual students or recognized student clubs and organizations may collect funds for worthy causes, such as Muscular Dystrophy, Blood Drives or College-sponsored activities. There shall be no commercial solicitations of funds or business, nor shall individual students solicit funds for personal gain.
  10. The College has the right and responsibility to halt the distribution of literature which it believes to be libelous, obscene, invades privacy, or literature designed to cause immediate disruption of classes, violence or substantial disorder of the normal operations of the College.
  11. Failure to comply with the above procedural regulations may lead to the denial of the use of the student literature tables and/or may lead to disciplinary action.

**LITERATURE TABLE USE REQUEST FLOW CHART**



**FLOW CHART FOR APPEAL OF DENIAL OF USE OF LITERATURE TABLE**



Any individual, registered student or recognized student club or organization which has been denied access to the student literature tables, or was required to halt distribution based on procedure 10 above may appeal the denial or requirement to halt distribution. The appeal shall be in writing and shall be directed to the Dean of Student Personnel Services within 10 calendar days of the denial or requirement to halt distribution. The Office of the Dean of Student Personnel Services shall make a prompt investigation of the appeal, contacting the parties involved, and shall, within 10 calendar days from the

date of appeal make a decision to reinstate the distribution rights denied or halted or to uphold the original decisions. If the decision of the Dean of Student Personnel Services is not satisfactory, the individual student or recognized student club or organization may appeal the Dean's decision to the Student Activities Board of the College. This second appeal must be in writing and presented to the Chairperson of the Student Activities Board within 10 calendar days of the decision of the Dean of Student Personnel Services. The Student Activities Board shall make a prompt investigation of the appeal, contacting parties involved, and shall within 10 calendar days from the date of the appeal, make a decision to reinstate the distribution rights or upholding the denial or required halt of distribution. The decision of the Student Activities Board shall be final.

Where it is contemplated that a violation of the student literature distribution procedural regulation warrants the imposition of disciplinary action upon an individual student, disciplinary action shall be taken in accordance with "Due Process" as outlined in this catalog.

#### 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 the individual students.

The following principles shall be employed for the guidance and direction of all persons or bodies hearing students accused of violating regulations of the College, except those involving academic performance and achievement:

- The student will be notified by certified letter that an alleged violation has occurred. The student will be directed, in the letter, to make an appointment with the appropriate College official to review the facts concerning the alleged violation and to determine if formal charges should be prepared. A "hold" may be placed on the student's record which will result in the student's reenrollment being delayed.
- The student shall be notified by an appropriate College official that he/she is accused of violating a regulation;
- The student shall be notified that he/she may elect one of three courses of action:
  - The student may admit the alleged violation and request, in writing, that the administrative officer take whatever action seems appropriate;
  - The student may admit the alleged violation and request a hearing before the Judicial Board;
  - The student may deny the alleged violation, in which case the administrative officer shall refer him/her to the Judicial Board;
- Prior to the hearing, the student shall be entitled to the following:
  - Written notification of the time and place of the hearing;
  - A written statement of the charges of sufficient particularity so that the student may prepare his/her defense;
  - Written notification of the names of the witnesses who are directly responsible for having reported the alleged violation or, if there are no such witnesses, written notification of how the alleged violation came to the Board's attention.
- 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;
- The student shall be entitled to be accompanied by counsel;
- The student or his/her counsel shall be entitled to ask questions of the Judicial Board or of any witnesses;
- The student shall not be required to testify against himself/herself;
- The student shall be entitled to an expeditious hearing of his/her case;
- The student shall be entitled to an explanation of the reasons for any decision rendered against him/her.
- Decisions rendered by the Judicial Board will be final. A student who wishes to contest the decision of the Judicial Board has recourse to civil court action.

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 membership of the Judicial Board will consist of the following members:

- The Dean of Student Personnel Services Division (Chairperson);
- The Chairperson of the Student Development Services Department;

- 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;
- 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:
  - The Office of the Dean of Student Personnel Services Division;
  - The Judicial Board of the College.

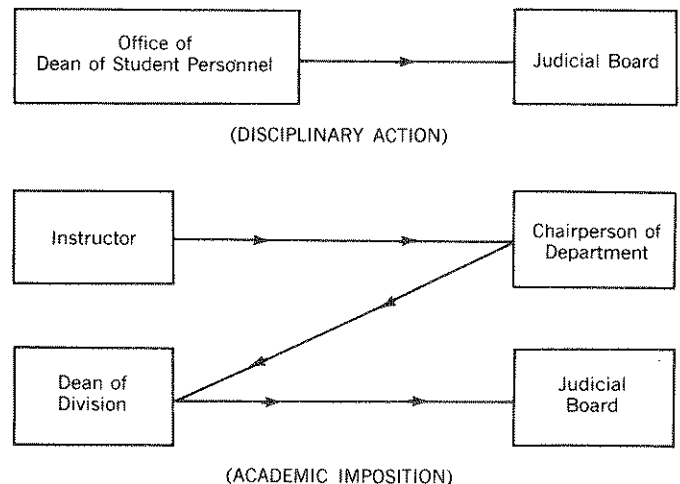
The instructional division membership of the Judicial Board shall be two faculty members of the division in which the student is matriculating, when hearing a case involving a disciplinary action based on an alleged violation of the general rules and regulations of the College. When the Judicial Board 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 the chair 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:
  - The faculty member involved;
  - The chairperson of the instructional department involved;
  - The dean of the division involved, and
  - 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;

- Decisions rendered by the Judicial Board will be final. A student who wishes to contest the decision of the Judicial Board has recourse to civil action in the courts.

#### GRAPHIC EXPLANATION OF LINE OF APPEAL



#### POSTER REGULATIONS

Lansing Community College is continually sensitive to the fact that there is a need for our students, staff, and offices to communicate regarding various activities, events, and services. The College is also sensitive to the right of freedom of expression, particularly as provided for in the First Amendment of the Constitution of the United States. At the same time, the College is responsible for providing reasonable procedures and regulations to protect public and private property, provide for the general safety and welfare of all members of the College community, and which preclude disruption of the normal functions of the College.

The following statements are designed to regulate the use of posters within the College facilities while providing students, College personnel and College properties reasonable protection from commercial exploitation and court

suits. While the courts have said that College property is considered a "public trust," these same courts have ruled that College property is not "public property" subject to unregulated use by any and all individuals. This regulation is designed to facilitate communication through the use of posters while complying with the legislated instructional mission of the College.

**DEFINITION:** A poster is any written communication designed to apply to a wall or other surface for the purpose of relating information about an event, service, idea or activity. A poster may be in the format of, but not limited to, a sign, a brochure, an announcement, or banner.

### GENERAL POSTER REGULATIONS

1. Within any and all buildings, placement of all signs and posters is restricted to approved bulletin boards.
2. All posters should be in English, or when in another language, a literal English translation should be supplied with each poster copy. When a foreign language poster is used, its complete English translation should be:
  - a. Clearly printed on the same poster and in the same size letters as the letters used in the original foreign language poster, or
  - b. Attached to each copy of the foreign language poster, clearly printed, and in the same size letters as the letters of the original foreign language poster. The English translation must remain with the poster for the duration of its posting.
3. Each poster is required to have in the lower left-hand corner, its posting date (month, day, and year) and in the lower right-hand corner, its date (month, day, and year) to be removed. Each poster should be up for a reasonable length of time depending upon the activity.
4. Designated bulletin boards are available in each building for the posting of student and staff personal notices. All student and staff personal notices will be confined to these designated bulletin boards.
5. A poster shall not exceed 18 inches by 24 inches except when given special permission by the appropriate office of approval.
6. No poster shall be placed in such a way that it covers all or part of a previously posted approved poster whose take-down date has not expired.
7. The removal of posters at or prior to the take-down date shall be the responsibility of the sponsoring organization or individual. No posters shall be removed prior to the take-down date by unauthorized individuals.
8. Each poster must identify the sponsoring organization, department or individual. Each poster must display a telephone number or an office location where more complete information can be obtained.

#### POSTERS: Offices of Approval

- a. Students and student organizations wanting to post posters must gain approval in the Office of Student Activities.
- b. College staff and faculty must gain approval in their departmental office or from the office of their administrative supervisor.
- c. Student and College staff personal notices placed in designated bulletin boards within the College buildings do not need approval. Examples of personal notices are selling used books, sharing a ride, sharing an apartment, and selling personal articles. Profit making commercial notices are not considered personal and will be removed.

### STUDENT OR STUDENT ORGANIZATION APPEAL OF POSTER DENIAL OR REMOVAL

If a student or student organization feels that a denial of posting or removal of a poster infringes upon their First Amendment rights or is in violation of this regulation, an informal appeal may be made by the poster sponsor to the Director of Student Activities. A meeting will be held between the appealing poster sponsor or sponsors with the Director of Student Activities to discuss the appeal. If the appeal is not resolved, a formal appeal may be presented to the Director of Student Activities. This appeal must be in writing, must indicate the reason(s) for the appeal, and must be dated and signed by the appealing party. The Director of Student Activities will gather information and respond to the appealing party within five (5) days of receipt of the appeal. If the student or student organization is not satisfied with the response of the Director of Student Activities, a second written appeal may be made to the Dean of Student Personnel Services. This written appeal must contain the reason(s) for the appeal, and a copy of the poster must be made available to the Dean of Student Personnel Services for review. The appeal to the Dean of Student Personnel Services must be dated and signed by the appealing party. The Dean of Student Personnel Services will gather information and respond to the appealing party within five (5) days of receipt of the appeal, giving the decision rendered and reason(s) therefore. The decision of the Dean of Student Personnel Services shall be final.

Failure to comply with the above regulations may lead to the denial of approval, the removal of posters or disciplinary action.

In order to protect the student body, individual members of the College community and the resources of the College, the College reserves the right and accepts the responsibility to deny approval or remove any poster or posters which it believes to cause significant disruption of the normal function and operation of the College.

### POSTER REGULATIONS FOR OFF-CAMPUS ORGANIZATIONS AND INDIVIDUALS

Lansing Community College is sensitive to the fact that there is a need for some off-campus organizations and individuals involved in non-commercial enterprises to communicate with Lansing Community College students and staff members concerning various activities, events, and services. The College is also sensitive to the right of expression, particularly as provided for in the First Amendment of the Constitution of the United States. At the same time, the College is responsible for providing reasonable procedures and regulations to protect public and private property and providing for the general safety, welfare, and positive learning environment for all members of the College community.

Therefore, the College has provided a kiosk, centrally located on the downtown campus, for the use of non-commercial groups and individuals who are not affiliated with the College. Such groups and individuals may place their posters on this kiosk without seeking prior approval from any College office, and the College disclaims any and all responsibility for items posted.

### FACULTY RESPONSIBILITIES\*

The primary responsibility of instructional staff is teaching effectively. Such effective teaching may occur in the classroom, laboratory, office, or in any other instructional setting. This responsibility is reflected by an instructor who:

- A. Is articulate and enthusiastic about his/her field and establishes a positive, stimulating, learning, atmosphere
- B. Prepares for each class; organizes course concepts and presents them clearly; exhibits comprehensive knowledge of the subject; applies skills appropriate to course content; makes appropriate and timely use of student and instructional support services
- C. Respects students as individuals; recognizes student learning styles and manages student learning accordingly; adapts course material to student learning mode and rate
- D. Leads discussions when appropriate and provides presentations which represent various sides of a given issue
- E. Informs students early in the class as to what is expected of them through a departmentally approved syllabus, course outlines, grading standards, texts, and other materials; provides appropriate classroom materials and assists students in mastering them; provides students with scheduled instructional hours
- F. Evaluates students fairly and objectively; constructs and administers examinations that are valid and reliable indicators of student learning; maintaining clear and thorough records of student progress and keeps students informed throughout the course
- G. Encourages intelligent, independent thought by students, where appropriate
- H. Uses instructional media, learning materials, and equipment effectively

The complementary responsibilities of instructional staff are to assist student through scheduled office hours and on other occasions, including being an informed adviser on academic and career planning by:

- A. Providing assistance to students on an individual basis
- B. Being available to consult with students during regularly scheduled office hours and informing students about the availability of these hours
- C. Knowing curriculum/program requirements and career opportunities in one's field of expertise or making appropriate referrals for academic advising; being able to advise students in one's own program area; where appropriate making referrals for counseling, placement, and for information regarding educational alternatives within the College and at other institutions

\*Recommendations of the College-Wide Faculty Evaluation Committee; current agreement between the Board of Trustees and the Lansing Community College Chapter of the Michigan Association for Higher Education.

### COURSE DESCRIPTIONS

Each course description has seven categories of information:

WRI 122      A      Composition II      B      C D E      4 (4-0)

- F. Prerequisite: WRI 121. Continuation of WRI 121 and an alternative to ENG 122 in many programs. Writing and G. 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 an introduction to documentation of sources.

- A. Course code and number
- B. Course title
- C. Number of term credit hours
- D. Number of lecture-discussion hours per week
- E. Number of laboratory hours per week



- F. Prerequisites for enrolling in the course are indicated prior to the course description. The course number(s) or other information indicate the preparation or prerequisite to enrollment in the course. The appropriate departmental office should be consulted in case of questions as to eligibility for enrolling in the course.
- G. A brief description of the course. The appropriate departmental office will provide additional information upon request.

## COURSE CODES USED IN DESCRIPTIONS

Courses are listed by departmental course codes within each Division of the college.

The sequence is as follows:

## DIVISION OF STUDENT PERSONNEL SERVICES

### DEPARTMENT OF STUDENT DEVELOPMENT SERVICES

SD Student Development

### DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS

PEA Professional  
PEB Fitness  
PEC Individual Sports  
PED Individual/Dual  
PEE Team Sports  
PEF Aquatics  
PEG Combatives/Weight Training  
PEH Gymnastics/Dance  
PEI Indoor Activities  
PEJ Outdoor Activities

### MILITARY SCIENCE, AIR FORCE R.O.T.C.

MS Military Science

### AEROSPACE STUDIES, AIR FORCE R.O.T.C.

AS Aerospace Studies

### CENTER FOR AGING EDUCATION

GER Gerontology

## DIVISION OF ARTS AND SCIENCES

### DEPARTMENT OF COMMUNICATION

COM Communication  
ESL English as a Second Language  
FRN French  
GRM German  
JPN Japanese  
JRN Journalism  
RDG Reading  
SGN Sign Language  
SPN Spanish  
SPH Speech  
WRI Writing

### DEPARTMENT OF HUMANITIES

ENG English  
HST History  
HUM Humanities  
PHL Philosophy  
REL Religion

### DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

CPS Computer Science  
MTH Mathematics

### DEPARTMENT OF SCIENCE

ANT Anatomy  
AST Astronomy  
BIO Biology  
CEM Chemistry  
GE Geology  
MET Meteorology  
MIC Microbiology  
NS Natural Science  
OCN Oceanology  
PGY Physiology  
PHY Physics  
SC Independent Study/Science Seminars

### DEPARTMENT OF SOCIAL SCIENCE

SS Social Science  
CD Child Development  
ED Education  
GEO Geography  
HUS Human Services  
PLS Political Science  
PSY Psychology  
PS Public Service  
SA Sociology/Anthropology  
SW Social Work

## DIVISION OF BUSINESS

### ACCOUNTING AND OFFICE SYSTEMS

ACC Accounting  
BUS Business  
CCR Court and Conference Reporting  
CLU Chartered Life Underwriter  
DE Data Entry  
EC Economics  
INS Insurance  
IWP Information/Word Processing  
LAW Law  
LUT Life Underwriters Training

### COMPUTER APPLICATIONS AND SOFTWARE SYSTEMS

CAB Computer Applications for Business  
CAS Computer Applications Systems

### CRIMINAL JUSTICE SYSTEMS

CJ Criminal Justice

### HOSPITALITY SYSTEMS

HMF Hotel-Motel and Food Service  
TA Tourism and Travel Agency Operations

### MANAGEMENT DEVELOPMENT CENTER

MGT Management  
MKT Marketing  
SBM Small Business Management

### MANAGEMENT SYSTEMS

AIB American Institute of Banking  
BUS Business  
LR Labor Relations  
MGT Management  
MKT Marketing  
RE Real Estate  
SL Savings and Loan

## DIVISION OF TECHNOLOGY AND APPLIED SCIENCES

### AUTOMOTIVE

AUT Automotive Trades

### AVIATION TECHNOLOGY

AFT Aviation Technology  
AFG Aviation Mechanics  
AFM Airframe Mechanics  
AFP Powerplant Maintenance

### COMPUTER INTEGRATED MANUFACTURING

ATR Metal Machine Trades  
ATS Technology Seminars  
CIM Computer Integrated Manufacturing  
CG Computer Graphics  
DT Drafting Technology  
MT Mechanical Technology  
EM Electro-Mechanical Technology  
ET Electronics Technology  
HAC Heating and Air Conditioning  
PIC Production and Inventory Control  
QC Quality Control  
RB Robotics  
WLD Welding

### CONSTRUCTION TECHNOLOGY

AT Architectural Technology  
LAT Landscape Architectural Technology  
BTA Building Trades

BTJ Building Trades  
BTR Building Trades  
CT Civil Technology  
FST Fire Science Technology  
SAF Occupational Safety and Health  
ATG Applied Technology General  
ATS Applied Technology Seminars  
TEC Technology General

**DEPARTMENT OF HEALTH CAREERS**

NUR Nursing  
CHC Continuing Health Carrers  
DA Dental Assistant  
DBA Dental Business Assistant  
DHA Dental Hygiene/Dental Assistant  
DH Dental Hygiene  
EMT Emergency Medical Services Technology  
ESA Advanced Emergency Medical Tecnology  
EMS Emergency Medical Services  
ER Emergency Care  
HC Health Careers  
AHC Allied Health Careers  
ST Surgical Technology  
RT Respiratory Therapy  
RTA Respiratory Therapy—Advanced  
RXT Radiologic Technology

**TRANSPORTATION TRAINING**

TT Truck Driver Training

**DIVISION OF TELECOMMUNICATION AND THE ARTS****DEPARTMENT OF LIBRARY INFORMATION SERVICES**

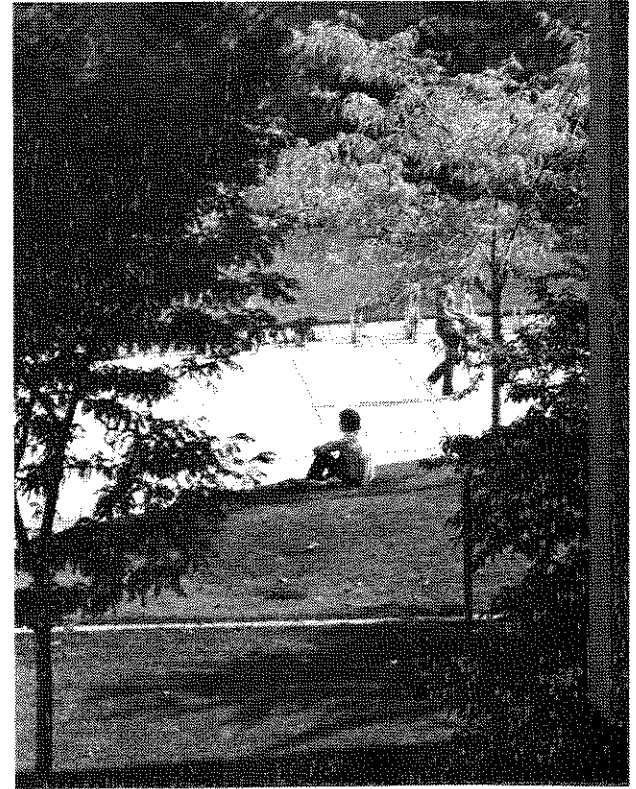
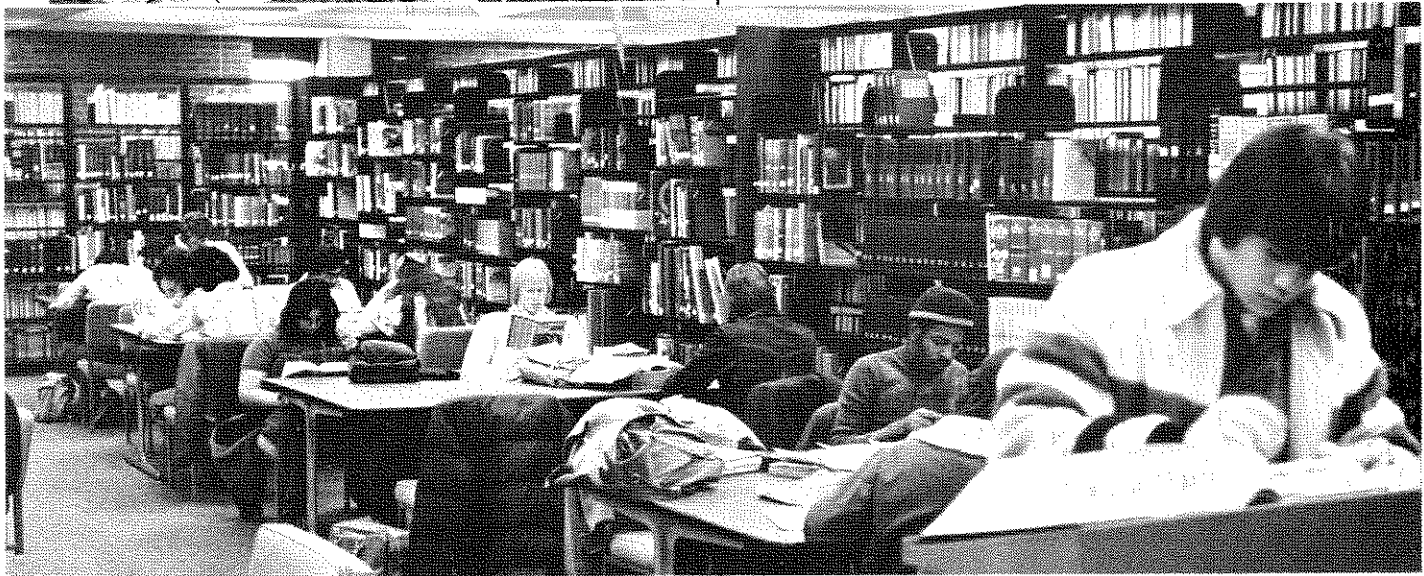
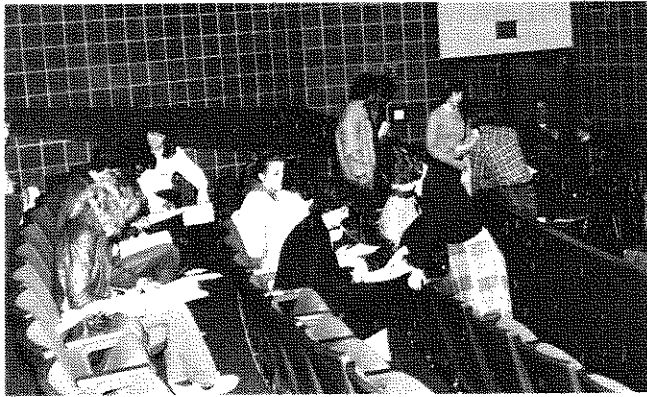
LIB Using Information Resources

**DEPARTMENT OF MEDIA**

ART Art  
MRT Media Technology  
PHO Photography

**DEPARTMENT OF PERFORMING ARTS**

DNC Dance  
MUS Music  
THR Theatre  
THW Theatre Workshops





## Lansing Community College



Dean William Schaar

# DIVISION OF STUDENT PERSONNEL SERVICES

Admissions  
Physical Education & Athletics  
Registrar  
Student Activities  
Student Development Services  
Student Financial Services

## DIVISION OF STUDENT PERSONNEL SERVICES

Dr. William Schaar, Dean

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.

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, 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.

## DEPARTMENT OF STUDENT DEVELOPMENT SERVICES

Dr. John H. Cansfield, Chairperson

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 departmental advising centers and counseling offices on campus provide students with academic advising opportunities. Assistance and coordination is also offered to academic departments with academic advising programs.

### 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 LCC students often transfer. Curricular guides are available for students who wish to learn about the transfer requirements for their chosen curricula. Representatives of colleges and universities visit the Lansing Community College campus for the purposes of discussing transfer requirements with students.

### 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 counseling service areas and in several library locations. Several computer assisted career guidance systems (MOIS/SIGI) are available within the Career Planning and Placement Office.

### The Classroom Training Unit

The Unit staff provides counseling, advising and other support services for students attending the College under the auspices of the Job Training and Partnership Act. Students participating in the program are referred from appropriate Tri-County agencies and from within the College.

### The Career Exploration and Assessment Center

Offers extensive career interest testing and personalized, one-to-one counseling to aid individuals in career decision making. Designed for non-LCC students.

### Student Orientation

Through the Student Testing, Advising and Registration Time (START), incoming students become better integrated into the College community. Academic placement testing, College information, and career development concepts are included. START operates prior to and during College registration periods. Individual College departments offer special student orientations which supplement the START experience.

### Center for Student Support

The Center provides academic support services for special needs students. These services include tutorial assistance, academic advising, vocational planning, personal/social counseling, academic monitoring, community outreach, study skill laboratory, and adaptations for handicappers.

Programs are specifically designed to assist students who are academically and economically disadvantaged, handicapped, or who have limited English ability. Special emphasis is placed on helping students who are pursuing vocational training.

### Tutorial Services

A tutorial program is offered in the Center for Student Support 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.

### Classroom Support Services

The Office of Handicapper Services in the Center for Student Support provides the following assistance:

- Advising
- Readers
- Interpreters
- Note Takers
- Tutors
- Registration
- Mobility and Orientation of Campus
- Special Materials and Equipment
- Financial Aid Forms
- Referral of students to Counselors, Appropriate Departments, and other agencies
- Tactical Map of LCC Campus

### 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 counseling services.

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.

### Women's Resource Center

The Women's Resource Center is a service center for people at Lansing Community College and in the community who may be exploring career options, considering returning to school, needing support in life-transition periods, looking for new directions, or developing personal and 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 one's life.

The Women's Resource Center provides an opportunity for individuals to discuss concerns with our staff; a community outreach program including a speaker's bureau and training seminars for businesses and agencies; ongoing scholarship and child care/financial aid programs and Tuition Reimbursement for Special Populations. Special referral services and scholarships and a support group for displaced homemakers are available through the Center. A free G.E.D. preparation course is offered through the Lansing School District Adult Education Program and the Women's Resource Center.

**Student Development Services (SD)**

Student Development Services Department  
Division of Student Personnel Services

**SD 106 College Survival Skills 2(2-0)**

Designed to provide an orientation to the services available at Lansing Community College to assist students in identifying personal and academic requirements for success in higher education. This course will identify those personal factors which can help individuals to succeed academically and acquaint them with services available to assist them.

**SD 117 Life Planning Workshop 1(1-0)**

Life 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.

**SD 118 Stretching Your Dollars 2(2-0)**

Assistance is given in very basic money management, budget procedures, record-keeping, wise shopping practices, low-cost entertainment and recreation, effective debt payment methods, and financial goal-setting and planning.

**SD 119 Mid Career Planning 2(2-0)**

Designed for people who wish to evaluate their present career situation in terms of their personal development. The class will enable students to identify present skills, interests, values, motivations, and plan some next step goals designed to promote career development. The course is equally appropriate for those considering a career change as well as those who would like to plan for continued growth and development within their present job situation.

**SD 121 Exploring Your Potential 2(2-0)**

Designed to help each person identify past and present achievements which suggest the presence of strengths and potentials. The goal of the class is greater realization of one's potential through self-determination.

**SD 124 Techniques of Study 2(2-0)**

Develops effective study habits by examining behaviors that interfere with successful classroom performance. A valuable aid for beginning and advanced students. Weekly discussions focus on: how to take examinations, notetaking, writing papers, reading improvement, and use of the library.

**SD 125 Career Planning 2(2-0)**

A course to help students relate their values, life goals, interests, and skills to job areas. Students investigate potential careers through self-assessment, career assessment, decision-making, and next-step planning.

**SD 126 Elimination of Self-Defeating Behaviors 2(2-0)**

This course is designed to help people change their behavior, learning how self-defeating behaviors are started, maintained, and how they can be eliminated. The behavior change is aimed at teaching people how to live life more fully and happily. Teaching methods involve short lectures, feedback, discussions, and written homework based on personal thoughts. Class participants work independently on their own personal insights.

**SD 127 Job Search Readiness 2(2-0)**

This course aids students in the job search process. Course content covers filling out applications, writing resumes and cover letters, interviews, and other techniques used in seeking employment. Group discussions focus on personal attitudes toward job hunting.

**SD 128 Interpersonal Communication 2(2-0)**

This course is designed to help the student improve interpersonal skills including observation, listening, disclosure and behavior change skills, through lecture/discussion, readings, and a journal. The focus will be on understanding and constructive use of interpersonal communication skills.

**SD 131 Weight Reduction II 2(2-0)**

Prerequisite: SD 132. Weight Reduction II is designed to reinforce the self-management techniques taught in the prerequisite class. Solutions to both specific and long-range problems of weight loss and maintenance will be covered. (Any weight reduction program should be undertaken only after consultation with one's physician.)

**SD 132 Weight Reduction Seminar 2(2-0)**

The assumption for this course is that poor eating habits are learned and may be replaced by more appropriate behavior conducive to weight reduction and control. Beginning with a structured diet and exercise plan, students

will focus their attention on environmental, personal and emotional factors which interfere with weight control. (Any weight reduction program should be undertaken only after consultation with one's physician.)

**SD 137 Financial Management 2(2-0)**

This course is designed to cover all areas of financial planning and money management. Emphasis will be placed on total financial planning with a view toward attaining financial security and independence. Included will be budgeting, savings, taxes, estate planning, Social Security benefits, insurance and investments.

**SD 140 Marriage Preparation 2(2-0)**

This course is designed to assist persons in answering basic questions of relationship, companionship, partnership, and love, for others and themselves. (This course is designed with couples in mind).

**SD 142 Assertiveness Training I 2(2-0)**

Assertive behavior is interpersonal behavior in which a person expresses her/his opinions, feelings, beliefs, wants and personal rights and values in such a way that the rights of others are not violated. Techniques covered teach students to identify and accept basic interpersonal rights and develop assertive skills.

**SD 143 Assertiveness II 2(2-0)**

Prerequisite: SD 142 or SD 161. An expansion of concepts taught in the introductory Assertiveness Training classes is the focus of this class. Students will work on further development of vocabulary, ideas and behavior related to being assertive. Practice will be through role play and other means.

**SD 145 Organizing Time 2(2-0)**

This course is designed to assist individuals in making the most effective use of their time. It will be structured with discussions, films, written exercises, and readings dealing with procrastination, goal setting, time charting, and efficient measures of time management.

**SD 147 Men's Lives/Men's Needs 2(2-0)**

This discussion and experiential format course is designed with men in mind. It will be a supportive structure where communication skills, assertiveness training skills, self-confidence, self-care, and a positive approach to problem solving and decision making will be utilized with men's issues and feelings as the focus.

**SD 149 Marriage Enrichment 2(2-0)**

The goal of this course is to make a good marriage better. Positive attitudes and strengths in the marriage relationship are stressed. Participants will develop growth plans for their marriages and will have an opportunity to practice communication skills and techniques for creative conflict resolution.

**SD 150 Divorce Adjustment 2(2-0)**

Designed for those who are experiencing or who have recently completed a divorce, the student-centered atmosphere is supportive and geared toward coping and finding constructive alternatives to the emotional crisis of divorce. A supportive, informed atmosphere will allow participants to discuss openly their feelings and experiences in working toward the goal of increased self-awareness.

**SD 157 Single Parenting 2(2-0)**

This course is designed for those who are raising children in a single-parent family structure. Topics will include communication, discipline, time-structuring, and the unique concerns of adults faced with the responsibilities of single-parenthood. Group discussions, lectures, and readings will be used to benefit both men and women in their desire to become more effective parents.

**SD 158 Anger Awareness 2(2-0)**

This course is designed to define and explore anger, and to identify feelings, attitudes, and methods of expressing anger. This will be accomplished through readings, exercises, sharing and discussion. Participants will be expected to develop a guide to greater awareness of anger and how to deal with anger more effectively.

**SD 161 Women and Assertiveness 2(2-0)**

Assertive behavior is interpersonal behavior in which a person expresses her/his opinions, feelings, beliefs, wants, and personal rights and values in such a way that the rights of others are not violated. This course emphasizes the way women deal with assertiveness situations.

**SD 162 Start Living Rationally 1(1-0)**

Using the philosophical teachings of Rational Emotive Therapy, this course is designed to help students become more effective and productive. A variety

of approaches and techniques will be used to provide students with insight into the sources of problems as well as specific approaches to problem solving. Practical techniques are offered to avoid frustration when the world is not the way it "should" be; for overcoming difficult situations at school, home, and on-the-job and resulting in more of what one wants in life.

**SD 165 Brown Bag Films 1(1-0)**

An educational, contemporary film, videotape, or speaker is presented at each session, followed by a discussion of the issues presented in class. Topics deal with social issues facing society today.

**SD 167 Management Skills and Women 2(2-0)**

Information and practice exercises related to the skills needed for management level jobs, with emphasis on the unique situations common to women who are being promoted or seeking promotion are covered. Included are values clarification, leadership styles, communication, time management, decision making, supervision, and other skills.

**SD 168 Female Sexuality/Health 2(2-0)**

Through the sharing of questions and feelings about sexuality, each student will explore what it means to be a fully sexual female and discover ways to take care of oneself. Topics include health issues, self examination, body awareness, sex roles, and the health care system.

**SD 169 Women As Winners 2(2-0)**

This course is designed to offer participants new tools for insight, self-awareness and understanding. Participants learn to set their own goals, emancipate themselves from the boundaries they have set for themselves, and thereby become more authentic and self-actualizing.

**SD 176 Widow(er)hood 2(2-0)**

The means of meeting change and crisis in a positive way, including possible new directions in life and the exploration of ways to make crisis work for the widowed, are shared through this class.

**SD 184 Job Search/Reentry Women 2(2-0)**

This class is designed to assist you in your job search by presenting job search skills that you can use now and in the future. Content will include setting realistic job goals, developing an effective resume, identifying your job skills, good interviewing and effective follow-up. Emphasis will be given to the special job search concerns of women reentering the job market.

**SD 188 Rape Education 2(2-0)**

This course will present research and statistics encompassing the various areas of sexual assault prevention and treatment. Included will be medical examination, medical evidence gathering, victim's medical rights, counseling strategies, phases of crisis/stages of coping with rape trauma, social service networking, statutory and legislative responses to need. Psychological profiles of victims and assailants, demographics of sexual assault, and behavioral aspects (method of operation) of the crime will be covered.

**SD 189 Birthing/Lamaze 2(2-0)**

This course is designed to meet the preparation needs of the expectant parent(s) for labor and delivery experience. It is unique because it provides skills which allow expectant persons to participate actively with full awareness of the delivery process. Breathing and relaxation exercises will help ensure a sense of security, composure and sharing in the birth experience. Additional information on parenting with infants will be covered. (A letter signed by the expectant mother's physician is required by the second class session.)

**SD 192 Self-Defense and the Visually Impaired 1(1-0)**

This class is designed to increase the self-defense and confrontation skills of the visually impaired through lecture/discussions and through the practice of a variety of exercises and drills. (Wear loose-fitting clothing to allow freedom of movement. If a cane is used, bring it to class.)

**SD 194 Building A Healthful Lifestyle 2(2-0)**

This course will assist participants in establishing control over their lifestyle as a means for achieving optimal wellbeing, both physical and mental. What we choose to do with our lives requires decisions about the use of time, talent, energy, and social and material resources. What we actually put into practice involves realistic planning, a supportive structure and environment, and the experience of fulfillment. In this course, participants will experience the process of change.

**SD 199 Women and Financial Management 2(2-0)**

This course is designed to cover all areas of financial planning and money management. Emphasis will be placed on total financial planning with a view toward attaining financial security and independence. Included will be

budgeting, savings, taxes, estate planning, Social Security benefits, insurance, and investments. Focus in the course will be on the financial concerns of women.

**SD 204 Self-Defense and Women 1(1-0)**

This seminar is a combination of consciousness-raising and skill-building experiences intended to increase students' understanding, resources and skills in sexual assault prevention and self-defense.

**SD 220 Parent-Child Communication 2(2-0)**

This course is designed for anyone interested in the development of parenting communication skills. Skills will include active listening, problem solving, and resolution of family conflict. Application of skills involves infants, preschoolers, school-age, and older children.

**SD 224 Small Group Leadership Training 2(2-0)**

The goal of Small Group Leadership Training is to prepare participants to be group facilitators by increasing their knowledge of small group dynamics as well as increasing their skills through experiential learning activities.

**SD 226 Career Planning and Women 2(2-0)**

In a small group setting, this class will emphasize self-exploration and methods of increasing knowledge about career opportunities. Included will be identification of personal interests, life values, present skills and relating these to career options, goal-setting, decision-making, and developing a plan for future action.

**SD 234 Overcoming Shyness 2(2-0)**

Shyness is very common and most of the difficulties associated with shyness can be changed. Social awkwardness, difficulty meeting new people, fear of rejection, poor conversational skills and many hurtful thoughts about failure and inability to succeed or change are some of the characteristics with which this course will deal.

**SD 236 Self Defense and Women 2(2-0)**

Develop self defense techniques; develop a sense of confidence in determining when to use self defense; and examine the politics of rape as well as legal, medical and psychological aspects of this and other violent crimes against women.

**SD 240 Empathy Training 2(2-0)**

This course will teach the student how to use empathy as a technique to deal with emotions, values and attitudes in the communication process. The skills will be taught in a small group emphasizing a supportive, experiential atmosphere. The interested student can acquire beginning skills for short-term peer counseling and improve interpersonal relationships between spouse, children, parents, friends, co-workers, etc.

**SD 241 Math Anxiety 2(2-0)**

Many people find themselves excluded from certain career choices because they are afraid to take math classes. 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. The highly anxious math student will benefit from this class before taking a math class.

**SD 242 Dealing With Stress 3(3-0)**

This course is designed to facilitate an understanding of stress and how it affects behavior. The goal of the class is to enable the student to identify alternate methods of dealing with stress in order to live more comfortably and productively.

**SD 243 Advanced Empathy 2(2-0)**

Prerequisite: SD 240 or Concurrently. This course will teach the student how to expand the use of empathy as a technique to deal with emotions, values and attitudes and decision-making in the communication process. The skills will be taught in a small group emphasizing a supportive experiential atmosphere. Concentration will be on values clarification and decision-making.

**SD 244 Widow(er)hood II 2(2-0)**

Prerequisite: SD 176. This course is a natural extension of Widow(er)hood I and will explore many growth-related issues that should be an extension of coping with loss. Concerns such as learning to be single again, raising a child alone, caring for the home alone, as well as the emotional adjustment involved in such changes will be covered in this class. A supportive environment which enhances the individual potential of each class member will continue to be maintained as in the prerequisite course.

**SD 245 Remarriage: Repetition or Renewal 2(2-0)**

A course focusing on relationship building: self-assessment and understanding, understanding of behavior of others, acknowledging expectations of others, communication of needs, identification of potential problems, and problem-solving techniques. Individual participants will engage in structured self-exploration through personal inventories and group participation.

**SD 246 Alcohol: The Misunderstood Drug 2(2-0)**

The focus will be in the nature of an overview. The impact of alcohol on lives and society in general will be presented. The medical, economic, social, sexual, and legal aspects of alcohol will be discussed. This course will help students to grasp the impact of the advertising media, to discover the cost of problem drinking, and to evaluate the indirect effect on social and sexual values. The course will enable students to be more aware of their environment and to establish acceptable personal values.

**SD 248 Women's Reentry Seminar 3(3-0)**

For individuals in transition primarily from a homemaker role to that of student and/or wage earner, including displaced homemakers and homemakers who wish to work outside the home or begin an educational program. Confidence building, awareness of conflicts and issues, adjusting to change, setting personal and career goals and support in making the transition are emphasized.

**SD 256 I'm OK, You're OK 1(1-0)**

This course shows the basic concepts related to transactional analysis and how these concepts can enrich our lives. Within each of us is a child, an adult, and a parent reacting to the world around us. Increased personal awareness about ourselves can help us to be more effective.

**SD 271 Living Alone Creatively 2(2-0)**

This course is designed for both single men and single women and will focus on creative and positive aspects of living alone (or with children). Information and films will be shared to increase self-awareness, develop skills, and create a support system to further the goal of "Living Alone Creatively."

**SD 274 Black Women's Awareness 1(1-0)**

Explore concerns and issues confronting the Black woman in America today through course discussion, lectures, and group activities. Share viewpoints and life experiences in response to such questions as, "Who is the Black woman?" "What are her needs?" "How can those needs be met?" "How can class participants grow together?"

**SD 281 Assertive Couples Communication 1(1-0)**

Communicating assertively in a primary relationship is emphasized through assertiveness training and the theories of communication and self-esteem building in specific issues in relationships. (Class is designed to meet the needs of couples.)

**SD 289 Burnout Prevention 1(1-0)**

Employees, particularly those working in the area of providing service to others, are increasingly experiencing problems of job dissatisfaction and feelings of helplessness. As a result, they experience "burnout" with respect to their work. This course will deal with why burnout occurs, how to recognize the signs, and how to deal with feelings associated with burnout. (Designed for individuals involved in a work setting.)

**SD 290 Adjusting to Role Stress 2(2-0)**

Prerequisite: SD 242. Expectations placed on an individual by someone else can produce stress. The class is designed to help people identify current roles and become more aware of the expectations and stressors associated with each role. Students will be encouraged to clarify their own expectations and to become more aware of any unrealistic demands that might be placed on them.

**SD 293 Advanced Elimination of Self-Defeating Behavior 1(1-0)**

Advanced Elimination of Self-Defeating Behavior is designed to help people reinforce life-giving choices learned in the prerequisite course. Learning why life-giving choices work according to how they are carried out is the goal of the course. The work in this course is aimed at enhancing life-giving behaviors through review of concepts and discussion of participants' experience at placing the concepts into action during daily living.

**STUDENT FINANCIAL SERVICES**

Neil G. Shriner, Director

The Student Financial Services Program at Lansing Community College assists students who demonstrate need in meeting some of the College costs that cannot be met by personal or family resources. An objective method of

need determination approved by the Federal government is used to evaluate student's and family's financial circumstances. Some scholarships are available through the respective divisions of the College that are based on academic achievement or talent.

Students are eligible to apply for financial assistance if they have graduated from high school, have completed a G.E.D., or their high school class has graduated. They must be enrolled in collegiate programs of study leading to a certificate or degree and must be citizens or permanent residents of the United States.

**Sources of Financial Assistance**

Financial assistance programs are funded from federal, state, college and private sources. Four major sources 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 academic achievement or talent may or may not be based on need.

- Board of Trustees Scholarships are awarded to outstanding district high school graduates.
- Divisional Scholarships are awarded to outstanding students who apply directly to the College division or department of their area of study.
- Athletic Scholarships are awarded through the Athletic Department. Talented athletes contact coaches of their respective sports.
- Michigan Competitive Scholarships are based upon a qualifying examination given during the junior and senior year in high school. Students may receive an "honorary" award not based on need, or monetary award based upon need.
- Private Scholarships are available through the College or private organizations. A Scholarship and Financial Aid Booklet is available in the Office of Student Financial Services giving information about private scholarships, grants, loans, employment and college transfer scholarships available to LCC students.

Grants: non-repayable money usually based upon need.

- Federal Pell Grants are based on need by filing an LCC Admissions and Financial Aid Form and an Application for Federal Student Aid, (or) Financial Aid Form to College Scholarship Service, (or) Family Financial Statement to the American College Testing Service. Students must submit the Federal Pell Grant Student Aid Report, received through the mail, to LCC Office of Student Financial Services to receive the grant.
- Supplemental Educational Opportunity Grants are awarded to "high" need students by submitting the same application forms as for Pell Grants.
- Women's Resource Center Grants are available for tuition, child care, displaced homemakers, and special populations. Students apply through the Women's Resource Center, Student Personnel Services Building, 2nd Floor.
- Center for Aging Education Tuition Assistance is available to persons 60 years of age or older for up to four (4) credits per term. Students must meet moderate income guidelines. Students apply through the Center in Room 207 Old Central Bldg. or call 483-1179.

Loans: money that must be repaid beginning six to nine months after graduation or enrollment of less than six (6) credits.

- National Direct Student Loans are low interest loans determined upon the basis of need. Students apply by filing an LCC Admissions and Financial Aid Application and an Application for Federal Student Aid, (or) Financial Aid Form to College Scholarship Service, (or) Family Financial Statement to the American College Testing Service.
- Federal Guaranteed Student Loans may be obtained from banks, savings and loan associations or credit unions. Students apply three (3) months or more before needing the funds.
- State Direct Loan applications may be obtained at the College's Student Financial Services Office if students are unable to obtain a guaranteed loan from their lender. At least three (3) months are required to process the State Direct Loan.
- Short-Term Loans are available on a limited basis through the Student Financial Services Office for tuition, books and emergency expenses.
- Nursing Loans are available based upon need to students enrolled in the Nursing Program. Students apply the same as for the National Direct Student Loans and specifically request a Nursing Loan if the student is in the program.

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

- Federal College Work Study is based upon need. Students submit an LCC Admissions and Financial Aid Application Form and an Application for Federal Student Aid, (or) Financial Aid Form to College Scholarship Service, (or) Family Financial Statement to American College Testing Service.
- Student Aide jobs are available to students at the College based upon skills and abilities and not necessarily upon need.
- College Placement Office at LCC posts Federal Work Study Jobs, Student Aide Jobs, Part-time Jobs and Full-time Jobs Off-Campus. Students obtain information at the Placement Office and must interview at the department's or employer's office.



Special Situation Funds: are available for certain students. The College's Student Financial Services Office has information regarding application procedures for the following programs:

- Armed Services
- Bureau of Indian Affairs
- Children of Disabled or Deceased Veterans
- Clubs, Organizations & Business Scholarships
- Job Training Program (JPTA)
- LCC Emergency Fund
- Michigan Commission on Indian Affairs
- Michigan Economics for Human Development for Migrant Workers
- Private Donor Scholarships
- Veterans' Benefits
- Vocational Rehabilitation Services

#### How and When to Apply

Financial Assistance Forms are available to students and their parents through high school counselors or at the College Student Financial Services Office located in the Student Personnel Services Bldg., 1st floor.

To make application for financial assistance at the College, two (2) forms must be submitted:

1. An LCC Application for Admissions and Financial Assistance Form must be completed and returned to: Lansing Community College, Admissions Office, 530 North Capitol, Box 40010, Lansing, Michigan 48901.
2. One (1) of the following Financial Statements must be submitted:
  - Application for Federal Student Aid (Free Form) OR
  - Financial Aid Form to College Scholarship Service (Fee Required) OR
  - Family Financial Statement to American College Testing Service (Fee Required)

Guaranteed Student Loans are available by applying directly through the student's or parents' bank, savings and loan association or credit union.

State Direct Loans are available if the student is refused a Guaranteed Student Loan by his/her bank or lender. Students may request forms at the Student Financial Services Office for State Direct Loans.

LCC Board of Trustees Scholarships are available through district high school counseling offices.

Divisional Scholarships are available by applying directly to the respective College division or department of the student's major area of studies.

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

Students transferring from other colleges must submit a Financial Aid Transcript from their previous colleges when they apply for financial assistance at LCC.

Once the student has submitted the LCC Application for Admissions and Financial Assistance to the Admissions Office and the Federal Pell Grant Student Aid Report (SAR), which the student receives through the mail, and Financial Aid Transcripts to the Office of Student Financial Services, processing of the student's application for financial assistance will be completed and the student will be notified.

The amount of the student's award will be based on a standardized cost of attending LCC, less the expected student's and family's contribution. The College will attempt to meet student's need based upon available funds.

All financial assistance applications are confidential.

#### Rights and Responsibilities of Students Receiving Financial Assistance

As a recipient of financial assistance, a student enters into an agreement with Lansing Community College which affects the receipt and continuation of assistance. Therefore, students should be sure to read this information carefully.

#### Need and Financial Assistance Package

Financial need is determined by subtracting the expected family contribution and other financial resources from the appropriate College budget. The College will attempt to meet the student's need within the limitations of available resources. Also, if any errors are made by the College in determining eligibility for assistance or awarding of assistance, they will necessarily be corrected. Finally, should any major changes occur in the student's financial circumstances or other aid be provided to the student, the student will report these changes to the Office of Student Financial Services.

#### Expected Family Contribution

If a student is a dependent student, the College assumes that parents have the first obligation to provide for the student's cost of education to the extent that they are able, based on a standardized method of determining parental contribution. The second obligation falls upon the student to contribute to his/her own education from personal assets and earnings, which may include the need to borrow against future earnings.

If a student is a self-supporting or independent student, the College assumes that since a student is the prime beneficiary of education, the student

has a primary obligation to provide for the cost of education to the extent the student is able, based on a standardized method of determining student contribution. The student's expected contribution will come from personal earnings, spouse's earnings if applicable, savings and assets, which may also include the need to borrow against future earnings.

#### Falsification of Information

Falsification of information submitted by the student or parents for the purpose of receiving financial assistance may result in cancellation of assistance, billing back for assistance received and referral to the appropriate federal authorities.

The Office of Student Financial Services may be required to validate information provided on the Financial Assistance Form by requiring income tax statements or other documentation of financial status.

#### Credit Hour Load

Financial assistance offered to a student is based on enrollment as a full-time student; i.e., 12 credit hours or more per term. If a student enrolls for less than 12 credit hours the student will receive only a portion of the financial assistance package. For example, if a student's enrollment is for 9-11 credit hours per term, the student will receive approximately three-quarters (¾) of the full-time financial aid package. If a student enrolls for 6-8 credit hours per term, the student will receive approximately one-half (½) of the full-time financial assistance package. If a student enrolls for less than six credit hours per term, the student will not be eligible for financial assistance.

Audited courses for non-credit do not count when determining your financial aid and cannot be billed to financial aid.

Please note: While a reduction in credit hours below a full-time level will result in a reduction of the total financial assistance package, it will not necessarily represent a proportional reduction in the Pell Grant. Where the Pell is involved, all reductions are based on standardized tables provided by the U.S. Department of Education which do not result in simple proportional reductions. In fact, situations may occur where students having a high Pell "eligibility index" enroll for less than 12 credit hours and are no longer eligible to receive Pell funds.

#### Budgeting Financial Aid Package

The student is responsible for properly budgeting all financial aid offered for each term. The financial aid package will be distributed to the student in the following manner: (1) tuition and fees will be deducted from the financial aid during registration if sufficient funds are available and if tuition and fees are not paid by the student or other sources; (2) the student will receive an advanced financial assistance check during the first full week of classes, if the student is eligible; and (3) the student will receive the balance of grants, loans or scholarships approximately one week after the end of the College's 50% refund period. The student must be prepared to meet his/her living expenses during the period prior to check distribution.

#### Financial Assistance Advance Check

Students may receive an advance financial assistance check if enrolled by the last day of on-campus registration and if, as resident students, they have award totals of at least \$300 per term or if, as non-residents, they have award totals of at least \$425 per term. The financial assistance advance check will be calculated by subtracting the actual amount of the student's tuition and fees from the total award and advancing 10% of the remainder to 6-8 credit hours; 30% for 9-11 credit hours; or 50% for 12 or more credit hours, if the resulting total is \$20.00 or more. Any other monies due will be distributed after to 50% drop and add period.

#### College Work Study

If a student has been offered College work student eligibility, the student must first secure employment through the Placement Office (Room 211, Vocational Technical Building) prior to receiving these funds which will be disbursed on a regular hourly salary payment schedule.

#### Repayment of Grants

If a student withdraws from Lansing Community College or is withdrawn by the College because of not attending classes, a portion of any grants awarded to the student may be repaid and grades received may affect continuation of aid.

#### Satisfactory Academic Progress Requirements

To continue on financial assistance, students must maintain "Satisfactory Academic Progress" each term. Satisfactory Academic Progress for students receiving federal financial assistance is defined as:

1. Maintaining a grade point average (G.P.A.) above the Withdrawal Range as defined elsewhere in the catalog.
2. Completing 50% or more of the credits attempted each term. Students, who do not complete 50% or more credits for two terms during the academic year, will be cancelled from financial assistance with the right of written appeal to the Director of Student Financial Services.

If a student is withdrawn because of unsatisfactory progress, the student may be readmitted and allowed to reenroll under a learning contract in such programs as "Project Stay" or "Project 60" and be considered as making satisfactory academic progress for financial assistance programs as long as the student adheres to the terms of the educational agreement or until the student has raised his or her cumulative grade point average above the withdrawal range, and completes 50% or more of the credits attempted each term.

Students who do not successfully complete the terms of their educational contract with "Project Stay" or other support programs will be cancelled from financial assistance.

#### Renewal of Financial Assistance

Financial assistance is not automatically renewed. Awards are granted for one year only. A student must reapply for assistance for the following year by completing all required application forms by stated deadlines on the application. For renewal a student must be enrolled in a certificate or degree program.

To be continued on financial assistance, the student must not be in default on any past educational loans at the College. Also, the student must not owe any repayments for educational grants, due to withdrawing from college or being withdrawn from college because of not attending classes.

A student will not be awarded federal financial assistance at Lansing Community College beyond 180 credits. A transfer student will not be awarded federal financial assistance beyond 180 credits, including transfer credits accepted by LCC.

Exceptions are:

1. Students who have one term to complete a degree or certificate program.
2. Students who have 180 credits or a Bachelors Degree may be recommended for a Federally Guaranteed Student Loan, or Nursing Loan to complete a degree or certificate program for the purpose of obtaining employment.

#### Rights of Information

It is the student's right to obtain information pertaining to financial aid programs available through the College and to discuss, with a financial aid advisor, information pertinent to the student's assistance application, file folder (records) and assistance package.

#### Appeals

It is the student's right to appeal any decisions made regarding the assistance application or package. The student may meet with a financial assistance advisor to discuss his/her package. The student may meet with a financial assistance advisor to discuss extenuating circumstances to the above policies or any other policies affecting the student as an assistance recipient. A financial assistance review committee will meet periodically to consider appeals.

#### Student Financial Services Committee

A College-wide Committee on Student Financial Assistance has been established at Lansing Community College. The membership of this committee is as follows:

1. The Director of Student Financial Services (Chairperson).
2. One faculty member from each of the three instructional divisions; Business, Arts and Sciences, Division of Technology and Applied Sciences -to be appointed by the appropriate dean.
3. Two students to be appointed by the President of Student Government with the consent of Student Government.
4. The Director of Student Activities.
5. The Business Manager or his Representative.
6. The Dean of Student Personnel Services.

The functions of this committee are:

1. To assist in the development of programming and procedure with the Office of Student Financial Services of the College.
2. To assist in the evaluation of existing procedures and programming within the Office of Student Financial Services of the College.
3. To assist in the area of communications about the student financial assistance program and to provide input from the various sub-populations of the College.

## 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 Services Office. The job board is located outside the Career Planning and Placement Center, Room 211, Vocational-Technical Building.

#### Interviews

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

#### Services Offered

The Career Planning and Placement Center offers services that will assist you in the areas of career planning and job placement. These include:

- career counseling and interest testing
- career planning and job-search classes
- credential file system for graduates and alumni
- Computer Assisted Placement System (Job-Applicant Matching)
- resume and interview preparation
- employment assistance for both full and part-time positions
- MOIS (Michigan Occupational Information System)
- SIGI (System of Interactive Guidance and Information)

## STUDENT ACTIVITIES

William Zuhl, Director

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. Shorter trips are planned to such points of interest as Frankenmuth, Cedar Point, and Greenfield Village.

#### 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.

## Physical Education & Athletics Department

Division of Student Personnel Services

Dr. Walter Lingo, Chairperson

The Physical Education Program at Lansing Community College offers students an opportunity to develop physical skills. The attainment of this physical skill will enable individuals to pursue and/or maintain a sound state of physical fitness.

All Physical Education courses are transferable and all Physical Education grades are tabulated in determining student grade point averages.

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 areas:

(PEA)	Professional
(PEB)	Fitness
(PEC)	Individual Sports
(PED)	Individual/Dual
(PEE)	Team Sports
(PEF)	Aquatics
(PEG)	Combatives/Weight Training
(PEH)	Gymnastics/Dance
(PEI)	Indoor Activities
(PEJ)	Outdoor Activities

### Professional (PEA)

Physical Education & Athletics Department  
Division of Student Personnel Services

<b>PEA 100 Professional Orientation</b>	<b>1(1-1)</b>
Overview of physical education field for prospective physical education majors.	
<b>PEA 101 First Aid</b>	<b>3(3-0)</b>
Standard first aid procedures and Red Cross certification.	
<b>PEA 102 Athletic Training</b>	<b>3(3-0)</b>
Athletic injury prevention and care techniques; duties and responsibilities of athletic trainers.	
<b>PEA 103 Health</b>	<b>3(3-0)</b>
Selected contemporary health issues; i.e., human sexuality, drug abuse, weight control.	
<b>PEA 104 IM Athletics</b>	<b>3(3-0)</b>
Offers an introduction to IM athletic administration and competitive event supervision.	
<b>PEA 107 Psychology of Coaching</b>	<b>3(3-0)</b>
Philosophy, techniques, and methods practiced in coaching team and individual sports.	
<b>PEA 108 Officiating Baseball/Softball</b>	<b>2(2-0)</b>
Application of rules and officiating techniques in baseball and softball: game mechanics, psychology of umpiring, field positioning and contracts.	
<b>PEA 109 Officiating Basketball</b>	<b>2(2-0)</b>
Instruction and testing to provide opportunity for official certification.	
<b>PEA 110 Officiating Soccer</b>	<b>2(2-0)</b>
Application of rules and officiating techniques in soccer playing.	
<b>PEA 113 Officiating Football</b>	<b>2(2-0)</b>
Rules and officiating techniques for football; opportunity to become certified upon completion of course and testing.	
<b>PEA 114 Officiating Volleyball</b>	<b>2(2-0)</b>
Techniques and rules of volleyball; opportunity for certification upon successful completion.	
<b>PEA 115 Coaching Basketball</b>	<b>2(2-0)</b>
Designed to develop coaching skills. Focuses on defensive and offensive strategies as well as teaching fundamental skills.	
<b>PEA 200 Massage Therapy</b>	<b>3(1-4)</b>
Introduction to history, techniques, and theory.	

<b>PEA 201 Independent Study</b>	<b>1(0-2)</b>
<b>PEA 202 Independent Study</b>	<b>2(0-4)</b>
<b>PEA 203 Independent Study</b>	<b>3(0-6)</b>
<b>PEA 204 Independent Study</b>	<b>4(0-8)</b>

Individual study on a prescribed topic in coordination with an assigned faculty member.

<b>PEA 209 Human Nutrition</b>	<b>2(2-0)</b>
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Nutrition and its role in promoting better health; concepts and controversies in nutrition; vitamin supplements, natural foods, fats, salt and other topics of interest.

<b>PEA 211 CPR Training</b>	<b>1(1-0)</b>
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Red Cross Certification in cardio-pulmonary resuscitation; artificial respiration and air-way obstruction.

<b>PEA 213 Massage Therapy-Intermediate</b>	<b>3(1-4)</b>
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Specialized massage techniques such as advanced foot massage; exploration of other aspects of Swedish massage acupressure.

<b>PEA 215 Coaching Soccer</b>	<b>2(2-0)</b>
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Students learn individual and team offensive and defensive play. Proper passing, tackling methods, work-out drills, and game strategies are stressed.

### Fitness (PEB)

Physical Education & Athletics Department  
Division of Student Personnel Services

<b>PEB 100 Adopted Lifetime Personal Health Activities (ALPHA)</b>	<b>1(0-2)</b>
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The nature of health, physical education and recreation and their place in general education.

<b>PEB 101, 102 Individual Fitness-A-B-C-D</b> <b>103, 104</b>	<b>2(1-2)</b>
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Four sequential courses to acquaint students with the principles of training. Provides individual conditioning programs.

<b>PEB 105 Jogging</b>	<b>1(0-2)</b>
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Introduces jogging as physical fitness and covers footcare, equipment, clothing, and safety.

<b>PEB 107 Jogging-Advanced</b>	<b>2(0-4)</b>
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Developing an individual training regimen for competitive runners.

<b>PEB 108 Stretching for Athletes</b>	<b>1(0-2)</b>
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Teaches use of ballet and balletic grace with emphasis on flexibility and fluid body movements.

<b>PEB 109 Triathlon Training</b>	<b>3(0-6)</b>
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Designed to teach proper techniques in swimming, cycling, and running. A vigorous training program is designed to challenge the student.

<b>PEB 110 Stretching for Athletes II</b>	<b>1(0-2)</b>
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A continuation of Stretching for Athletes I (PEB 108).

<b>PEB 112 Fitness for Forties</b>	<b>1(0-2)</b>
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Designed for the older student just beginning an exercise program. Emphasis on slow gradual fitness through walking.

<b>PEB 119 Fitness for the '80's</b>	<b>1(0-2)</b>
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Students interested in dance from folk to aerobic dance.

<b>PEB 120 ABC's of Physical Fitness</b>	<b>2(1-2)</b>
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Aerobics, body building, and calisthenics are building blocks for this fitness program. A progressive regimen toward better health.

<b>PEB 121 Liten-up Workout</b>	<b>1(0-2)</b>
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A beginning exercise program with emphasis on increasing aerobic capacity through walking, jogging, stretching, and light weight training.

<b>PEB 122 Heavy Hands Workout</b>	<b>1(0-2)</b>
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An aerobic exercise program that utilizes weight attached to legs or arms. Tones muscle groups while increasing aerobic fitness.

<b>PEB 200-207 Tempest-Intro/A-B-C-D-E-F-G</b>	<b>1(0-2)</b>
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A series of sequential courses designed for EMS students. Designed for specific concerns of EMS.

**Individual Sports (PEC)**Physical Education & Athletics Department  
Division of Student Personnel Services

<b>PEC 106 Pool</b>	<b>1(0-2)</b>
History, rules, and fundamentals, practice drill, positioning of cue ball, and variations of the game of pocket billiards.	
<b>PEC 107 Pool-Intermediate</b>	<b>1(0-2)</b>
Refinement and improvement of skills.	
<b>PEC 108 Pool-Advanced</b>	<b>2(2-0)</b>
Further refinement and improvement of skills.	
<b>PEC 109 Racquetball-Beginning</b>	<b>1(0-2)</b>
History, terminology, rules, fundamentals, etiquette, strategy, and basic shots.	
<b>PEC 110 Racquetball-Intermediate</b>	<b>1(0-2)</b>
Refinement and improvement of skills.	
<b>PEC 111 Racquetball-Advanced</b>	<b>2(2-0)</b>
Court strategy and tournament play.	
<b>PEC 112 Table Tennis-Beginning</b>	<b>1(0-2)</b>
Basic skills, including the serve, forehand and backhand strokes.	
<b>PEC 113 Table Tennis-Intermediate</b>	<b>1(0-2)</b>
Continuation of skills.	
<b>PEC 114 Competitive Table Tennis</b>	<b>2(2-0)</b>
Refinement of skills and introduction of game strategy.	
<b>PEC 115 Tennis-Beginning</b>	<b>1(0-2)</b>
Basic skills of tennis: serve, forehand, and backhand strokes, rules and strategy of the game.	
<b>PEC 116 Tennis-Intermediate</b>	<b>1(0-2)</b>
Continuation of skills.	
<b>PEC 117 Tennis-Advanced</b>	<b>2(2-0)</b>
Refines skills of service, forehand and backhand strokes and game strategy.	
<b>PEC 127 Bowling-Beginning</b>	<b>1(0-2)</b>
Basic skills and scoring of bowling.	
<b>PEC 128 Bowling-Intermediate</b>	<b>1(0-2)</b>
Refines skills.	
<b>PEC 129 Bowling-Advanced</b>	<b>2(2-0)</b>
Class competition involved.	

**Individual/Dual (PED)**Physical Education & Athletics Department  
Division of Student Personnel Services

<b>PED 103 Basic Bicycling</b>	<b>1(0-2)</b>
Physical fitness value of bicycling. Tips on minor repair, proper cycling techniques and bicycling as a commuter.	
<b>PED 104 Bicycling-Touring</b>	<b>1(0-2)</b>
Minor bicycle repair, maintenance, cold weather riding, and increased cycling distances. Short tours and planned longer rides on some weekends.	
<b>PED 105 Bicycling-Camping/Touring</b>	<b>2(0-4)</b>
Combines camping and touring: outfitting the camping cyclist, long distance riding, planning for long bike camping trips.	
<b>PED 106 Cross Country-Beginning</b>	<b>1(0-2)</b>
Instruction in jogging or running, dependent upon the physical fitness of the individual.	
<b>PED 108 Cross Country-Advanced</b>	<b>2(2-0)</b>
Emphasis on competition.	

<b>PED 109 Cross Country Skiing-Beginning</b>	<b>1(0-2)</b>
Basic skills of cross country skiing: flat, uphill and downhill techniques, equipment, waxing, touring, and basic safety.	
<b>PED 110 Cross Country Skiing-Intermediate</b>	<b>1(0-2)</b>
Refinement and improvement of skills.	
<b>PED 111 Cross Country Skiing-Advanced</b>	<b>2(2-0)</b>
Advanced skills plus overnight camping trip.	
<b>PED 115 Golf-Beginning</b>	<b>1(0-2)</b>
Golf strokes, rules, and golf etiquette; experience on the driving range and golf course.	
<b>PED 116 Golf-Intermediate</b>	<b>1(0-2)</b>
Refinement and improvement of skills with emphasis on individual problems.	
<b>PED 117 Golf-Advanced</b>	<b>2(2-0)</b>
A study of the U.S.G.A. Rules of Golf.	
<b>PED 118 Ice Skating-Beginning</b>	<b>1(0-2)</b>
Introduction to the healthful, life-long activity of skating.	
<b>PED 119 Ice Skating-Intermediate</b>	<b>1(0-2)</b>
Refinement and improvement of skills.	
<b>PED 120 Ice Skating-Advanced</b>	<b>2(2-0)</b>
Emphasis on teaching and supervising groups of skaters.	
<b>PED 121 Roller Skating-Beginning</b>	<b>1(0-2)</b>
Basic skills of forward and backward skating.	
<b>PED 123 Roller Skating-Advanced</b>	<b>2(2-0)</b>
Dance routines and more advanced speed skating.	
<b>PED 127 Yoga-Beginning</b>	<b>1(0-2)</b>
Introduction to the philosophy and positions of yoga.	
<b>PED 128 Yoga-Intermediate</b>	<b>1(0-2)</b>
Refinement and continuation of skills.	
<b>PED 129 Yoga-Advanced</b>	<b>2(2-0)</b>
Refinement and continuation of skills.	
<b>PED 130 Yoga-Special</b>	<b>1(0-2)</b>
Postures and asanas are modified to meet the individual needs of the handicapped.	

**Team Sports (PEE)**Physical Education & Athletics Department  
Division of Student Personnel Services

<b>PEE 109 Basketball-Beginning</b>	<b>1(0-2)</b>
Beginning techniques and skill development.	
<b>PEE 110 Basketball-Intermediate</b>	<b>1(0-2)</b>
Team offenses and team defenses.	
<b>PEE 111 Basketball-Advanced</b>	<b>2(2-0)</b>
Team competition and preparation.	
<b>PEE 114 Indoor Soccer</b>	<b>1(0-2)</b>
Basic soccer skills with focus on indoor rules and play.	
<b>PEE 115 Soccer-Beginning</b>	<b>1(0-2)</b>
Beginning techniques; rules, strategy and competitive play.	
<b>PEE 116 Soccer-Intermediate</b>	<b>1(0-2)</b>
Team defenses and team offenses.	
<b>PEE 117 Soccer-Advanced</b>	<b>2(2-0)</b>
Team playing and advanced strategy in game situations.	

<b>PEE 118 Softball-Beginning</b> Fundamental skills.	<b>1(0-2)</b>	<b>PEF 113 Diving-Advanced</b> Sound knowledge of diving. Diving at the competitive level.	<b>2(1-2)</b>
<b>PEE 119 Softball-Intermediate</b> Techniques and rules.	<b>1(0-2)</b>	<b>PEF 114 Advanced SCUBA</b> Prerequisite: PEF 109. For certified divers who wish to increase understanding and enjoyment of diving. Application of basic SCUBA techniques. Two scheduled weekend dives.	<b>3(2-2)</b>
<b>PEE 120 Softball-Advanced</b> Team strategy and competitive play.	<b>2(2-0)</b>	<b>PEF 115 Parent/Infant Water Adjustment</b> Parent/child water safety, adjustment, and fun; water adjustment for the nonswimming child and improvement of motor skills and coordination.	<b>1(0-2)</b>
<b>PEE 121 Touch Football-Beginning</b> Beginning techniques and skill development.	<b>1(0-2)</b>	<b>PEF 116 Water Fitness-A</b> Stationary water exercises and water games to improve cardio-vascular fitness and flexibility.	<b>1(0-2)</b>
<b>PEE 123 Touch Football-Advanced</b> Team strategy and competitive play.	<b>2(2-0)</b>	<b>PEF 117 Water Fitness-B</b> Emphasis on swimming and swimming technique; designing an individual fitness program.	<b>1(0-2)</b>
<b>PEE 124 Volleyball-Beginning</b> Skills, game strategy, history, rules, and values of volleyball.	<b>1(0-2)</b>	<b>PEF 118 Water Fitness-C</b> Should be able to complete 500 yards in 10 minutes. A fitness program beyond basic water fitness. Stroke drills and mechanics are stressed with an introduction to principles of training.	<b>1(0-2)</b>
<b>PEE 125 Volleyball-Intermediate</b> Refinement and improvement of skills.	<b>1(0-2)</b>	<b>PEF 119 Water Fitness-D</b> Should be able to swim 500 yards in 8 minutes. Fitness for the competitive swimmer: stroke drills, stroke mechanics and analysis, dry land exercises, and weight training.	<b>1(0-2)</b>
<b>PEE 126 Volleyball-Advanced</b> Team concepts, strategy and competition.	<b>2(2-0)</b>	<b>PEF 120 SCUBA Fitness</b> Fitness for SCUBA divers; refresher check out on SCUBA gear.	<b>1(0-2)</b>
<b>PEE 127 Water Polo-Beginning</b> Introduction of basic skills used in team play.	<b>1(0-2)</b>	<b>PEF 121 Parent/Toddler Water Adjustment</b> Water adjustment for parent/toddler. Child must be 3 years of age.	<b>1(0-2)</b>
<b>PEE 129 Water Polo-Advanced</b> Team concepts, strategy, and competition.	<b>2(2-0)</b>	<b>Combatives/Weight Training (PEG)</b> Physical Education & Athletics Department Division of Student Personnel Services	
<b>PEE 130 Competitive Volleyball</b> Individual and team strategies, offensive and defensive play, fitness, reaction, and movement drills.	<b>2(2-0)</b>	<b>PEG 100 Boxing-Beginning</b> Basic skills of offense, defense, and training practices.	<b>1(0-2)</b>
<b>Aquatics (PEF)</b> Physical Education & Athletics Department Division of Student Personnel Services		<b>PEG 101 Boxing-Intermediate</b> Extension of Boxing 100 with more ring time and training techniques.	<b>1(0-2)</b>
<b>PEF 100 Swimming-Beginning</b> Fundamentals and techniques, with emphasis on water adjustment, basic strokes, breathing, survival, and diving skill.	<b>1(0-2)</b>	<b>PEG 102 Boxing-Advanced</b> Refinement and improvement of the skills of offense, defense, and training methods.	<b>2(2-0)</b>
<b>PEF 101 Swimming-Adv/Beginning</b> Refinement and further development of skills.	<b>1(0-2)</b>	<b>PEG 103 Fencing-Beginning</b> Instruction in fundamental techniques. Care of equipment.	<b>1(0-2)</b>
<b>PEF 102 Swimming-Intermediate</b> Strokes and skills required to become a competent swimmer; review of basic fundamentals with endurance work.	<b>1(0-2)</b>	<b>PEG 104 Fencing-Intermediate</b> Emphasis on rules and competitive preparation.	<b>1(0-2)</b>
<b>PEF 103 Advanced Swimming</b> Preparation programs for competitive swimming.	<b>2(2-0)</b>	<b>PEG 105 Fencing-Advanced</b> Individual competition.	<b>2(2-0)</b>
<b>PEF 104 Advanced Life Saving</b> Red Cross Certification is awarded upon completion of the course. Students should be able to swim 500 yards comfortably with good stroke technique. A prerequisite for Water Safety Instructor.	<b>2(1-2)</b>	<b>PEG 106 Judo-Beginning</b> Rules, theory and application of judo both for sport and self-defense.	<b>1(0-2)</b>
<b>PEF 105 Water Safety Instructor</b> Red Cross Certificate program.	<b>3(2-2)</b>	<b>PEG 107 Judo-Intermediate</b> For the individual who has a limited background and wants to improve techniques.	<b>1(0-2)</b>
<b>PEF 106 Life Guard Training</b> Covers the skills needed to become a life guard with first aid training.	<b>1(0-2)</b>	<b>PEG 108 Judo-Advanced</b> Competition on an intraclass level.	<b>2(2-0)</b>
<b>PEF 108 Skin Diving</b> Introduction to underwater recreation.	<b>2(1-2)</b>	<b>PEG 109 Karate-Beginning</b> Develops skills in punching with fists and hands, kicking (with feet and knees), and essential body movement in combat.	<b>1(0-2)</b>
<b>PEF 109 SCUBA</b> National certification.	<b>3(2-2)</b>	<b>PEG 110 Karate-Intermediate</b> For the individual who has some knowledge and would like to improve that knowledge.	<b>1(0-2)</b>
<b>PEF 110 Swim Theory/Technique</b> Designed for the competitive swimmer. Focuses on dry land training, strength training, and proper stroke mechanics.	<b>2(1-2)</b>		
<b>PEF 111 Diving-Beginning</b> Fundamentals of diving: front, back, inward, reverse, and twisting dives.	<b>1(0-2)</b>		

<b>PEG 111 Karate-Advanced</b>	<b>2(2-0)</b>	<b>Outdoor Activities (PEJ)</b> Physical Education & Athletics Department Division of Student Personnel Services	
Designed for the highly skilled.			
<b>PEG 112 Self Defense-Beginning</b>	<b>1(0-2)</b>	<b>PEJ 100 Angling-Beginning</b>	<b>1(0-2)</b>
Designed to develop confidence and skills in the art of self-defense.		Covers fish structure, habits and habitats, tackle and techniques for fly, bait, spin, and ice fishing.	
<b>PEG 114 Self Defense-Advanced</b>	<b>2(2-0)</b>	<b>PEJ 101 Angling-Intermediate</b>	<b>1(0-2)</b>
Individual skills and techniques refinement.		A lab class with emphasis on different types of baiting procedures.	
<b>PEG 115 Weight Training-Beginning</b>	<b>1(0-2)</b>	<b>PEJ 102 Angling-Advanced</b>	<b>2(0-4)</b>
Various training methods, principles, and program designs.		Fishing trips with emphasis on special castings and recognizing different fishing habits.	
<b>PEG 116 Weight Training-Intermediate</b>	<b>1(0-2)</b>	<b>PEJ 103 Backpacking-Beginning</b>	<b>2(2-0)</b>
Introduces power lifting and competitive lifts.		Backpacking, safety and techniques.	
<b>PEG 117 Weight Training-Advanced</b>	<b>2(2-0)</b>	<b>PEJ 105 Backpacking-Advanced</b>	<b>3(0-6)</b>
Refinement and improvement of skills.		Incorporates overnight trip(s).	
<b>PEG 126 Aikido-Beginning</b>	<b>1(0-2)</b>	<b>PEJ 106 Bow Hunting-Beginning</b>	<b>2(1-2)</b>
Aikido - "The Way of Harmony" - focuses on physical discipline and harmony with self, partner, and potential combatants.		Basic fundamentals.	
<b>PEG 127 Aikido-Intermediate</b>	<b>1(0-2)</b>	<b>PEJ 108 Bow Hunting-Advanced</b>	<b>3(0-6)</b>
Further development toward harmony. Focuses on new defensive strategies and movements.		Game habits for the hunter.	
<b>PEG 129 Body Building-Beginning</b>	<b>1(0-2)</b>	<b>PEJ 109 Canoeing-Beginning</b>	<b>1(1-0)</b>
Focuses on proper lifting techniques to isolate and strengthen muscle groups.		Prerequisite: Students must know how to swim. Fundamentals of recreational canoeing and handling, care of equipment, safety strokes, and canoe tipping.	
<b>PEG 130 Body Building-Intermediate</b>	<b>2(1-2)</b>	<b>PEJ 111 Canoeing-Advanced</b>	<b>2(2-0)</b>
Continuation of PEG 129 with more rigorous lifting regimens included.		Class trips are planned and taken.	
<b>PEG 131 Body Building-Advanced</b>	<b>2(0-4)</b>	<b>PEJ 112 Horsemanship-Beginning</b>	<b>2(0-4)</b>
Continuation of PEG 130 with addition of posing for body building competition.		Horse care and riding skills are introduced.	
<b>Gymnastics/Dance (PEH)</b> Physical Education & Athletics Department Division of Student Personnel Services		<b>PEJ 113 Horsemanship-Intermediate</b>	<b>2(0-4)</b>
<b>PEH 103 Parent/Child Gymnastic Tumbling</b>	<b>1(0-2)</b>	Prerequisite: PEJ 112. Refinement and improvement of skills.	
Development of motor skills with child and parent participating. Basic tumbling skills and elementary gymnastic movements.		<b>PEJ 114 Horsemanship-Advanced</b>	<b>3(0-6)</b>
<b>PEH 105 Aerobic Exercise-Beginning</b>	<b>1(0-2)</b>	Prerequisite: PEJ 113. Techniques and skills used in training horses for show.	
A progressive fitness course using dance as a vehicle toward fitness. Some weight training included.		<b>PEJ 118 Basic Mountaineering-Beginning</b>	<b>2(0-4)</b>
<b>PEH 106 Aerobic Exercise-Intermediate</b>	<b>1(0-2)</b>	Climbing technique, equipment, food, survival, rescue, and medicine.	
Continuation of PEH 105 with more strenuous aerobic routines added.		<b>PEJ 119 Mountaineering-Intermediate</b>	<b>2(0-4)</b>
<b>Indoor Activities (PEI)</b> Physical Education & Athletics Department Division of Student Personnel Services		Emphasis on survival and rescue.	
<b>PEI 100 Backgammon-Beginning</b>	<b>2(2-0)</b>	<b>PEJ 120 Mountaineering-Advanced</b>	<b>3(0-6)</b>
Introduction to backgammon including rules and strategy.		Further experience including a planned trip.	
<b>PEI 101 Backgammon-Intermediate</b>	<b>2(2-0)</b>	<b>PEJ 124 Sailing-Beginning</b>	<b>2(1-2)</b>
Offensive and defensive strategy.		Introduction of basics.	
<b>PEI 102 Backgammon-Advanced</b>	<b>2(2-0)</b>	<b>PEJ 125 Sailing-Intermediate</b>	<b>2(1-2)</b>
Playing the game competitively.		Refinement of basic skills.	
<b>PEI 103 Bridge-Beginning</b>	<b>2(2-0)</b>	<b>PEJ 126 Sailing-Advanced</b>	<b>3(1-4)</b>
Introduction; rules and strategy; active participation throughout the course.		Further experience including a planned outing.	
<b>PEI 105 Bridge-Advanced</b>	<b>2(2-0)</b>	<b>PEJ 138 Windsurfing-Beginning</b>	<b>2(1-2)</b>
Emphasis on bidding and participation in tournament play.		Introduction to sailing theory, rigging procedure, maintenance and selection of equipment, and sailboarding techniques.	
<b>PEI 106 Chess-Beginning</b>	<b>2(2-0)</b>	<b>PEJ 139 Windsurfing-Intermediate</b>	<b>2(1-2)</b>
An introduction, including history, rules, recording of game, and play.		More advanced windsurfing with introduction to trick-boarding.	
<b>PEI 108 Chess-Advanced</b>	<b>2(2-0)</b>	<b>PEJ 142 Outdoor Recreation &amp; Leisure Education</b>	<b>1(0-2)</b>
Refinement and improvement of offensive and defensive skills.		Introduction to seasonal outdoor fitness and recreational activities. Activities include cycling, cross country skiing, camping, etc.	

## MILITARY SCIENCE

(U.S. Army ROTC Program)

Lansing Community College, through Michigan State University, offers undergraduate and graduate students an opportunity to qualify as commissioned officers in the United States Army, serving in the Active Army, the Army Reserves, or the Army National Guard. The program provides an education in Leadership and Military Skills through courses offered by the MSU Military Science Department. Also included are courses in Written Communication, Human Behavior, Management, Military History, and National Security offered by other LCC and MSU departments. While not an academic major, the Army ROTC program provides excellent preparation for leadership in any profession, military or civilian.

### Scholarships

The ROTC program offers four-year, three-year, and two-year scholarships to qualified students. Tuition, fees, and an allowance for textbooks are provided. Scholarship students also receive a \$100 per month allowance for up to ten months per year during the scholarship. Scholarship students must meet college/university admissions criteria.

### Basic Course

The Basic Course, normally completed in the Freshman and Sophomore years, provides the student a general knowledge of the military's role in our society and the missions of the US Army. Subjects include Leadership, Land Navigation, Marksmanship, Military History, Physical Fitness, and basic Military Skills. Students enroll in one Military Science class each term, plus in their sophomore year, HST 235, Military History (an MSU course which LCC students must register for as guest students). It is possible for a Sophomore to complete the Basic Course in one year through prior arrangement with the department. No military obligation is incurred for non-scholarship students participating in, or completing, the Basic Course. (Note: LCC students register for Military Science courses through LCC, but actually take them at MSU. All students should contact the department in building 57, Demonstration Hall, phone 355-1913, before enrolling.)

### Advanced Course

The Advanced Course is the professional phase of the ROTC program. NOTE: LCC students must transfer to a four-year college or university that offers Army ROTC, such as Michigan State University, in order to enroll in the Advanced Course. Upon satisfactory completion of required ROTC courses and the awarding of a bachelor's degree, the student is eligible for a commission as a Second Lieutenant in the US Army Reserve. Distinguished Military Students and Army ROTC Scholarship cadets are eligible to apply for a commission in the Regular Army.

The professional phase includes courses in Leadership Skills, Training and Personnel Management, Ethics, Military Justice, and Military Tactics. During the two years of the Advanced Course, students enroll in one Military Science course per term. Additionally, they must complete one course in national security studies from a list of approved courses available at the department. Furthermore, it is recommended that all cadets complete a management course from a list of approved courses available at the department. Two scheduled field trips are required each year, and all students must meet physical fitness standards. A six-week leadership camp for advanced training is normally attended in the summer between the junior and senior years.

### Eligibility Requirements

To be accepted for the Advanced Course, the applicant must:

1. Be enrolled as a full-time student at a four-year institution in a program leading to a degree.
2. Have completed or received credit for the Basic Course.
3. Meet medical and age standards.
4. Have at least a 2.00 grade-point average.
5. Pass such survey and screening tests as may be prescribed.
6. Agree to accept appointment as a regular or reserve officer of the Army and to serve on active duty or with a Reserve or National Guard component as a commissioned officer for such time as directed by the Secretary of the Army.
7. Be physically qualified for appointment as a commissioned officer of the Army under regulations in effect at the time of graduation.
8. Enlist in the US Army Reserve until commissioned.
9. Agree to attend Summer Camp between the junior and senior years (or third and fourth MS years) unless deferred by the Professor of Military Science.

### Uniforms and Textbooks

Regulation uniforms are furnished to students on a loan basis beginning their second term. Textbooks are furnished during participation in the ROTC program but must be returned when the student completes association with the Department.

### Special Opportunities

In conjunction with Summer training, students are selected to attend Airborne, Air Assault, Ranger, or Northern Warfare training in locations from Florida to Alaska. Students may compete for Summer Flight Training at Fort Rucker, Alabama. Additionally, outstanding students are offered the opportunity to participate in Troop Leadership Training and spend three weeks performing the duties of an officer at a military installation. All of these experiences are voluntary and competitive, but they will enrich the leadership development.

### Credit for Previous Military Training

Students with previous military training will be granted constructive credit as follows:

1. By transfer. Constructive credit will be granted at the time of entrance to LCC for corresponding ROTC courses completed satisfactorily in a senior division ROTC unit in a college or university.
2. Other training or service. Constructive credit will be granted at the time the student enters the ROTC program at LCC. If for any reason the student does not complete the ROTC program which he or she begins, constructive credit will be withdrawn.
  - a. Service academy education. Students who have satisfactorily completed work at a service academy may receive constructive credit for up to three years of Military Science. The Department will make a credit determination at the time that the student enrolls.
  - b. Active service or active duty for training in the US Army, Navy, Air Force, Marine Corps or Coast Guard. The Professor of Military Science may grant constructive credit for up to two years of the basic course, depending upon service duties.
  - c. Junior ROTC or Military School training. Students who have had Junior ROTC or Military School training should contact the Professor of Military Science for credit determinations. Maximum allowable constructive credit will be the two-year basic course.

### REQUIRED COURSES:

Basic Course		
FALL	WINTER	SPRING
MS 101	MS 102	MS 103
FALL	WINTER	SPRING
MS 201	MS 202	MS 203

### Advanced Course

Refer to applicable four-year college catalog

### Military (MS)

Army ROTC  
Division of Student Personnel Services

#### MS 101 Intro to the Military Profession 1(1-1)

Fall, Winter, Spring. Prerequisite: Approval of Department. Analysis of the military profession from several academic perspectives and exploration of the technical, ethical, and personal ramifications of service as an officer in the US Army. Lab introduces military skills.

#### MS 102 Military Leadership-I 1(1-1)

Winter. Prerequisite: MS-101 or approval of Department. Introduction to military leadership. Draws upon examples from military history to illustrate what a military leader must be, know, and do to lead soldiers in battle. Lab includes both military skills and leadership applications.

#### MS 103 Army Physical Fitness Training 1(0-3)

Spring. Prerequisite: MS-102 or approval of Department. The leaders' role in implementing the Army Physical Fitness Program to provide for the physical well being of subordinates. Individual and group fitness programs are introduced. Includes rappelling and smallbore rifle marksmanship.

#### MS 201 Military First Aid 1(1-1)

Fall. Prerequisite: MS-103 or approval of Department. Emergency first aid techniques, including casualty evaluation, lifesaving measures, CPR, and environmental injury prevention. Lab includes military skills and first aid applications.

#### MS 202 Military Leadership-II 1(1-1)

Winter. Prerequisite: MS-201 or approval of Department. Descriptive model of small unit leadership. Provides cadets with a realistic preview of the small unit leader's role in the Army. Lab includes small unit drill and ceremonies.

**MS 203 Land Navigation**

1(1-2)

Spring. Prerequisite: MS-202 or approval of Department. Use of military topographic and special maps to include intersection, resection, modified resection, and polar coordinates. Development of overlays for tactical operations. Lab includes actual land navigation in the field using the lensatic compass.

**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 purposes 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 Description of Courses section of this catalog.

**Uniforms and Textbooks**

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

**Aerospace Studies Courses (AS) Air Force ROTC**  
Division of Student Personnel Services

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.

**AS 110 Organization of the U.S. Air Force**

1(1-0)

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.

**AS 111 U.S. Strategic Offensive and Defense Forces**

1(1-0)

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

**AS 112 U.S. General Purposes Forces**

1(1-0)

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.

**AS 210 Development and Employment of Aerospace Forces I**

1(1-0)

Development of flight from the first efforts to the present, and the employment of aerospace forces in war and peace.

**AS 211 Development and Employment of Aerospace Forces II**

1(1-0)

Development of flight from the first efforts to the present, and the employment of aerospace forces in war and peace.

**AS 212 Development and Employment of Aerospace Forces III**

1(1-0)

Development of flight from the first efforts to the present, and the employment of aerospace forces in war and peace.

**AS 141 Leadership Laboratory**

1(1-0)

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

**CENTER FOR AGING EDUCATION**

Since September 1975 the Center for Aging Education has provided aging education, training, and consultation to agencies, businesses, community organizations, and individuals. The Center's emphasis is on developing and providing quality programs and educational services that are responsive to the needs of the community. Programs and services of the Center include:

- career training in gerontology for individuals who provide direct services to older persons (Certificate Program or Associate Degree)
- short-term workshops/seminars on special topics in aging
- retirement preparation seminars
- programs for those already retired
- small group programs for family caregivers
- customized training and in-house seminar development
- consultation on aging education issues
- audio-visual programs on high-interest topics

Workshops, seminars and other gerontology training programs are offered in response to identified community needs and interests. Center staff design seminars for older adults and others interested in education for and about aging.

The Center offers a small group retirement planning program to individuals in the community and on-site to organizations. It also provides consultation to employers in implementing retirement/life planning programs for their employees.

The Center offers both a Certificate in Gerontology and a Gerontology Specialty Option within the Human Services Associate Degree Program. Three terms of field placement are included in both programs. During field placement the student works at an agency or organization serving older adults. Gerontology courses and the field placement experience are taught and supervised by Center for Aging Education staff.

Academic advising is available to persons interested in pursuing careers in gerontology, as well as to those who wish to upgrade their skills in their present jobs. Center staff also advise older adults seeking information on educational opportunities. Gerontology advising supplements the regular general advising program of the college.

A Senior Adult Tuition Award program is administered by the Center for Aging Education in cooperation with the Student Financial Services Office. Persons 60 years of age or older who meet moderate income guidelines are eligible to apply. Priority is given to residents of the college district. All awards are dependent upon the availability of funds.

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

Center for Aging Education  
Division of Student Personnel Services

**GER 100 Introduction to Human Aging**

3(3-0)

A basic orientation to the field of gerontology, with emphasis on social aspects: demography, physiology, psychology, sociology, economics, environment, death and dying, and community and government programs.

**GER 101 Programs and Services for the Aging**

3(3-0)

Prerequisite: GER 100 recommended. Focus is on the organization and functions of the aging system, its relationship to the broader human services system, and how the services worker can use or develop community resources for the benefit of older adults.

**GER 102 Mental Health and Aging**

3(3-0)

Prerequisite: GER 100. Covers psychological and social adaptations necessary for maintenance of good mental health: influences of physical health, social and family aspects, depression and losses, institutions, positive approaches to mental health, and a life-cycle perspective. Emphasis is on responses to aging and environmental factors that have an impact on mental health.



- GER 103 Recreational Programs for the Aging** 2(2-0)  
Prerequisite: GER 100 recommended. An exploration of the potential and effects of therapeutic recreation in relation to older adults. Includes activity analysis, creating a livable environment, development of in-service training, review of State and Federal guidelines, medical background for understanding charting and care plans, effective communication with physically and mentally impaired, use of volunteer staff, and locating community resources for programs.
- GER 104 Aging and Health** 3(3-0)  
Prerequisite: GER 100. Examines patterns of physical health and illness among the aged, changing physiology of body systems, current theories of aging process, chronic illnesses, and mechanisms for health and medical care. Emphasis is on practical implications for the human services provider.
- GER 105 Planning for Retirement** 2(2-0)  
Covers financial matters, legal affairs, physical and mental health, being alone, housing choices, employment and volunteer opportunities, community resources, and meaningful use of time. Includes discussion of planning and decision-making skills; and development of a personalized plan for retirement.
- GER 108 A Manager's Guide to Pre-Retirement Planning Programs 1** (1-0)  
Principles, practices, and current approaches to pre-retirement planning. Includes a review of the goals and objectives of pre-retirement planning, components of a model program, methods of conducting programs, and planning considerations for the employer.
- GER 109 Mature Driver Refresher** 1(1-0)  
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; license renewal and restricted driving.
- GER 110 Self-Renewal** 1(1-0)  
Mature adult students clarify personal values, identify accomplishments and interests, and develop communication skills. Topics include myths about aging, using individual personal resources (emotional, physical, mental, and social), and an exploration of meaningful roles for older adults.
- GER 111 Senior Adult Issues** 1(1-0)  
An examination of critical retirement issues. Topics include sources and use of local community resources in housing, physical health, mental health, and finances. Students look at changes resulting from legislation, the influence of organizations, and alterations in lifestyles.
- GER 112 Organizations Serving Seniors** 1(1-0)  
Survey of various agencies providing programs, services, and group services for mature adults. Agencies include those assisting in legal matters, housing concerns, financial issues, legislative matters, and nursing home assistance.
- GER 113 Investments and Financial Management in Retirement** ½(½-0)  
An overview of money management strategies and investments, especially as applied to fixed incomes in retirement. Topics include determining networth, types of investments, yield, stocks, bonds, mutual funds, money management tips and legalities.
- GER 121 Senior Group Program Planning** 1(1-0)  
For persons who may serve as leaders of senior groups: reviews group activities, roles as leaders, improving existing programming, motivating group members, techniques of leadership, publicity skills, arranging trips, and innovative program ideas.
- GER 122 Working with Older Adults: The Aging Process** Variable  
Overview of issues and skills critical to working with older adults in a service capacity. Includes an introduction to the field of aging; myths and realities of aging; age-related sensory loss; effects of stress on the mental health of older adults; special communication skills; an introduction to the aging service network; and information about local community resources.
- GER 123 Counseling Outreach Skills: Aging Populations** 2(2-2)  
Prerequisite: GER 100 required & GER 102 recommended. Basic communication and counseling skills are presented and practiced, including special considerations in dealing with older adults. Topics include empathy, death and dying, loss, grief, and depression.
- GER 124 As Parents Age: A Seminar for Families** 1(1-0)  
An examination of aging in the family context, with emphasis on information useful to the individual's own family situation. Topics include the normal ag-
- ing process, sensory changes, improving communications, understanding "senility," common mental health problems, alternative living arrangements (community-based vs. institutional), community services and resources, roles of adult children, shared decision-making, and the dynamics of guilt.
- GER 156 Serving Older Adults: Outreach/Referral** 1(1-0)  
For outreach office staff members who are charged with assisting in the provision of services to older adults. Includes purpose of outreach offices, purpose and function of information and referral services, relationship of the information and referral function to the Older Americans Act and the aging services network, communication skills, and techniques for working with difficult clients.
- GER 157 Working with Older Adults: Outreach and Communication Skills** ½(½-0)  
An overview of effective techniques for communication, outreach, and problem solving for persons who work with older adults. Includes a special emphasis on applications to federally-funded programs.
- GER 160 Issues of Aging: Employment** 1(1-0)  
Introduction to issues of employing the older worker: physical capacity; learning ability; job performance; performance in training; work attitudes; and benefits, including insurance and Social Security.
- GER 161 Issues of Aging: Sexuality** 1(1-0)  
Issues relating to sexuality and older persons: societal attitudes, sexual behavior patterns, physiological changes, psychological responses, and special situations such as institutional settings.
- GER 163 Grants in Aging** 2(2-0)  
The grants process as it applies to funding programs that serve older adults. Write a mini-proposal, identify funding sources, learn how funds are allocated, become familiar with proposal language, and learn how to prepare a budget for a grant proposal. Develop and present own proposal for funding.
- GER 164 Medication and Alcohol Use Among Older Adults** 1(1-0)  
Examination of medication and alcohol use among older adults: prescription and non-prescription medicines, side effects, drug interactions, and strategies for using medicines wisely. Students learn to identify a substance abuse situation and make appropriate referrals.
- GER 165 Confusion I: Concepts and Causes** 1(1-0)  
An introduction to causes and current concepts of confusion ("senility," dementia, Alzheimer's Disease) in older persons. Provides an overview of social, physical, psychological and environmental factors resulting in confusion. Relationship to depression, techniques for communicating with confused older persons, family dynamics and community resources are discussed.
- GER 167 Issues of Aging: Nursing Homes** 1(1-0)  
The role of nursing homes in the continuum of care, issues and concerns relating to care, funding of care, review of residents' rights, guidelines for choosing a home, and guidelines for visiting nursing home residents.
- GER 168 Legal Rights of Older People** Variable  
Introduction to legal issues affecting older adults: nursing home residents' rights, wills and estate planning, health insurance, age discrimination, guardianship, and other related legal topics.
- GER 169 Issues of Aging: Age Discrimination** 1(1-0)  
Introduction to the Age Discrimination Act and the Age Discrimination in Employment Act. Includes psychological data on age discrimination, the use of age as a criterion in the law, and the credit law as it relates to age.
- GER 170 Depression: Recognition and Treatment** 1(1-0)  
An examination of depression in later life. Symptoms, causes, "masks," diagnosis and assessment of depression are introduced, including information on distinctions between depression and dementia. Basic techniques and guidelines for working with depressed older persons are presented.
- GER 171 Confusion II: Techniques for Intervention** 1(1-0)  
Prerequisite: GER 165 or equivalent. An introduction to techniques for working with older adults with Alzheimer's disease and related disorders. The psychosocial needs of individuals and their families are a primary focus. Communication techniques, programming approaches, handling problem behaviors, a task breakdown approach, environmental adaptations and role of the family are discussed.

**GER 172 Nursing Management of Confused Older Adults in Acute Care Settings** ½(½-0)

Prerequisite: GER 165 or equivalent. An examination from a holistic perspective of issues and techniques for management of confusion in the presence of acute or chronic illness requiring hospitalization. Designed specifically for nursing staff in hospital settings.

**GER 173 Understanding and Managing the Problem of Urinary Incontinence** ½(½-0)

An introductory seminar designed to assist those caregivers with the problem of incontinence management in older adults. Topics include attitudes, normal age effects on urine control, prevalence, common responses to loss of control, possible causes, complex incontinence, treatment and techniques of management.

**GER 190 Seminar: The Aging Experience: An International Perspective** ½(½-0)

An examination of what happens in the lives of older people in China and Russia today. Participants explore the influence of society, lifestyle, sex, culture, economy and health habits on aging.

**GER 199 Working with Older Adults: Dying and Death** 1(1-0)

An overview of issues and skills critical to caregivers working with terminally ill older adults. Included are an examination of attitudes toward dying, death, and older adults; understanding the behavior of the dying person; understanding personal feelings; techniques for communicating with the terminally ill; working through personal grief; and exploring alternatives to institutionalized death.

**GER 201 Field Placement I** 4(1-10)

Prerequisite: GER 100 & department approval. On-the-job experience in serving older persons through placement at a local community agency. Students assess their motivation and career skills in the field of aging services, explore community resources, demonstrate appropriate work habits, assess their attitudes toward older persons, and relate current research in the field of aging to actual practice. An accompanying seminar integrates experience with concepts and principles of gerontology.

**GER 202 Field Placement II** 4(1-10)

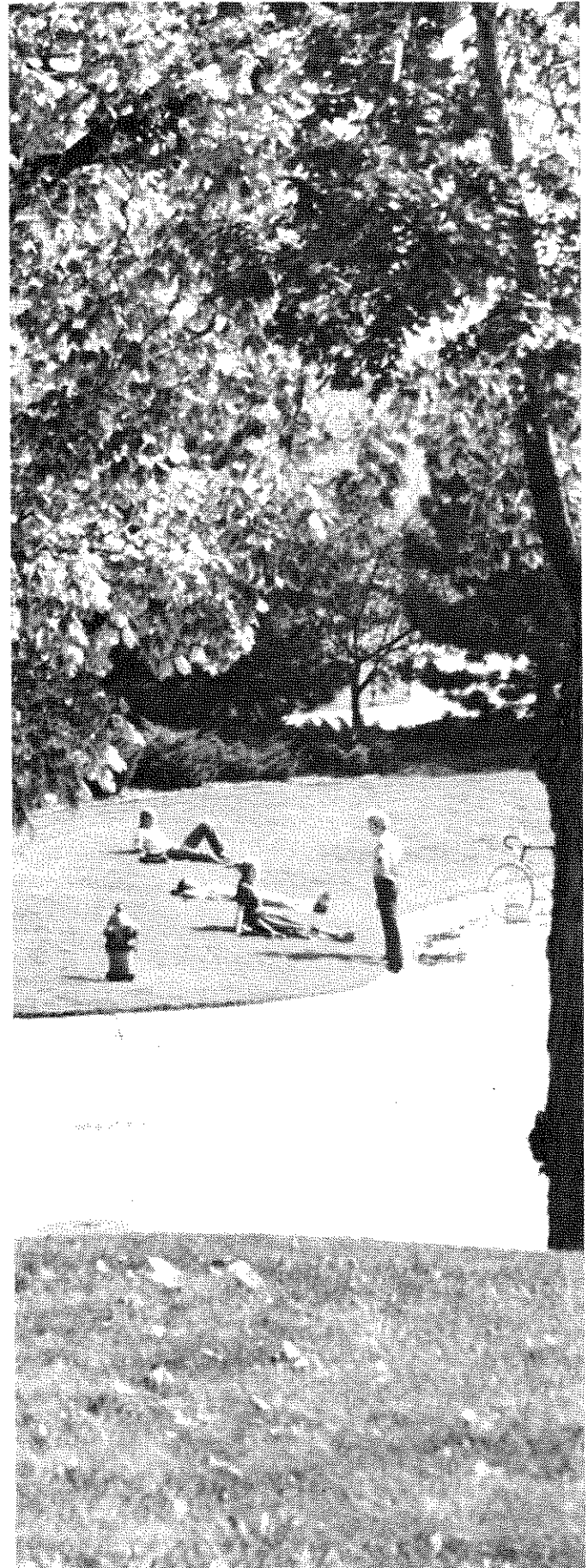
Prerequisite: GER 201, 12 program credits & department approval. Second in the series of field experience courses. A continuation of Gerontology 201 providing additional practical experience and training in gerontology. Includes practice and demonstration of group work techniques.

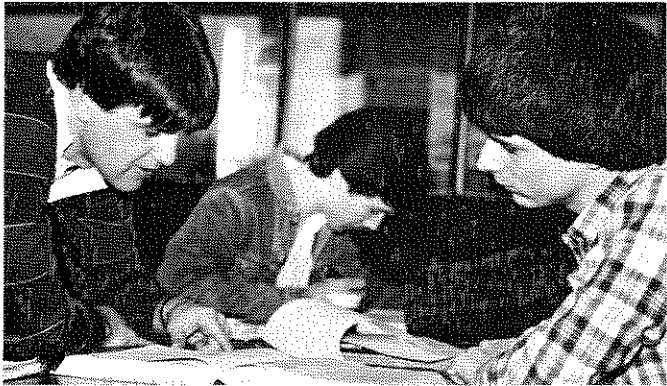
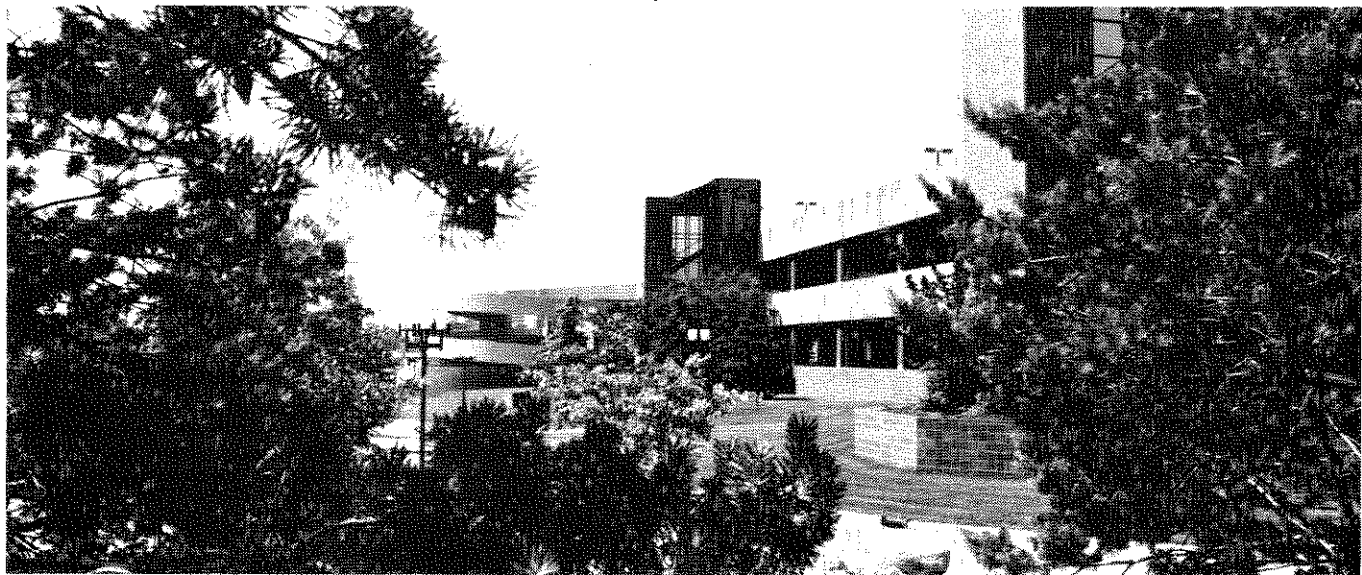
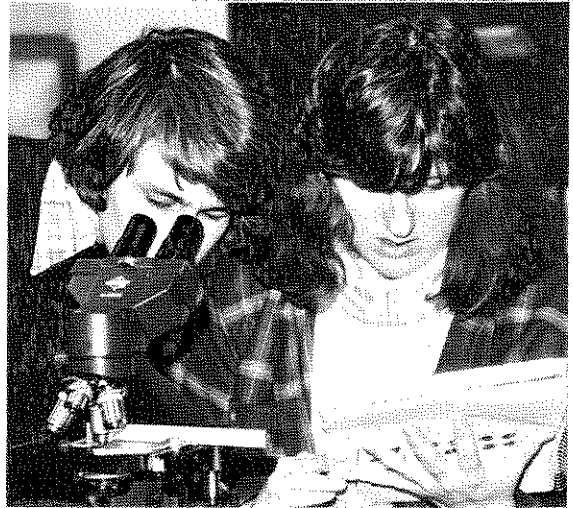
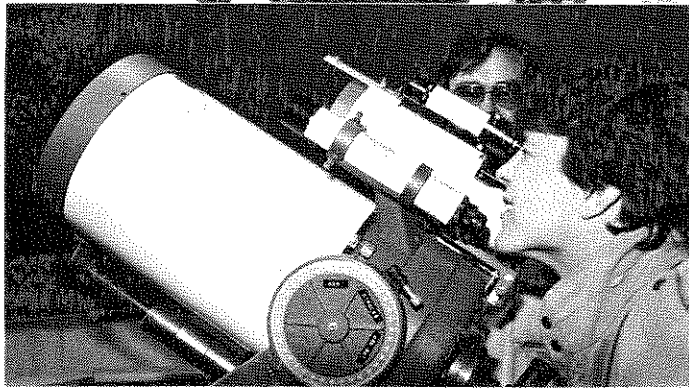
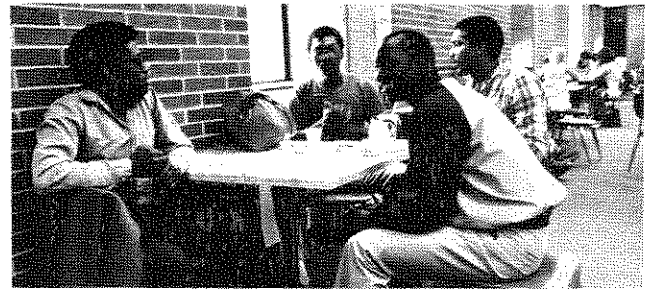
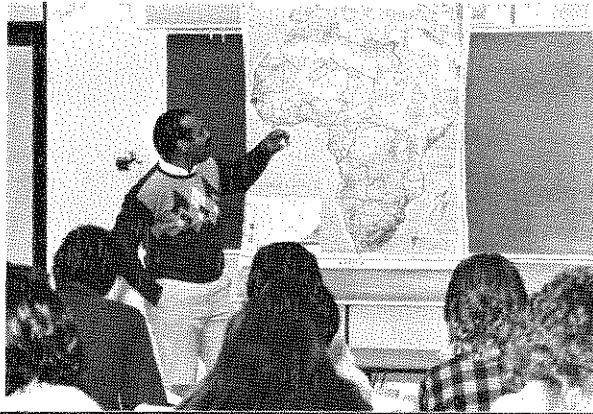
**GER 203 Field Placement III** 4(1-10)

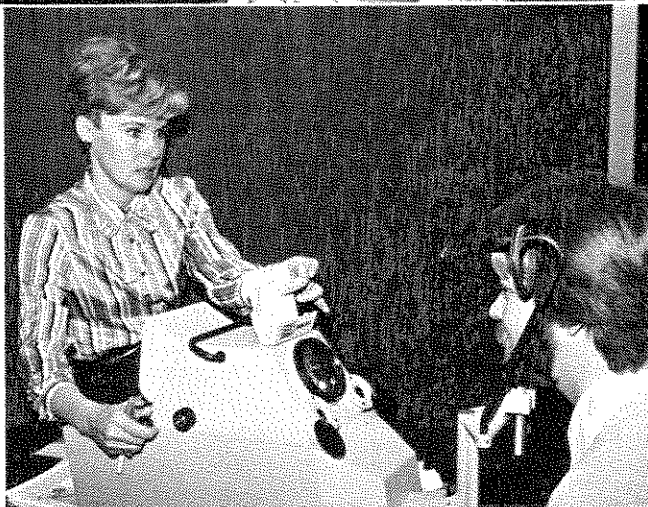
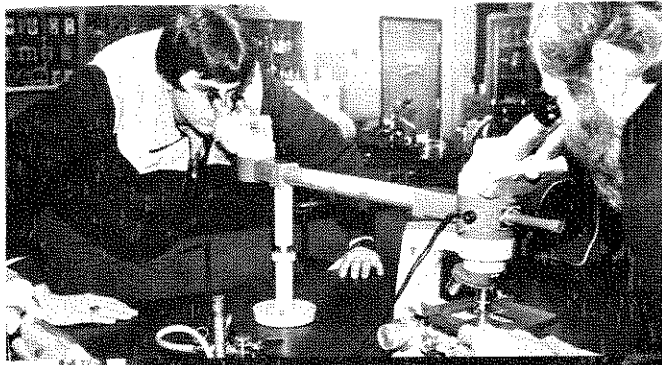
Prerequisite: GER 202, 20 program credits & department approval. Third in the series of field placement courses. A continuation of Gerontology 202. Includes a focus on current research, job search techniques, and preparation of a resume.

**GER 213 Family Caregivers Series: Evaluation of Self as a Caregiver** ½(½-0)

Designed for those caring for a chronically ill family member or friend in the home. Topics include: development of the family; family systems; the caregiver role; your family responsibility tree; communication skills; assessment for decision making; assessing the caregiver; and filling the gaps with community resources. An interdepartmental course with the Health Careers Department.







## Lansing Community College



Dean Sam Kintzer

# DIVISION OF ARTS & SCIENCES

Department of Communication  
Department of Humanities  
Department of Mathematics & Computer Science  
Department of Science  
Department of Social Science

## DIVISION OF ARTS AND SCIENCES

Dean Sam Kintzer

The purpose of a liberal arts education is to present knowledge and ideas about the world around us through studies in the social and natural sciences, mathematics, and humanities; and to develop the ability to express concepts through effective communication by writing and speaking clearly. Of equal importance is the ability to read critically.

Students are encouraged to select those courses and programs which help them acquire that broad base of understanding and range of abilities which lead to the development of analytic reasoning and informed judgment. Such individuals will be more versatile in dealing with the complexities of change in a modern technological society and be better prepared for positions of leadership and responsibility.

Completing distribution requirements in communication, humanities, science and social science will fulfill general education requirements for the Associate Degree in Arts and Sciences. It is to the advantage of students to complete their general education at Lansing Community College before transferring because many Michigan colleges and universities will then not require additional basic course work.

The Division of Arts and Sciences is established:

1. To provide general education for all students.
2. To offer freshman and sophomore liberal arts and science courses paralleling the first two years of university education.
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 choice of a value system.
6. To encourage the student to search for knowledge in the heritages of all civilizations and to become aware of the depth and range of the human achievement.
7. To provide support courses for vocational programs for other Divisions of the College.
8. To offer seminars in special subjects as part of a lifelong learning program for the community.
9. To offer a career program providing training for entry level positions in Human Service agencies in the fields of Social Welfare, Mental Health, Hearing Impaired, Child Development and Education.

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

- Provides students with a variety of instructional environments: independent study, computer-assisted instruction, off-campus courses in the field and community, individualized self-paced learning courses, audio-visual-tutorial studies, lecture-discussion, laboratory and seminar courses.
- 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 organized purpose. 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.
- Provides assistance to students needing improvement of academic skills to succeed at the college level through remedial-developmental courses in reading, writing and mathematics and placement testing services for diagnostic purposes.

### DUAL ENROLLMENT

High school students who have demonstrated academic ability may, upon recommendation of their 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.

### SEMINAR SERIES

Special seminars are drawn from any area within departments in the Division of Arts and Sciences. The courses are designed and offered by faculty in topics that may reflect the forefront of knowledge about ourselves or others and are designed to help us acquire new skills or insights. Credits are variable from one to four. Prerequisites are listed individually for each offering.

### 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.

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, Room 111, A&S Bldg.

## DEPARTMENT OF COMMUNICATION

Chairperson: Dr. George R. Bramer

The Department of Communication offers instruction in the following areas, under the codes indicated:

CHN:	Chinese
COM:	Communication
ESL:	English as a Second Language
FRN:	French
GRK:	Greek
GRM:	German
ITL:	Italian
JPN:	Japanese
JRN:	Journalism
RDG:	Reading
SGN:	Sign Language
SPN:	Spanish
SPH:	Speech
WRI:	Writing

The department offers testing services to help you select appropriate courses in writing, reading and/or spelling. You are urged to inquire in the Communication Department Laboratory about a writing or spelling placement test. Reading testing and advising are offered during regular registration before each term. Additional reading testing and advising can be arranged in the department laboratory.

### COURSE DESCRIPTIONS

**Communication (COM)**  
Department of Communication  
Division of Arts and Sciences

#### COM 031 Vocabulary Improvement I 2(2-0)

Knowledge of and extensive practice with word parts (roots, prefixes, and suffixes) are used to expand vocabulary. Pronunciation, correct usage and dictionary skills are also emphasized.

#### COM 050 Spelling Improvement I 2(2-0)

Focuses on basic spelling problems and principles progressing from elementary three-letter words through words frequently used but commonly misspelled. Emphasizes use of dictionaries for finding correct spelling. Prepares students for Spelling Improvement II.

#### COM 051 Spelling Improvement II 2(2-0)

Advances from intermediate to college level. Covers words frequently misspelled and misused in business, general college work and practical adult life situations. Includes prefixes, suffixes, meaning, pronunciation and the most useful spelling principles plus their exceptions.

#### COM 150 The Press in a Free Society 3(3-0)

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.

#### COM 209 Mass Communication 4(4-0)

Introductory course acquainting students with the major mass media and their impact on American society. Students will investigate current communication theory and research on a broad range of topics related to the mass media, including values the media portray, the effects of televised violence on viewers, news, advertising, and media stereotypes.

- COM 230 Introduction to English Linguistics** 4(4-0)  
Examines the English language from the perspective of contemporary American linguistics: generative syntax, phonology, regional and social variation. Considers implications for teachers.
- English As A Second Language (ESL)**  
**Department of Communication**  
**Division of Arts and Sciences**
- ESL 016 Beginning English as a Second Language** 5(5-0)  
For advanced beginners who have been introduced to some basic English structures but have not yet mastered them. Class sessions focus on the spoken form and homework on the written form. Tapes provide supplementary aural-oral experience.
- ESL 017 Intermediate English as a Second Language** 5(5-0)  
Reinforces the instruction of ESL 016, introduces new verb forms and complex sentence patterns, and gives increased attention to writing. Tapes provide supplementary aural-oral experience.
- ESL 018 Advanced English as a Second Language** 5(5-0)  
Emphasis is on advanced grammatical structures with some preparation for taking college classes. Tapes provide supplementary aural-oral experience.
- French (FRN)**  
**Department of Communication**  
**Division of Arts and Sciences**  
Advanced placement in French study may be arranged for students who have satisfactorily completed two or more years of French in high school, and those who have established French proficiency by other means.
- FRN 101, 102, 103 Elementary French I, II, III** 5(5-0) each  
Prerequisites: for FRN 101, none; for FRN 102, FRN 101; for FRN 103, FRN 102; or the equivalent of these prerequisites. Three-term sequence of elementary French designed to teach pronunciation, vocabulary, conversation, 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.
- FRN 201, 202, 203 Intermediate French I, II, III** 5(5-0) each  
Prerequisites: for FRN 201, FRN 103; for FRN 202, FRN 201; for FRN 203, FRN 202; or the equivalent of these prerequisites. 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.
- German (GRM)**  
**Department of Communication**  
**Division of Arts and Sciences**  
Advanced placement in German study may be arranged for students who have satisfactorily completed two or more years of German in high school, and those who have established German proficiency by other means.
- GRM 101, 102, 103 Elementary German I, II, III** 5(5-0) each  
Prerequisites: for GRM 101, none; for GRM 102, GRM 101; for GRM 103, GRM 102; or the equivalent of these prerequisites. Three-term sequence in contemporary German. Students explore topics of current interest concerning German-speaking cultures as a vehicle for learning basic communication skills. Conversation and class participation are emphasized. Tape recordings accompanying the text provide additional exercise in pronunciation and comprehension.
- GRM 201, 202, 203 Intermediate German I, II, III** 5(5-0) each  
Prerequisites: for GRM 201, GRM 103; for GRM 202, GRM 201; for GRM 203, GRM 202; or the equivalent of these prerequisites. Three-term sequence in contemporary German offering advanced training and practice in the four basic skills—speaking, listening comprehension, reading and writing. Includes a thorough review of basic German grammar, intensive vocabulary building, small-group discussions, writing compositions, and student presentations on German culture. Cassette recordings accompanying the text provide students with additional listening comprehension practice.
- Japanese (JPN)**  
**Department of Communication**  
**Division of Arts and Sciences**  
Advanced placement in Japanese study may be arranged for students who have satisfactorily completed two or more years of Japanese in high school, and those who have established Japanese proficiency by other means.
- JPN 101, 102, 103 Elementary Japanese I, II, III** 4(4-0) each  
Prerequisites: for JPN 101, none; for JPN 102, JPN 101; for JPN 103, JPN 102; or the equivalent of these prerequisites. Three-term sequence in contemporary Japanese for beginners, offering basic knowledge of the Japanese language for practical communication. Develops skill in speaking, listening, reading and writing, and includes study of culture and everyday life in Japan. Three writing systems are introduced. Cassette tapes accompanying the textbook provide students with listening comprehension practice.
- Journalism (JRN)**  
**Department of Communication**  
**Division of Arts and Sciences**  
For additional journalism-related courses, see COM 031, 050, 051, 150, 209 and 230.
- JRN 151 Newswriting** 4(4-0)  
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.
- JRN 152 Reporting** 4(4-0)  
Prerequisite: JRN 151. 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.
- JRN 254 Editorial Writing** 4(4-0)  
Prerequisite: JRN 151. 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.
- JRN 256 Newsletter Writing and Production** 4(4-0)  
Provides the student with a working knowledge of writing and editing in journalistic style, and the techniques necessary for producing a newsletter or house organ.
- Reading (RDG)**  
**Department of Communication**  
**Division of Arts and Sciences**  
For additional reading-related courses, see COM 031, 050, 051 and 230.
- RDG 016, 017, 018 Reading Clinic I, II, III** 4(0-8) each  
Sequence teaches basic reading skills and improves confidence. Each course provides a personal reading program. Combines private tutoring with directed practice in the reading lab. At the time of registration, a student must register for both a specific course—RDG 016, 017, or 018—and a RDG 006 section. The RDG 006 section arranges the times for the student's attendance in the Communication Department Laboratory.
- RDG 019 Reading Comprehension I** 4(4-0)  
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.
- RDG 020 Reading Comprehension II** 4(4-0)  
Improves the student's ability to read 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.
- RDG 021 Speed Reading** 4(4-0)  
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.
- RDG 023 College Reading Survival Skills** 2(2-0)  
Designed for beginning college students whether recent high school graduates or returning adults. Develops college survival skills. Includes work on reading speed and flexibility, study techniques, concentration and memory, note-taking, test-taking, and vocabulary expansion.

**Sign Language (SGN)**  
**Department of Communication**  
**Division of Arts and Sciences**

**SGN 160 Orientation to Deafness 2(2-0)**

Introduces the student to deafness and its effects. Lectures and audio-visual presentations cover areas of interest to those working professionally with deaf persons, parents, and families of deaf individuals, and those desiring greater awareness of the "world of the deaf." Class experience includes guest lectures to further acquaint students with the deaf community.

**SGN 161 Sign Language I 4(3-2)**

Prerequisite: SGN 160 or concurrent enrollment. Provides students with a basic understanding of American Sign Language (ASL). ASL grammar, syntax and vocabulary are introduced and weekly laboratory sessions develop elementary receptive and expressive skills.

**SGN 162 Sign Language II 4(3-2)**

Prerequisite: SGN 161 or department approval. Provides students with an intermediate understanding of American Sign Language. Students will be videotaped and further grammar, syntax and vocabulary are presented. Weekly laboratory sessions are continued and elementary conversational skills are developed.

**SGN 163 Sign Language III 4(3-2)**

Prerequisite: SGN 162 or department approval. Provides students with more advanced understanding of American Sign Language (ASL) including additional vocabulary and ASL idioms. Expressive and receptive conversational skills are emphasized in both class and laboratory sessions.

**SGN 164 Fingerspelling 2(2-0)**

Prerequisite: SGN 161 or department approval. Provides concentrated instruction and practice in fingerspelling, emphasizing the development of receptive and expressive skills.

**SGN 165 Receptive Manual Communication 4(3-2)**

Prerequisite: SGN 163 or department approval. Designed to increase the student's skill in conversational sign language. Focuses on the reception, analysis and comprehension of the various manual communication systems utilized by the hearing impaired in conversational situations. Skills in American Sign Language (ASL) are emphasized.

**SGN 261 Principles of Interpreting I 5(4-2)**

Prerequisite: SGN 260 or department approval. Surveys basic interpreting through lecture, role playing, and classroom discussion. Introduces the ethics (RID Code) and responsibilities of the interpreter. Examines the role and necessary skills of the interpreter in various settings: education, medical, legal, human services, etc. Provides sign language vocabulary acquisition through laboratory experiences.

**SGN 262 Principles of Interpreting II 5(4-2)**

Prerequisite: SGN 261, 263 and department approval. Designed to provide in-depth understanding of various interpreter settings and to develop proficiency in interpreting. Increases awareness of oral and deaf-blind interpreting and interpreting for individuals with minimal language skills. Provides sign language acquisition with emphasis upon specific vocabularies through laboratory experiences.

**SGN 263 Sign to Voice Interpreting 3(3-0)**

Prerequisite: SGN 261. Designed to provide an understanding of the principles and problems of interpreting the manual, oral and written communication of deaf persons into their spoken or written standard English equivalents. Develops skill and fluency in receiving and expressing all levels of communication of deaf individuals.

**SGN 267 Practicum I 4(2-4)**

Prerequisite: SGN 261 or department approval. Combines lecture and supervised placement in various interpreter settings to allow directed observation and application of practical interpreting skills.

**SGN 268, 269, 270 Advanced Practicum I, II, III Credits variable  
four to six**

Prerequisite: SGN 263, 267 and department approval. Designed to provide interpreting experience through placement in various settings. Includes weekly lectures and individual conferences between interpreter trainee and practicum supervisor. Depending upon credit choice, students will spend 4, 6, or 8 hours each in their placement setting.

**Spanish (SPN)**  
**Department of Communication**  
**Division of Arts and Sciences**

Advanced placement in Spanish study may be arranged for students who have satisfactorily completed two or more years of Spanish in high school, and those who have established Spanish proficiency by other means.

**SPN 101, 102, 103 Elementary Spanish I, II, III 5(5-0) each**

Prerequisites: for SPN 101, none; for SPN 102, SPN 101; for SPN 103, SPN 102; or the equivalent of these prerequisites. Three-term sequence of elementary Spanish emphasizing use of the language for practical communication. Class-work features intensive small-group conversation practice, and an introduction to Hispanic 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.

**SPN 201, 202, 203 Intermediate Spanish I, II, III 5(5-0) each**

Prerequisites: for SPN 201, SPN 103; for SPN 202, SPN 201; for SPN 203, SPN 202; or the equivalent of these prerequisites. 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.

**Speech (SPH)**  
**Department of Communication**  
**Division of Arts and Sciences**

For additional speech-related courses, see COM 031, 209 and 230.

**SPH 101 Human Communication 4(4-0)**

Introductory course examining the communication process in its three major settings: interpersonal interaction, small group discussion, and public speaking. The learning approach utilizes readings, lectures, discussions, participative classroom exercises, and oral and written assignments to help students increase their understanding of human communication while improving their communication skills.

**SPH 102 Interpersonal Communication 4(4-0)**

Introductory course providing students with an understanding of interpersonal communication theories and their application in everyday interactions with family, friends, and co-workers. Through in-class activities, students' interpersonal communication skills will be increased in areas including openness, empathy, supportiveness, descriptiveness, conflict resolution, and behavioral flexibility in interaction.

**SPH 103 Small Group Communication 4(4-0)**

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.

**SPH 104 Fundamentals of Public Speaking 4(4-0)**

Helps beginning speakers develop the skills and confidence needed to speak effectively to audiences in public situations. Through a carefully planned series of speaking assignments, students learn the proper techniques for researching, developing, organizing, outlining, and delivering effective informative and persuasive speeches.

**SPH 105 Voice and Articulation 3(3-0)**

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.

**SPH 203 Advanced Public Speaking 3(3-0)**

Prerequisite: SPH 104. 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.

**SPH 206 Nonverbal Communication 4(4-0)**

Provides 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.

**Writing (WRI)**

**Department of Communication**  
**Division of Arts and Sciences**

For additional writing-related courses, see COM 031, 050, 051 and 230.

Placement testing is conducted during the first week of each term for all students in WRI 101, WRI 111, 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. Waiver or credit for WRI 121-123 may be achieved through various national and local testing programs. Inquire about these possibilities in the Admissions Office or the Department of Communication.

The Composition/English requirement for the Associate Degree in Arts or Sciences (A.A. or A.S.) can be fulfilled in various ways. The second required course can be either WRI 122 or ENG 122, and the third can be either WRI 123 or ENG 123. Students who receive permission to waive WRI 121 are required to select another four-credit course in Communication, Writing or English to fulfill the twelve credit requirement for the Associate in Arts or Sciences Degree. Writing course requirements for curricula outside the Division of Arts and Sciences are specified in individual curriculum guides, which are available at counseling offices or department offices on campus.

**WRI 101 Fundamentals of Writing 4(1-6)**

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 laboratory activities and group work in weekly class meetings, as well as flexible scheduling, self-pacing, and professional tutorial assistance.

**WRI 102 Grammar and Mechanics in Writing 4(1-6)**

Designed to help students master, in their own writing, the basic grammatical and mechanical skills (except spelling) that are expected upon entry to WRI 121. Students will learn about and apply knowledge of basic sentence elements and structures, sentence punctuation, and word forms.

**WRI 111 Business Writing: Grammar and Mechanics 4(1-6)**

Designed to meet the demands of business writing. Course components include study of grammar, punctuation, and style of business prose. Revision and proofreading skills necessary for correct manuscript form in business correspondence are emphasized through practice and testing.

**WRI 121 Composition I 4(4-0)**

Designed to help students develop writing ability. Emphasizes the organization and development of informational prose. Includes units in use of the dictionary and college reading skills.

**WRI 122 Composition II 4(4-0)**

Prerequisite: WRI 121. WRI 122 builds upon the writing skills developed in WRI 121. In WRI 122 the emphasis shifts from the expository essay to the argumentative or persuasive essay. The overall course goal is to teach students to write logically, with style appropriate for support of an argument or proposition.

**WRI 123 Composition III 4(4-0)**

Prerequisite: WRI 122 or ENG 122. Continuation of the composition sequence and an alternative to ENG 123 in many programs. Emphasizes investigative techniques, library resources, and writing the research paper with full documentation by notes and bibliography.

**WRI 131 Honors Composition I 4(4-0)**

Prerequisite: Department approval. Covers the same material as WRI 121, but with additional work to challenge the superior writer.

**WRI 132 Honors Composition II 4(4-0)**

Prerequisite: Department approval. Covers the same material as WRI 122, but with additional work to challenge the superior writer.

**WRI 133 Honors Composition III 4(4-0)**

Prerequisite: Department approval. Covers the same material as WRI 123, but with additional work to challenge the superior writer.

**WRI 281 Writing For Publication 3(3-0)**

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.

**SEMINARS**

**Department of Communication**  
**Division of Arts and Sciences**

The Department of Communication offers seminars in reading, creative and functional writing, speech, conversational foreign languages, and sign language. These courses, generally open to all, are of special interest to adults who

are continuing their education, and also to certificate or degree students whose curricula require electives. They may be taken on an audit basis or for a grade and credit.

Degree credit varies according to seminar content; transfer credit depends on the institution to which the student transfers. Information about degree credit and level of instruction will be provided at the first class meeting or in advance at the department office. In general, seminar course numbers at the 200 level and above indicate increased challenge.

**INDEPENDENT STUDY**

**Department of Communication**  
**Division of Arts and Sciences**

**COM 295, 296, 297, 298 Independent Study in Communication Credits I, II, III, IV variable one to four**

Prerequisite: Department approval. Individual projects in communication, writing, reading, journalism or Spanish. Students will spend at least two hours a week for each credit in Independent Study.

**DEPARTMENT OF HUMANITIES**

Chairperson: Dr. Joseph Anderson

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

ENG: English  
HST: History  
HUM: Humanities  
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 or Science can also be fulfilled in a number of ways. HUM 211, 212, 213; World Civilizations I, II, III is the recommended sequence of courses. 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:

- Art and Music history (HUM 101, 150, 151, 152)
- History (HST 104-296)
- Literature (ENG 201-296 and HUM 102)
- Philosophy and Religion (PHL 101-296; REL 150-296 and HUM 104)

Please note that World Civilizations courses (HUM 211, 212, 213) are counted as History courses when only one or two of them are taken to fulfill general education requirements. It should also be noted that HUM 121, 122, 123; Power and Morality may be substituted as a whole or in part for HUM 211, 212, 213.

**COURSE DESCRIPTIONS**

**English (ENG)**  
**Department of Humanities**  
**Division of Arts and Sciences**

**ENG 122 Freshman English II 4(4-0)**

Prerequisite: WRI 121. A continuation of WRI 121. An alternative 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.

**ENG 123 Freshman English III 4(4-0)**

Prerequisite: ENG 122 or WRI 122. A continuation of ENG 122 or WRI 122. An alternative to WRI 123. An introduction to the various literary forms, plus the development of analytical and writing skills and research techniques.

**ENG 132 Freshman English II: Honors 4(4-0)**

Prerequisite: Department approval. Same as ENG 122 but taught on an advanced level.

**ENG 133 Freshman English III: Honors 4(4-0)**

Prerequisite: Department approval. Same as ENG 123 but taught on an advanced level.

**ENG 134 Honors Colloquy 4(4-0)**

Prerequisite: Department approval. A forum for invited speakers and a vehicle for discussion among the students and faculty of the Honors Program in the division of Arts and Sciences. A central theme will be selected each time the Colloquy is offered.



- ENG 201 The Poetic Imagination** 4(4-0)  
Prerequisite: ENG 122 recommended. 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.
- ENG 202 Introduction to Drama** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). Introduces drama and its literary techniques and conventions. Attention is given to principles and theory, but understanding of the plays is emphasized. Representative plays from Greek, European, English, and American dramatists.
- ENG 203 Introduction to Prose** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). 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 Chaucer's *Canterbury Tales* to Sinclair Lewis' *Babbitt*.
- ENG 210 The American Novel** 4(4-0)  
Prerequisite: ENG 122 or WRI 122. Study of the major nineteenth and twentieth century American novels from James Fenimore Cooper to Jack London to Ernest Hemingway and John Steinbeck. Emphasis is on historical development of the novel form in America and the novelist's interpretation of the American scene.
- ENG 220 Science Fiction** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). Designed to acquaint students with this popular and modern literary form. Some history and definitions of science fiction, but emphasis is on short stories and novels and their unique view of the future. Also included are movies and audio-tapes.
- ENG 225 The Popular Political Novel** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). Inherently an interdisciplinary course concerned with popular culture, the novel form as used by popular and commercial writers, and politics. Although a non-American novel or two may be used, the emphasis is on recent American novels that deal with the American political scene. Usually offered every other year.
- ENG 240 The Film As Art** 4(2-3)  
Prerequisite: WRI 121 (ENG 122 recommended). 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.
- ENG 245 Popular Culture and Mass Media** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). A study of the popular culture distributed by mass media (including film, television, newspapers, magazines and radio) and how the media and popular culture reflect and shape our cultural beliefs. Extensive use of multi-media.
- ENG 250 Masterpieces of American Literature** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). 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.
- ENG 255 Russian Literature in Translation: The "Golden Age" of Realism** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). An in-depth study of representative works by acknowledged masters of Russian realistic fiction, emphasizing but not limited to Turgenev, Dostoevsky, Tolstoy, and Chekhov; and set against the background of Pushkin and Lermontov's romanticism, and Gogol's naturalism.
- ENG 260 Black American Literature** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). A survey of Afro-American literature from the seventeenth century to the twentieth century. Introduces the various genres in the literature of Black Americans.
- ENG 270 Literature By Women** 4(4-0)  
Prerequisite: WRI 121 (ENG 122 recommended). A study of the works of nineteenth and twentieth century North American women. Designed to further understanding and appreciation of the themes, images, issues and modes of expression of female writers.
- ENG 275 The Philosophical Imagination in Literature** 4(4-0)  
Prerequisite: ENG 122 or WRI 122. This course presents an interdisciplinary approach to philosophy and literature through selected readings in the various literary genres and media: the literary essay, the novel, the drama, poetry, and

the cinema. The course offers a general background of important philosophical ideas channeled into aesthetic and ethical problems.

- ENG 290 Shakespeare** 4(4-0)  
Prerequisite: ENG 122 or WRI 122. 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.

**History (HST)**  
**Department of Humanities**  
**Division of Arts and Sciences**

- HST 105 The Twentieth Century World** 4(4-0)  
A survey of the most significant developments in twentieth century world history and politics with particular emphasis on the period since the end of World War II.
- HST 111 United States History to 1865** 4(4-0)  
A history of the United States from the colonial beginnings through the Civil War.
- HST 112 United States History: 1865 to the Present** 4(4-0)  
A history of the United States from the reconstruction of the nation after the Civil War to the present.
- HST 150 American Black History** 4(4-0)  
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.
- HST 160 Modern Mexico** 4(4-0)  
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 twentieth Century.
- HST 210 Studies in American History** 4(4-0)  
Prerequisite: HST 111 or HST 112 and approval of the instructor. Covers problems of research, writing, philosophy of history and interpretation, involving a detailed examination of a particular area of American history.
- HST 215 Women in American History** 4(4-0)  
A survey of American history from colonial times to the present which examines women's roles in the family, production, social and political life.
- HST 220 Michigan History** 4(4-0)  
A survey of the political, economic and social development of Michigan from pre-colonial times to the present.
- HST 225 Michigan Black History** 4(4-0)  
A study of the history of Black people in the state of Michigan. An effort will be made to relate local Black history to national trends.
- HST 230 British History I (1066-1689)** 4(4-0)  
A survey of British history and culture from the Norman conquest (1066) to the Glorious Revolution (1688-89). Special emphasis will be placed on the interaction of political, constitutional, legal, social, and cultural forces and influences which shaped British history from the Middle Ages to the seventeenth century.
- HST 231 British History II (1689-present)** 4(4-0)  
A survey of the political, economic and social forces which shaped the development of British history and society from the seventeenth century to the present with particular emphasis on the nineteenth and twentieth centuries.
- HST 232 History of Modern Ireland** 4(4-0)  
Nineteenth and twentieth century Irish history and politics with special emphasis on the causes and nature of the conflict in Northern Ireland. Also relates Irish to United States and Michigan history.
- HST 255 African History: An Introduction** 4(4-0)  
A general survey of the African continent with emphasis on special selected topics (and regions) as follows: Pre-colonial Africa, the scramble for Africa, the rise of African Nationalism and Independence, Africa's internal and external relations.
- HST 270 The Modern Middle East** 4(4-0)  
A 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.

**HST 275 Modern East Asia 4(4-0)**

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

**Humanities (HUM)  
Department of Humanities  
Division of Arts and Sciences**

**HUM 101 Art and Music History in Western Civilization 4(4-0)**

An introduction to the masterpieces of art and music history from pre-historic times to the present, and their importance in Western Civilization. Extensive use made of multi-media.

**HUM 102 Mythology 4(4-0)**

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.

**HUM 104 Introduction to Humanities 4(4-0)**

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.

**HUM 121 Power and Morality: The Present 4(4-0)**

The first in a series of courses dealing with the general theme of Power and Morality in the Modern world. This course explores the question of how one can remain human in face of the presence and uses of power in the state, in the family, in the work environment, and in one's confrontation with the divine.

**HUM 122 Power and Morality: The Past 4(4-0)**

The second in a series of courses dealing with the general theme of Power and Morality. While the first course, HUM 121, presented contemporary definitions of Power and Morality, HUM 122 goes back to the past, particularly to Ancient Greece and to the Roman Empire, to achieve an historical understanding of this theme.

**HUM 123 Power and Morality: The Future 4(4-0)**

The third in a series of courses dealing with the general theme of Power and Morality. The emphasis in this course is on how people can remain human in the future in the light of such contemporary trends as the increased emphasis on technology, the ecological crisis, and the threat of nuclear war.

**HUM 150 History of Art I 4(4-0)**

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

**HUM 151 History of Art II 4(4-0)**

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.

**HUM 152 History of Art III 4(4-0)**

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.

**HUM 211 World Civilizations I 4(4-0)**

First of a series of three courses in the cultural foundations of the major ancient world civilizations of Africa, Asia, Europe, and the Americas. Emphasizes the relationship of man's creative works to his beliefs, values, and needs showing how others have understood themselves and how this understanding has shaped our views and conditions today.

**HUM 212 World Civilizations II 4(4-0)**

Prerequisite: HUM 201 or 211 recommended. Second of a series of three courses in the cultural foundations of the major world civilizations of Africa, Asia, Europe, and the Americas from the seventh to the seventeenth centuries. Emphasizes the relationship of man's creative works to his beliefs, values, and needs showing how others have understood themselves and how this understanding has shaped our views and conditions today.

**HUM 213 World Civilizations III 4(4-0)**

Prerequisite: HUM 202 or 212 recommended. Third of a series of three courses in the cultural foundations of the major world civilizations of Africa, Asia, Europe, and the Americas in the modern era. Emphasizes the relationship of man's creative works to his beliefs, values, and needs showing how others have understood themselves and how this understanding has shaped our views and conditions today.

**HUM 215 Utopia: The Future Through The Past 4(4-0)**

Prerequisite: WRI 121 (ENG 122 recommended). The study of representative utopian literature of the western world, plus a few anti-utopian works, for the dual purposes of reviewing and understanding the past but also, and more importantly, considering and evaluating social, political, economic, and moral issues of the near future.

**Philosophy (PHL)  
Department of Humanities  
Division of Arts and Sciences**

**PHL 101 Introduction to Logic 4(4-0)**

An introduction to the elements of reasoning with special attention given to the role of language in reasoning, the identification of fallacious arguments in both deductive and inductive reasoning, and the use of reason in everyday life.

**PHL 102 Philosophy of Science 4(4-0)**

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.

**PHL 103 Introduction to Ethics 4(4-0)**

A course designed to explore essential requirements for moral reasoning. Basic moral principles will be examined and moral priorities discussed in the context of important social issues.

**PHL 201 History of Philosophy I 4(4-0)**

First in a series of three courses. Surveys major developments in western philosophy and their relation to the historical context in which they occur. From the early Greek nature philosophers to the thought of Socrates, Plato, and Aristotle.

**PHL 202 History of Philosophy II 4(4-0)**

Continuation of History of Philosophy I; medieval to early modern philosophy. From scholastic thought to the scientific revolution and Copernicus, Descartes, Newton, Locke, and Hume.

**PHL 203 History of Philosophy III 4(4-0)**

Continuation of History of Philosophy II; modern and contemporary philosophy. From Kant, and the structure of human thought to the meaning of belief and William James, Russell, and Whitehead.

**PHL 211 Who Am I? 4(4-0)**

Philosophy of person. Philosophical questions concerning concepts of self, the egocentric predicament, sensation and reason as sources of knowledge, and rationality and self definition. Examination of one's personal position through reading and discussion of primary and secondary sources.

**PHL 212 Self and Society 4(4-0)**

Philosophy of society and culture. Philosophical questions concerning knowledge and acculturation, law and conscience, and individual decisions and social responsibility. Examination of one's personal position through reading and discussion of primary and secondary sources.

**PHL 213 Life, Cosmos, Meaning 4(4-0)**

Philosophy of nature and the transcendent. Philosophical questions concerning reality behind appearances, faith and knowledge as sources of meaning, cosmology and our place in nature, and ecology and perspective on life. Examination of one's personal position through reading and discussion of primary and secondary sources.

**Religion (REL)  
Department of Humanities  
Division of Arts and Sciences**

**REL 150 World Religions 4(4-0)**

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.

**REL 201 Religions of East Asia 4(4-0)**

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.

**REL 203 Religion in American Life 4(4-0)**

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.

**REL 211 Old Testament Literature 4(4-0)**

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

**REL 212 New Testament Literature 4(4-0)**

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

**SEMINARS**

Department of Humanities  
Division of Arts and Sciences

Each term seminars may be offered in any of the disciplines of art and music history, history, literature, philosophy, or religion. Each seminar has its own course code and a descriptive title which includes the designation "seminar." Course codes, credit value and applicability toward degrees depend on the seminar content.

Transferability is decided on an individual basis by the institution to which the student transfers. Information about degree credit and level of instruction will be provided at the first class meeting or in advance at the department office. In general, seminar course numbers above 200 indicate increased challenge.

**INDEPENDENT STUDY Credits variable, one to two**

Department of Humanities  
Division of Arts and Sciences

Prerequisite: Arrangement with an instructor and approval by the Department Chairperson before registration. Special research projects and/or individual readings in English, History, Humanities, Philosophy, or Religion. Students will invest no less than 20 hours for each credit earned. Enrollment is usually restricted to Honors students who have grade-point averages of at least 3.0 in courses offered by this department.

## DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Chairperson: Dr. Gary Knippenberg

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

CPS: Computer Science  
MTH: Mathematics/Statistics

The Department of Mathematics offers courses in four different program areas. These include transfer level mathematics, statistics, computer science, and developmental mathematics. In each of these areas the curriculum is designed to provide students with the opportunity to start a program of study at a level which is appropriate for their experience and educational background, and then to proceed to any level of mastery which they need or desire.

The transfer level courses parallel freshman and sophomore levels of university work in mathematics, statistics, and computer science. They are taught using a traditional lecture format. Credits earned are transferable to other colleges and universities. Many of the transfer level mathematics and statistics courses require the use of computers. Computing facilities are readily available and instruction for use of these facilities is provided as a part of these courses.

Some computer science courses are designed for students who simply want a brief introduction to the discipline. Most, however, are designed to equip students with the background in computer science necessary to continue a major in this discipline or in mathematics, science, or engineering at a four-year college or university.

The developmental mathematics curriculum includes courses in arithmetic and algebra. Each course is offered using varying instructional modes. First, each developmental course is offered in the Mathematics Laboratory. This facility allows students to proceed through their course at their own pace, working independently, but at the same time always having one-to-one instruction available from Laboratory Instructors. Some sections of the Mathematics Laboratory courses also make use of weekly group lectures. In addition, two developmental courses, MTH 012 and MTH 102, are also offered using the traditional lecture method of presentation.

To determine the proper entry level course, students are encouraged to avail themselves of the Department's Math Placement Testing Service. This free testing is provided in the Mathematics Laboratory. Students are advised to make use of this service before registering for a math course.

**COURSE DESCRIPTIONS**

Computer Science (CPS)  
Department of Mathematics and Computer Science  
Division of Arts and Sciences

**CPS 100 Introduction to Computers 4(4-0)**

This course is designed so that the computer becomes an understandable tool to the student. Introduction to and practice is provided in word processing, spread sheet applications, the programming language BASIC, and user networks. In addition, the student learns of the application of computers to society at large by considering their social and economic implications, uses of large data banks and questions of privacy and security, and recent advances in computer technology.

**CPS 110 Structured Programming in BASIC 4(4-0)**

Prerequisite: MTH 012 or Placement Test. This course is intended to provide students with a background in programming using an extended version of the language BASIC. Primary focus is on learning the language and standard methods of structured programming by writing programs. Top-down design and stepwise refinement are emphasized in algorithm development and problem solving. No previous experience in programming is required but familiarity with concepts and techniques of algebra is needed.

**CPS 150 FORTRAN 4(4-0)**

Prerequisite: MTH 165. Structured programming techniques are applied in the design of algorithms and their implementation in FORTRAN 77. Topics included are Nassi-Shneiderman designs, stepwise refinement outlines, control structures, functions and subroutines, input and output procedures, data types, arrays, and string processing.

**CPS 210 Advanced Programming in BASIC 4(4-0)**

Prerequisite: CPS 110 and MTH 165. The primary emphasis of this course is to apply the language BASIC to engineering and scientific computation. It focuses on applications of science and mathematics. Emphasis is placed on programming techniques and style; the use of extensions of standard BASIC is encouraged. Topics emphasized include files, arrays, sorting and searching, linked lists and indexed files. Computer projects related to other courses will be encouraged.

**CPS 220 Introduction to Graphics 4(4-0)**

Prerequisite: MTH 165. CPS 110 is recommended. The course is designed to develop skills in the use of computer graphics, to provide knowledge of computer graphic systems, and to familiarize students with applications of computer graphics programming. Of special interest to students in the physical and biological sciences, mathematics, engineering, and computer science.

**CPS 240 Statistical Computing in SPSSX 3(3-0)**

Prerequisite: MTH 170 or MTH 205 or equivalent. For anyone having completed at least one course in introductory statistics, this course introduces the novice user to the most commonly used features and procedures of the SPSSX statistical computing language. Topics include: fundamentals of an SPSSX job and associated files, descriptive statistics, measures of association for two-way tables, tests for equality of means, and bivariate and multiple regression analysis.

**CPS 250 Advanced Programming in FORTRAN 4(4-0)**

Prerequisite: CPS 150. Advanced programming techniques are applied in a top-down fashion to problems involving common data structures (stacks, queues, trees and other linked data structures) and file handling. Additional topics included are internal representation of data and algorithm efficiency.

**CPS 253 Pascal as a Second Language 4(4-0)**

Prerequisite: MTH 165 and previous programming experience. For the student with experience in programming in another language. Emphasizes Pascal's special features and top-down program design and implementation. Includes functions, procedures, loop structures, file handling, recursion, user defined types, sets, arrays, records, pointers, and data structures. Computer science majors cannot apply both CPS 253 and CPS 255, 256 to requirements for an Associate in Science Degree.

**CPS 255 Algorithms and PASCAL I 4(4-0)**

Prerequisite: MTH 213. This course is designed to establish an understanding of fundamental computational procedures which form a basis for continuing study in computer science. Techniques of top-down design are applied in the design of algorithms and their implementation in Pascal. Topics included are the Nassi-Shneiderman design, stepwise refinement outlines, control structures, functions, procedures, input and output operations, data types, arrays, and string processing.

**CPS 256 Algorithms and PASCAL II 4(4-0)**

Prerequisite: CPS 255. Topics included are recursion, internal representation of data, sets, records, files, dynamic variables, stacks, queues, trees and other linked data structures, and algorithm efficiency.

**CPS 260 Introduction to Discrete Structures 5(5-0)**

Prerequisite: MTH 213 and CPS 256 or CPS 250. An introduction to the logical and algebraic structures and techniques required for further study in computer science. Topics included are statement logic and proof techniques, relations, functions, directed and undirected graphs and their matrix representations, Boolean algebra and logic networks, Hamming codes, finite-state machines, recognizers and regular expressions.

**CPS 265 Assembly Language and Computer Organization (DEC/VAX) 5(5-0)**

Prerequisite: MTH 213 and CPS 250 or CPS 255. An introduction for computer science majors to machine structure, registers, and operations, as implemented on DEC/VAX minicomputers. Assembler, loader, and execution tasks are delineated. Internal mathematical representation of data and related algorithms are studied. VAX-11 Macro assembly language programming is studied to illustrate the principles behind machine-oriented language features. Macro facilities, especially for input-output operations, and subprogram linkage are emphasized.

**Mathematics (MTH)**

Department of Mathematics and Computer Science  
Division of Arts and Sciences

**Developmental Courses****MTH 095 Mathematics Laboratory No credit**

At the time of registration in a Math Lab Course, a student must register for both a specific course (such as MTH 008 or MTH 009) and a MTH 095 section. The MTH 095 section arranges the time for the student's attendance in the Mathematics Laboratory; it is not a course. The courses available in the Mathematics Laboratory include MTH 008, MTH 009, MTH 012, and MTH 102. MTH 012 and MTH 102 are also available in a lecture format which is conducted in a traditional classroom environment.

**MTH 008 Basic Arithmetic 5(0-5)**

Prerequisite: Placement Test. The course focuses on practical uses of arithmetic. Skills and practical applications with whole numbers, decimals, fractions, percents and proportions are emphasized. An introduction to measurement is presented. Work is done both with and without a calculator.

**MTH 009 Pre-Algebra 5(0-5)**

Prerequisite: MTH 008 or Placement Test. The emphasis is on those concepts and skills needed before a student begins an algebra course. Topics emphasized include operations on fractions, percents, proportions, measurement, statistical charts, and simple algebraic equations. An introduction to the Metric System is included. Word problems are emphasized with all topics. Use of a calculator is optional for checking calculations.

**MTH 012 Beginning Algebra 5(0-5)**

Prerequisite: MTH 009 or Placement Test. An introductory course in algebra covering the real number system, linear equations, polynomials, factoring, rational expressions, radicals, systems of equations, graphing and applications.

**MTH 102 Intermediate Algebra 5(0-5)**

Prerequisite: MTH 012 or Placement Test. An extension of Beginning Algebra with emphasis on functions, graphing, inequalities, polynomials, systems of equations, rational expressions, radicals, rational exponents, quadratic equations and applications.

**Transfer Level Mathematics****MTH 164 College Algebra and Trigonometry I 5(5-0)**

Prerequisite: MTH 102 or Placement Test. Topics include exponents and radicals, linear equations and inequalities, quadratic equations and inequalities, use of calculator in solving numerical problems involving logarithmic and exponential functions, matrices, systems of linear equations, complex numbers, synthetic division and theory of equations.

**MTH 165 College Algebra and Trigonometry II 5(5-0)**

Prerequisite: A grade of 2.0 or higher in MTH 164. A continuation of MTH 164. Topics included are trigonometric functions, trigonometric identities, applications, DeMoivre's Theorem, sequences, mathematical induction, combinatorics and linear programming.

**MTH 166 Finite Mathematics 5(5-0)**

Prerequisite: MTH 164. An alternate course to MTH 165 for students whose program does not require the study of trigonometry. Topics include permutations and combinations, probability, the binomial theorem, vectors and matrices, linear programming and graph theory. Business applications are emphasized.

**MTH 200 Arithmetical Foundations 5(5-0)**

Prerequisite: MTH 102 or proficiency on Placement Test. Required of all elementary pre-teachers. Included is a study of the real number system, numeration, measurement and intuitive geometry. An activity-oriented approach is emphasized using standard teaching aids.

**MTH 209 Introduction to the History of Mathematics 2(2-0)**

Prerequisite: MTH 164. 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.

**MTH 210 Introduction to the Real Number System 2(2-0)**

Prerequisite: MTH 164. The course begins by defining the real number system as "a complete ordered field" and proceeds by explaining the words "field," "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.

**MTH 211 Graphs and Mathematical Models 2(2-0)**

Prerequisite: MTH 164. Numerous "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 basic problem areas including: transportation problems, communication and critical path problems, party problems and coloring-planarity problems.

**MTH 213 Analytic Geometry and Calculus I 5(5-0)**

Prerequisite: MTH 165 or Placement Test. The concept of slope of a curve is used to motivate and introduce the derivative. Topics include: formulas for differentiation with applications to curve tracing, optimization, related rates and the solution of equations. Conic sections, the indefinite integral and the calculus of trigonometric functions are also introduced.

**MTH 214 Analytic Geometry and Calculus II 5(5-0)**

Prerequisite: Grade of 2.0 or higher in MTH 213. The concept of area under a curve is used to motivate and introduce the definite integral. The Fundamental Theorem of Calculus is proved with applications to problems involving area, volume, arc length, surface area, work, and center of mass. Methods of differentiation and integration of transcendental functions are studied.

**MTH 215 Analytic Geometry and Calculus III 5(5-0)**

Prerequisite: Grade of 2.0 or higher in MTH 214. Topics to be covered include: polar coordinates, infinite sequences, infinite series, power series, and an introduction to vectors in 2 and 3-space, and an introduction to partial derivatives.

**MTH 216 Analytic Geometry and Calculus IV 5(5-0)**

Prerequisite: Grade of 2.0 or higher in MTH 215. Topics to be covered include: the calculus of vector functions, additional applications of partial derivatives, multiple integrals and ordinary differential equations.

**MTH 234 Linear Algebra 5(5-0)**

Prerequisite: MTH 215. An introduction to Linear Algebra. Topics include systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues, eigenvectors and quadratic forms.

**MTH 236, 237, 238, 239, 240 Honors Seminars in Mathematics 2(2-0)**

Prerequisite: Departmental Approval. 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 MTH 165, and so forth. Meetings with instructors are arranged.

**Statistics**

Department of Mathematics and Computer Science  
Division of Arts and Sciences

**MTH 170 Introduction to Statistics 5(5-0)**

Prerequisite: MTH 164 or equivalent. Topics include descriptive statistics, elementary probability, estimation, confidence intervals and hypothesis test-

ing. The course is especially designed for students in curricula such as social science, political science, medical technology or human ecology where only one term of statistics is required.

**MTH 205 Statistics I** 5(5-0)

Prerequisite: MTH 165 or MTH 166 or equivalent. Topics include frequency distributions, measures of central tendency and dispersion, Chebyshev's Theorem, laws of probability, random variables, expectation, probability distributions, limit theorem, sampling distributions, estimation and confidence intervals. Computer applications using the statistical package SPSSX are included. The course is especially designed for students in curricula such as business or economics which require more than one term of statistics.

**MTH 206 Statistics II** 5(5-0)

Prerequisite: MTH 205. A continuation of MTH 205. Topics include hypothesis testing, Chi-Square testing, analysis of variance, Bayesian decision making, regression and correlation.

**SEMINARS**

Department of Mathematics and Computer Science  
Division of Arts and Sciences

**Seminars**

Each term seminars may be offered in any of the disciplines of computer science or mathematics. Each seminar has its own course code and a descriptive title which includes the designation "seminar."

Course codes, credit value and applicability toward degrees depend on the seminar content. Transferability is decided on an individual basis by the institution to which the student transfers. Information about degree credit and level of instruction will be provided at the first class meeting or in advance at the department office. In general, seminar course numbers above 200 indicate increased challenge.

**DEPARTMENT OF SCIENCE**

Chairperson: Dr. Allan Saaf

The Department of Science offers courses in a variety of disciplines, principally Biology, Physics, Chemistry, and Earth science. The following course prefixes identify various subjects among the Science Department courses in order of their appearance in the subsequent text:

- ANT: Anatomy
- AST: Astronomy
- BIO: Biology
- CEM: Chemistry
- GE: Geology
- MET: Meteorology
- MIC: Microbiology
- NS: Natural Science
- OCN: Oceanology
- PGY: Physiology
- PHY: Physics
- SC: Science Seminars and Independent Study

General education is a central part of the Science Department's effort. Courses stress understanding of broad scientific principles and emphasize the importance of scientific reasoning, careful observation, and problem solving techniques.

The instructional program of the Science Department is designed to serve three basic purposes. These are, to provide a full range of courses that fulfill general education science requirements for an Associate Degree, to develop and offer specialized courses in support of programs offered by other departments within the College, and 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**

**Anatomy (ANT)**  
Department of Science  
Division of Arts and Sciences

**ANT 151 Anatomy and Physiology I** 4(3-2)

Emphasizes the function of all systems in the human body. Study of cells, tissues, skeletal system, muscular system, nervous system and special sense organs. The first of a two-term sequence in Human Anatomy and Physiology, designed for students pursuing certain vocational programs including medical secretaries, psychology majors, dental assistants, and other programs that require a basic understanding of human systems.

**ANT 152 Anatomy and Physiology II** 4(3-2)

Prerequisite: ANT 151. A continuation of ANT 151. The course covers the circulatory, respiratory, digestive, urinary, reproductive, and endocrine systems.

**ANT 211 Human Anatomy** 5(3.5-3)

Prerequisite: BIO 101 or equivalent. 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 technology, respiratory therapy, and physical education. The structures of the skeletal, muscular, nervous, sensory, circulatory, respiratory, digestive, excretory, endocrine and reproductive systems are studied.

**Astronomy (AST)**  
Department of Science  
Division of Arts and Sciences

**AST 201 Introduction to Astronomy** 4(4-1)

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 some astronomical observations.

**Biology (BIO)**  
Department of Science  
Division of Arts and Sciences

**BIO 100 Human Nutrition** 2(2-0)

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. The chemistry and utilization of nutrients are included.

**BIO 101 Biology** 4(3-2)

Prerequisite: CEM 110 (or concurrent enrollment or passing placement test score). A course in selected biological, physical and chemical concepts which are fundamental to the understanding of human physiology and microbiology. Topics include cell structure and function, cellular chemistry, transport mechanisms, cell division, genetics, and modern gene theory.

**BIO 107 Cellular Biology** 4(3-3)

Deals with the nature of science and life processes, including cell structure, cell function, cell division, and heredity. Forms and functions of cells are related in the study of tissues. Types of microscopes and microscopy techniques are studied. Applications of statistics and probability are used in the study of genetics.

**BIO 108 Life Processes** 4(3-3)

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

**BIO 109 Principles of Ecology** 4(3-3)

This course is oriented to field investigations and laboratory study of organisms including their relation to natural environment. Taxonomy is studied when relevant to ecology.

**BIO 140 Evolution** 4(3-3)

A course in the study of evolution of life on Earth. As a background to the study of organic evolution, the origin and evolution of the universe and the planet Earth are considered. The scientific method and the scientific treatment of theories and evidence are emphasized throughout the course.

**BIO 201 Zoology I** 4(3-3)

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 mammals.

**BIO 202 Zoology II** 4(3-3)

Prerequisite: BIO 201 or department approval. Continuation of BIO 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.

- BIO 210 Issues in Conservation** 4(3-3)  
Study of natural renewable resources and their utilization through management and conservation. Topics include history of conservation, soils, water, forests, wetlands, wildlife, and the impact of humans on such renewable resources of the earth. The laboratory consists of field investigations and projects for natural resource majors or others according to interest.
- BIO 211 Foundations of Biological Science** 4(3-3)  
Prerequisite: NS 123 or equivalent college biology course; PHY 209 recommended. 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 students directly with natural phenomena including their relationships and the application of principles studied. Methodology of biological science teaching is included.
- BIO 250 Entomology** 4(3-3)  
An introduction to the study of insects that emphasizes their classification, evolution, life cycles, and behavior. External and internal structures and functions are included. 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 identification and collection of major insect groups found in Michigan.
- BIO 260 Botany** 4(3-3)  
Prerequisite: One term of biology recommended. A morphological study of plants. The course deals with plant structures and life cycles, and consideration of ontological and evolutionary development.
- BIO 262 Systematic Botany** 4(3-3)  
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.
- BIO 270 Human Genetics** 4(4-0)  
Prerequisite: BIO 101 or BIO 107 recommended. Presents general principles of genetics with specific application to the human species. Included are the implications for individuals and society. Topics include: Mendelian genetics, mitosis and meiosis, chromosome structure, sex determination and X linkage, chromosome aberrations, molecular basis of inheritance, gene mutations, genetics of immune system, cancer genes, recombinant DNA technology, and genetic screening and counseling.
- BIO 280 Histology** 5(2-6)  
Prerequisite: BIO 107 or equivalent and PGY 212 are desirable. 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.
- BIO 290 Principles of Embryology** 3(3-0)  
Prerequisite: ANT 211 recommended. 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. Students should enroll in BIO 291 concurrently.
- BIO 291 Embryology Laboratory** 3(0-6)  
Prerequisite: BIO 290 or concurrent. This course is the laboratory experience for BIO 290. It emphasizes observation of live and preserved embryos, and of 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.
- Chemistry (CEM)  
Department of Science  
Division of Arts and Sciences**
- CEM 110 Fundamentals of Chemistry I** 5(5-0)  
Prerequisite: MTH 009 or equivalent. First of three lecture courses designed to meet the needs of students who require one year of chemistry or those who require a one-term course in inorganic concepts. Introduces the principles of measurement, dimensional analysis, properties and structure of matter, nuclear chemistry, electronic structure, chemical bonding, nomenclature, solution chemistry, and acid-base ionic equilibria.
- CEM 111 Fundamentals of Chemistry II** 3(3-0)  
Prerequisite: CEM 110 and MTH 102 or equivalent. Augments concepts of the quantum mechanical description of the atom, stoichiometry and solution chemistry, and introduces further concepts in molecular geometry, chemical kinetics, chemical equilibrium, oxidation-reduction, and thermodynamics. The student should take CEM 181 concurrently.
- CEM 112 Fundamentals of Chemistry III** 3(3-0)  
Prerequisite: CEM 111. A survey of the principles of organic chemistry. Introduces the student to the structure, nomenclature, chemical and physical properties, selected characteristic preparations and reactions of the most common classes of organic compounds. Other topics include polymers, optical isomerism and selected reaction mechanisms. Students enrolled in this course should take CEM 122 concurrently.
- CEM 122 Fundamentals of Organic Chemistry Laboratory** 1(0-3)  
Prerequisites: CEM 111 and CEM 181 or equivalent. An organic chemistry laboratory course that parallels the lecture course CEM 112. The class is designed to give the student experience with techniques, equipment and chemicals commonly employed in organic laboratories. Particular attention is given to reinforcing principles through experiences which directly relate to the material presented in CEM 112.
- CEM 165 Concepts in Biochemistry** 5(4-2)  
Prerequisites: High school chemistry within past two years or CEM 110, and BIO 101 or equivalent recommended. This course is designed to provide an understanding of the chemistry of life processes. Topics include enzymes, carbohydrates, lipids, proteins, metabolic pathways, amino acids, nucleic acids, genetics, blood, and urine. Physiological and pathological applications are incorporated into the topics. Required for students pursuing nursing and several other Health Career programs.
- CEM 171 General Chemistry Lecture I** 4(4-0)  
Prerequisites: High school chemistry or CEM 110 and algebra or MTH 102. Students should enroll in CEM 181 concurrently. 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. Covers atomic and molecular structure, chemical bonding, nomenclature, stoichiometry, gas laws, solutions, phase rule, the liquid and solid states, and colloids.
- CEM 172 General Chemistry Lecture II** 3(3-0)  
Prerequisites: CEM 171 and MTH 164. Students should enroll in CEM 182 concurrently. 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 the nonmetals.
- CEM 173 General Chemistry Lecture III** 3(3-0)  
Prerequisites: CEM 172 or departmental approval. CEM 173 is the third course in the 170's lecture series. Topics include ionic equilibria, solubility product constants, and introduction to coordination chemistry, organic chemistry, biochemistry, nuclear chemistry, and fundamental particles.
- CEM 181 General Chemistry Laboratory I** 1(0-3)  
Prerequisite: Credit or concurrent enrollment in CEM 171. CEM 181 is the first in a series of three general chemistry laboratory courses which is designed to accompany the CEM 170's lecture sequence. Stresses techniques and includes a treatment of density determination, synthesis, gas laws, freezing point depression, and acid-base titrations.
- CEM 182 General Chemistry Laboratory II** 3(1-6)  
Prerequisites: Credit or concurrent enrollment in CEM 172 and credit in CEM 181. CEM 182 is the second term general chemistry laboratory with emphasis on quantitative analysis. Includes acid-base titrations, oxidation-reduction titrations, complexation titrations, spectrophotometric analysis, chemical kinetics, and gravimetric methods of analysis.
- CEM 183 General Chemistry Laboratory III** 2(0-6)  
Prerequisite: Credit or concurrent enrollment in CEM 173 and credit in CEM 182. CEM 183 is the third term general chemistry laboratory. It is a systematic qualitative analysis lab which uses semi-micro techniques to determine the presence of common cations and anions.
- CEM 241 Principles of Organic Chemistry I** 4(4-0)  
Prerequisites: CEM 172 and CEM 182 or equivalent. CEM 241 is the first lecture 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 hydrocarbons with an emphasis on nomenclature, preparation, reactions, mechanisms, and spectroscopy.

**CEM 242 Principles of Organic Chemistry II 4(4-0)**

Prerequisite: Satisfactory completion of CEM 241. CEM 242 is a continuation of Chemistry 241. Topics include aromatic compounds, alkenes, carboxylic acids and their derivatives, carbonyl compounds, and amines. Nomenclature, preparations and reactions are stressed with emphasis on synthetic and analytical applications of the reactions studied.

**CEM 243 Principles of Organic Chemistry III 3(3-0)**

Prerequisite: Satisfactory completion of CEM 242. CEM 243 is a continuation of Chemistry 242. Topics include amino acids, carbohydrates, lipids including fats and oils, and nucleic acids.

**CEM 244 Principles of Organic Chemistry Lab I 1(0-3)**

Laboratory exercises are selected to give students experience with the chemicals, techniques, and equipment commonly employed in organic laboratories, with particular attention given to compounds studied in CEM 242.

**CEM 245 Principles of Organic Chemistry Lab II 1(0-3)**

A continuation of CEM 244 with emphasis on multi-step synthesis and isolation of organic materials. Particular attention is given to compounds studied in CEM 243.

**CEM 251 Organic Chemistry I 3(3-0)**

Prerequisites: CEM 172 and CEM 182 or equivalent. CEM 251 is the first lecture course of a three-term sequence in Organic Chemistry designed primarily for chemistry majors and other students wishing rigorous preparation for advanced courses in chemistry, biochemistry, pharmacy, or other fields related to the physical sciences. Topics include structure and bonding, hybridization, nomenclature, stereochemistry, thermodynamics and kinetics of organic reactions, and functional groups, including many reactions and their mechanisms.

**CEM 252 Organic Chemistry II 3(3-0)**

Prerequisite: Satisfactory completion of CEM 251. A continuation of CEM 251. Topics include a study of conjugation and resonance, alcohols, ethers, epoxides, alkynes, aromatic compounds, and spectroscopy. Emphasis on mechanism and stereochemistry is continued.

**CEM 253 Organic Chemistry III 3(3-0)**

Prerequisite: Satisfactory completion of CEM 252. Continuation of CEM 252. Topics include aldehydes, ketones, carboxylic acids, carboxylic acid derivatives, amines, and phenols. There is a continued emphasis on mechanism, stereochemistry and spectroscopy.

**CEM 254 Organic Chemistry I Laboratory 2(0-6)**

Prerequisite: CEM 251 concurrently. CEM 254 is the first course of a three term organic laboratory sequence. Laboratory exercises are selected to give the student experience with the chemicals, techniques, and equipment commonly employed in organic laboratories. Particular attention is given to compounds studied in CEM 251.

**CEM 255 Organic Chemistry II Laboratory 2(0-6)**

Prerequisite: CEM 254 and CEM 252 concurrently. CEM 255 is the second course of a three term organic laboratory sequence. Laboratory exercises are synthesis experiments chosen to reinforce the reactions and mechanisms discussed in CEM 252.

**CEM 256 Organic Chemistry III Laboratory 2(0-6)**

Prerequisite: CEM 255 and CEM 253 concurrently. CEM 256 is the third course of a three term organic laboratory sequence. Laboratory exercises emphasize qualitative organic analysis. Identities of unknowns are established using physical properties, chemical tests, derivatives, and spectroscopic information.

**Geology (GE)**  
**Department of Science**  
**Division of Arts and Sciences**

**GE 201, 202, 203 Geology Field Studies One to Three credits**

Prerequisites: Concurrent enrollment in GE 221, 222, 223, or previous completion of an equivalent course. Field studies in geology for students concurrently enrolled in another geology course for which extensive outdoor field work is essential. Students should consult the class schedule before enrolling in a field study course.

**GE 221 Geology I 4(3-3)**

Minerals and rocks of the earth's crust; constructive and destructive forces, including volcanism, erosion by water, ice, gravity, wind and waves, and the history of geology. Laboratory consists of mineral and rock study and identification, use of topographic maps, geologic maps and field activities.

**GE 222 Geology II 4(3-3)**

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. Laboratory consists of fossil study, relative and absolute dating methods, the interpretation of paleozoic environments, and field activities.

**GE 223 Geology III 4(3-3)**

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.

**GE 224 Michigan Geology 4(3-3)**

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.

**Meteorology (MET)**  
**Department of Science**  
**Division of Arts and Sciences**

**MET 212 Introduction to Meteorology 4(2-4)**

Prerequisite: NS 121. 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 are emphasized.

**Microbiology (MIC)**  
**Department of Science**  
**Division of Arts and Sciences**

**MIC 203 Microbiology 4(3-3)**

Prerequisite: BIO 101 or equivalent. An introductory study of the history of microbiology and classification of rickettsia, 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.

**Natural Science (NS)**  
**Department of Science**  
**Division of Arts and Sciences**

A three-course sequence in Natural Science designed to acquaint the student with fundamental scientific principles which govern the world around us. Scientific method and science reasoning are emphasized in order to provide clear definition of science and its limitations, and to enable the student distinguish between science and non-science.

**NS 121 The Physical World 4(3-3)**

Introduces the fundamental laws, theories, and principles of chemistry at physics. Includes such topics as kinetic, atomic and molecular theory at problems of the physical environment. One year of high school algebra or M1012 is recommended.

**NS 122 Rocks and Stars 4(3-3)**

Topics include an introduction to astronomy and the Solar System; minerals and rocks, geological processes, plate tectonics, and environmental geology.

**NS 123 Living World 4(3-3)**

Provides students with a basic understanding of the structure and function Earth's ecosystems, the importance of preserving them, and the value of natural populations that depend on them. Through lab exercises, tape-slides, modules, computer programs, textbook readings, films and lectures, students explore the beauty and diversity of life on Earth.

**Oceanology (OCN)**  
**Department of Science**  
**Division of Arts and Sciences**

**OCN 225 Basic Oceanology and Limnology 4(4-4)**

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.

**Physiology (PGY)**  
Department of Science  
Division of Arts and Sciences

**PGY 212 Human Physiology 5(5-0)**

Prerequisite: ANT 211 and BIO 101 or department approval. The physiology of the 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.

**Physics (PHY)**  
Department of Science  
Division of Arts and Sciences

**PHY 191 Physics for the Life Sciences 5(5-0)**

Prerequisite: Intermediate algebra or department approval. A one-term course in general physics designed to fulfill the physics requirement for certain Life Science and Health Career programs. Topics include force, motion, and energy; conservation laws, fluid pressures and flow; and wave phenomena, including sound and light. This course may not be taken in place of a full year of physics; nor does it satisfy any other general physics requirement unless prior approval is obtained.

**PHY 201 Physics (Mechanics and Heat) 4(4-2)**

Prerequisite: MTH 165 or equivalent recommended. 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 translational motion and equilibrium and their relation to force, work, energy, and power) as they are applied to solid bodies. Also includes the principles of heat and thermodynamics and their relationship to the operation of engines. It also includes consideration of rotational motion and equilibrium, heat, and thermodynamics.

**PHY 202 Physics (Electricity, Magnetism and Wave Motion) 4(4-2)**

Prerequisite: PHY 201 or approval of department. Designed to describe the electrical and magnetic nature of matter. Electrostatics, electricity, magnetism, DC and AC circuits are investigated.

**PHY 203 Physics (Optics and Modern Physics) 4(4-2)**

Prerequisite: PHY 201 or MTH 165. A course in modern physics. Included are topics concerning wave phenomena, geometrical and physical optics, relativity, and atomic, molecular, and nuclear structure.

**PHY 209 Foundations of Physical Science 4(2-4)**

Prerequisite: NS 121 or equivalent. 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 is included.

**PHY 215 General Physics I Lecture (Mechanics) 4(5-0)**

Prerequisite: Calculus I or its equivalent, or approval of department. Provides an introduction to the static and dynamic behavior of solids and fluids, using calculus extensively. The first in a series of three lecture courses designed for science and engineering majors. Students should enroll in PHY 225 (Physics I Lab) concurrently.

**PHY 216 General Physics II Lecture (Electricity and Magnetism) 4(5-0)**

Prerequisite: PHY 215 and Calculus II, or approval of department. Provides an introduction to the basic principles of electricity and magnetism, using calculus extensively. The second of three lecture courses designed for physical science and engineering majors. Students should enroll in PHY 226 (Physics II Lab) concurrently.

**PHY 217 General Physics III Lecture (Optics and Modern Physics) 4(5-0)**

Prerequisite: PHY 216 and Calculus III, or approval of department. The third of three lecture courses designed for science and engineering majors. Topics include geometric and physical optics and modern physics topics such as atomic and nuclear phenomena, relativity, solid state physics, and quantum physics. Students should enroll in PHY 227 (Physics III Lab) concurrently.

**PHY 225 General Physics I Lab 1(0-2)**

Laboratory topics in mechanics, which complement the lecture course PHY 215. Students should take 215 and 225 concurrently.

**PHY 226 General Physics II Lab 1(0-2)**

Laboratory topics in electricity and magnetism, which complement the lecture course PHY 216. Students should take 216 and 226 concurrently.

**PHY 227 General Physics III Lab 1(0-2)**

Laboratory topics in optics and modern physics, which complement the lecture course PHY 217. Students should take 217 and 227 concurrently.

**SEMINARS**  
Department of Science  
Division of Arts and Sciences

Seminars are developed from many areas within the natural science disciplines. Each seminar has its own course code and a descriptive title which includes the designation "seminar." Course codes, credit value and applicability toward degrees depend on the seminar content. Transferability is decided on an individual basis by the institution to which the student transfers. Information about degree credit and level of instruction may be obtained at the first class meeting or in advance from the department office.

**INDEPENDENT STUDY**  
Department of Science  
Division of Arts and Sciences

**SC 297, 298, 299 Independent Study Credits variable, one to three**

Prerequisite: Arrangement with an instructor and approval by the Department Chairperson before registration. Special study, field work, or laboratory work in specific science topics such as geology, astronomy, physiology, chemistry, physics, ecology, zoology, or other natural sciences. 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 as arranged.

## DEPARTMENT OF SOCIAL SCIENCE

Chairperson: Dr. William H. Heater

The Department of Social Science offers courses under the following course codes:

SS: Basic Social Science  
CD: Child Development  
ED: Education  
GEO: Geography  
HUS: Human Services  
PLS: Political Science  
PSY: Psychology  
PS: Public Service  
SA: Sociology/Anthropology  
SW: Social Work

Social Science includes the fields of education, geography, psychology, sociology, anthropology, economics, political science, government, and 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 begin their preparation by majoring in this department. Several courses are designed to meet specific requirements of majors in other areas.

For Associate degrees in Arts and Sciences the student is required to take a core of at least 12 credits in Social Science.

The 12 required credits in Social Science must include either SS 103, Social Science III; SS 104, American Government; or SS 105, State-Local Government. Any of these will satisfy the requirement of one course in government.

The remaining eight credits may be selected from any two of the following: SS 101, 102, PSY 200 or GEO 201. PSY 200 and GEO 201 cannot be used as core general education courses for psychology or geography majors respectively.

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 may be taken in any order, though the numbered sequence is recommended.

The Social Science Department also includes the Human Services Program, a two-year curriculum which provides skills needed for certain human service careers and also basic requirements for transfer to four-year colleges. Courses may be taken separately by people who are already employed in human services and want to upgrade their knowledge and skills. Courses with the following codes are career training courses which belong to the Human Services Program but do not apply toward the 12 credits required for the Associate Degree in Arts and Sciences: CD, ED, HUS, PS, and SW.

### COURSE DESCRIPTIONS

**Basic Social Science (SS)**  
Department of Social Science  
Division of Arts and Sciences

**SS 101 Introduction to Social Science I 4(4-0)**

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.



- SS 102 Introduction to Social Science II** 4(4-0)  
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.
- SS 103 Introduction to Social Science III** 4(4-0)  
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.
- SS 104 American Government** 4(4-0)  
An analysis of the American political system. Emphasizes federal and state systems, with special attention given to American democracy from local to national levels.
- SS 105 State and Local Government** 4(4-0)  
A study of state and local governmental activities, their structures, functions, and methods of organizing resources and making policy. Consideration is given to the relationship between governmental units and the problems they confront, including relations between federal, state and local government.
- SS 112 Honors Section of Introduction to Social Science II** 4(4-0)  
Prerequisite: Invitation only. Same as SS 102; 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.
- SS 113 Honors Section of Introduction to Social Science III** 4(4-0)  
Prerequisite: Invitation only. 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.
- Child Development (CD)**  
Department of Social Science  
Division of Arts and Sciences
- CD 101 Infants and Toddlers, 0 to 2½ Years** 2(2-0)  
Deals with the physiological and physical growth patterns, nutritional requirements, emotional, social, and cognitive skills of children, 0-2½ years. Prepares individuals for caring for the child at home or in a child-care setting. Includes discussion of the relative influences of genetics and environment on growth, the relationship of the development of the body systems to the child's nutritional status and the acquisition of skills in recognizing, recording, and interpreting child behavior.
- CD 102 Infant and Toddler Laboratory** 2(0-4)  
Prerequisite: Instructor approval. A supervised laboratory situation in which students have opportunity to work directly with infants/toddlers four hours per week. Emphasis is on application of development information and care-giving skills discussed in CD 101.
- CD 110 Introduction to CDA Credentials** 4(2-8)  
Prerequisite: Instructor approval. This course will examine the Child Development Associate (CDA) Credential, the Credential award system; and explore ways the student can meet the CDA competency standards, and provide assistance in beginning the credentialing process through course work and supervised field experience.
- CD 121 The Preschool Child, 2½-6 Years** 4(4-0)  
Physiological and physical growth patterns, nutritional requirements, and emotional, social and cognitive skills of children, 2½-6 years. This would include: relative influences of genetics and environment on growth; the relationship of the development of the body systems to the nutritional status of the child; acquisition of skills in recognizing, recording, and interpreting child behavior. This course partially addresses the first and third competencies as stated in the CDA Competency Standards.
- CD 280 Preschool Administration** 3(3-0)  
Analysis of the administrator's role in menu planning, preparation and serving of food for infants, toddlers, and preschool children; application of philosophy, communication, and business techniques necessary to operate an early childhood education program; acquisition of knowledge about safety, licensing, and health regulations. This course addresses the sixth competency as stated in the CDA Competency Standards.
- CD 281 Preschoolers with Special Needs** 4(4-0)  
This course addresses the special needs of preschool children including various categories of exceptionality, mainstreaming, play skill development and

working with parents. A portion of competency three, as stated in the CDA Competency Standards, is covered in this course.

- CD 282 Curriculum Development** 4(2-4)  
CD 121 recommended. This course centers on curriculum development that will encourage physical and intellectual development including the following areas: gross and fine motor skills, sense development, science, health, language, and creativity. This course, which includes field observation, specifically addresses the second competency as stated in the CDA Competency Standards.
- CD 283 Preschool Learning Environment** 4(2-4)  
CD 121 recommended. This course focuses on the physical and social learning environment of the preschool child including safe and healthy learning environments, guidance techniques, interaction with parents, and interaction skills with early childhood staff members. This course, which includes field observation, specifically addresses the first, fourth, and fifth competencies as stated in the CDA Competency Standards.

**Education (ED)**  
Department of Social Science  
Division of Arts and Sciences

- ED 101 Curriculum Reinforcement I** 3(3-0)  
Role orientation of the teacher aide as a significant person in the reinforcement of the school curriculum. Includes introduction to audio-visual materials, school records, safety, discipline, permissible first aid, and techniques of assisting teachers through dramatic play and story telling.
- ED 102 Curriculum Reinforcement II** 4(4-0)  
Prerequisite: ED 101. Methods of assisting an elementary teacher in math, reading, evaluation, home visits, parent-teacher conferences, art techniques, and classroom songs and games.
- ED 150 Introduction to Education** 3(3-0)  
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.

**Geography (GEO)**  
Department of Social Science  
Division of Arts and Sciences

- GEO 101 Principles of Geography** 4(4-0)  
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 effects on human life. Includes mapping techniques, land site analysis, and air-photo interpretation. Field trips will be an integral part of the course.
- GEO 201 World Regional Geography** 4(4-0)  
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.
- GEO 202 Geography of North America** 3(3-0)  
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.
- GEO 203 Economic Geography** 3(3-0)  
Study of geographic distribution 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.

**Human Services (HUS)**  
Department of Social Science  
Division of Arts and Sciences

- HUS 101 Introduction to Human Services** 4(4-0)  
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.

- HUS 102 Introduction to Mental Health** 3(3-0)  
This course will provide the student with an overview of the field of Mental Health with an emphasis on a historical review; psycho-social stages of development; definition of mental illness, causes and treatment; prevention; current service delivery systems; and the role of the Mental Health Associate.
- HUS 103 Introduction to Domestic Violence** 3(3-0)  
This course is designed to provide an overview of the historical, socioeconomic, cultural, and psychological factors related to domestic violence.
- HUS 104 Introduction to Child Advocacy** 4(4-0)  
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)
- HUS 105 Introduction to Mental Retardation** 4(4-0)  
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.
- HUS 110 Introduction to Child Abuse/Neglect** 3(3-0)  
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.
- HUS 203 Skills and Methods of Human Services** 4(4-0)  
Prerequisite: SS 101 or HUS 101. 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.
- HUS 205 Personal Dimensions of Human Services** 4(4-0)  
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."
- HUS 207 Group Process Skills** 4(4-0)  
Prerequisite: HUS 101 or SW 101. Introduction to the concepts, principles, goals and skills of social group work as a method of human service. Emphasis is upon the introduction of basic practice skills and intervention techniques within a framework of beginning theoretical knowledge.
- HUS 212 Family Treatment-Child Abuse/Neglect** 3(3-0)  
This course will address the special problems encountered working as a professional, paraprofessional 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 work attrition in the field of abuse and neglect, its cause, and some individual and agency solutions to the problem.
- HUS 214 Practicum I** 3(0-12)  
Prerequisite: Department approval. 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. A concurrent classroom seminar, HUS 217, serves to integrate field experience with theoretical concepts and principles of human service.
- HUS 215 Practicum II** 3(0-12)  
Prerequisite: HUS 214. A continuation of HUS 214. A concurrent seminar, HUS 218, serves to integrate field experience with theoretical concepts and principles.
- HUS 216 Practicum III** 3(0-12)  
Prerequisite: HUS 215. A continuation of HUS 215. A concurrent seminar, HUS 219, serves to integrate field experience with theoretical concepts and principles.
- HUS 217 Organizational Systems** 2(2-0)  
Prerequisite: HUS 214 concurrently. 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.
- HUS 218 Service Delivery Skills** 2(2-0)  
Prerequisite: HUS 215 concurrently. 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.
- HUS 219 Employment Readiness** 2(2-0)  
Prerequisite: HUS 216 concurrently. 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 the state certification.
- Political Science (PLS)**  
Department of Social Science  
Division of Arts and Sciences
- PLS 150 American Political Parties and Elections** 3(3-0)  
Deals with the origins, structures 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.
- PLS 200 Introduction to Political Behavior** 4(4-0)  
Introduction to theories, concepts and methods of political science with emphasis on the functions of political institutions and behavior of political action.
- PLS 207 Government Internship** 4(1-12)  
Prerequisite: Department approval. 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.
- PLS 210 Contemporary Political Affairs** 3(3-0)  
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.
- PLS 260 Introduction to Comparative Government** 4(4-0)  
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.
- PLS 271 International Relations** 4(4-0)  
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.
- PLS 280 Introduction to the Politics and Government of Japan** 4(4-0)  
Prerequisite: Department approval. An introduction to the Japanese governmental structures and political process, with emphasis on the unique characteristics of Japanese political culture, Japanese style of decision-making, and Japanese concepts of democracy.
- Psychology (PSY)**  
Department of Social Science  
Division of Arts and Sciences
- PSY 151 Business Psychology** 3(3-0)  
Will apply principles of psychology to the work environment and those aspects of daily living which influence work. A major emphasis will be in developing knowledge and behavioral skills required in the process of communicating effectively while at work. Other topics include: needs, attitude change, problem solving, learning, assertive behavior, and working in groups.
- PSY 153 Psychology for Health Careers** 3(3-0)  
A course designed for students in the health careers who must use psychology in the areas of effective interpersonal communication, helping relationships, death and dying, and interacting with special populations such as children, the aged, and the physically and emotionally disabled.
- PSY 200 Introductory Psychology: Social-Individual Behavior** 4(4-0)  
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.
- PSY 201 Introduction to Psychology: Principles and Methods** 4(4-0)  
Prerequisite: PSY 200 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.

**PSY 202 Psychology of Personality 4(4-0)**

Prerequisite: PSY 200. 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.

**PSY 203 Introduction to Social Psychology 4(4-0)**

Prerequisites: PSY 200 and SS 101. 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.

**PSY 204 Educational Psychology 4(4-0)**

Prerequisite: PSY 200. 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.

**PSY 205 Human Growth and Development 4(4-0)**

Prerequisite: PSY 200. 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.

**PSY 221 Child Psychology 4(4-0)**

Prerequisite: PSY 200. Explores theories and principles of child development from conception to puberty. The course covers psychological, sociological, and biological aspects of maturation and development.

**PSY 222 Adolescent Psychology 4(4-0)**

Prerequisite: PSY 200. Examines theoretical and empirical literature related to adolescence, emphasizing biological, psychological, and sociological aspects of maturation and development from puberty to young adulthood.

**PSY 250 Abnormal Psychology 4(4-0)**

Prerequisite: PSY 200. 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.

**Public Service (PS)  
Department of Social Science  
Division of Arts and Sciences**

**PS 201 Fundamentals of Public Administration 4(4-0)**

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.

**PS 231 Staff Roles and Relations in Substance Abuse 2(2-0)**

Includes present funding sources and staffing patterns for substance abuse agencies. Points of conflict within and among agencies are addressed.

**Sociology/Anthropology (SA)  
Department of Social Science  
Division of Arts and Sciences**

**SA 179 Introduction to Japan 2(2-0)**

Prerequisite: Department approval. An overview of Japan's physical, social, political and economic settings as they determine the way of life of Japanese people. The course includes a practical guidance in relating to Japanese customs.

**SA 200 Principles of Sociology 4(4-0)**

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.

**SA 210 Introduction to Research Methods in Social Science 4(4-0)**

Prerequisite: SS 101. 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.

**SA 230 Introduction to Substance Abuse 4(4-0)**

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.

**SA 254 Men, Women and Change 4(4-0)**

Prerequisite: SS 101 or PSY 200. A study of the changes in society over the past century in terms of their dramatic impact on sexual relationships, marriage, and family life. Course includes sex roles, sexual behavior, values, psychological needs, divorce, and parenting.

**SA 255 Contemporary Social Problems 4(4-0)**

Prerequisite: SS 101. Consideration of current social problems form 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.

**SA 260 Minority Groups 4(4-0)**

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.

**SA 270 Introduction to Cultural Anthropology 4(4-0)**

Prerequisite: SS 101. 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.

**SA 275 Introduction to Physical Anthropology and Archeology 4(4-0)**

Introduces human biological and cultural evolution; mechanisms of evolution; human origins, biological and cultural evidence from fossil record; behavior among other animals and development of human culture; culture as an adaptive mechanism; and modern human variation.

**SA 280 Introduction to the Society and Economy of Japan 4(4-0)**

Prerequisite: Department approval. An introduction to two main aspects of contemporary Japan: the Japanese way of life in its cultural context, and the Japanese economic system. Emphasis is on the unique features of the economic behavior of the people in terms of Japanese values, belief systems and cultural background.

**Social Work (SW)  
Department of Social Science  
Division of Arts and Sciences**

(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.)

**SW 101 Introduction to Social Work 4(4-0)**

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, and overview of social issues and client needs relative to social work practice.

**SW 203 Social Work Interviewing 4(4-0)**

Prerequisite: HUS 101 or SW 101. 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 videotaping and feedback.

**SW 205 Social Welfare 3(3-0)**

Prerequisite: SW 101. 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.

**SW 209 Community Organization 3(3-0)**

Prerequisite: SW 101 or HUS 101. 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.

**SW 230 Substance Abuse: Addiction and Treatment 3(3-0)**

Covers the addiction cycle of alcoholics and drug abusers, personality and interactional patterns of addiction, and casework and group work techniques.

**SW 231 Substance Abuse Agencies and Treatment Modalities 3(3-0)**

A review and analysis of current models of treatment within programs. Includes review of inpatient, outpatient, Halfway Houses, and occupational programs.

**SEMINARS**

Department of Social Science  
Division of Arts and Sciences

Each term seminars may be offered in any of the disciplines of political science, psychology, geography, sociology/anthropology or human services. Each seminar has its own course code and a descriptive title which includes the designation "seminar."

Course codes, credit value and applicability toward degrees depend on the seminar content. Transferability is decided on an individual basis by the institution to which the student transfers. Information about degree credit and level of instruction will be provided at the first class meeting or in advance at the department office. In general, seminar course numbers above 200 indicate increased challenge.

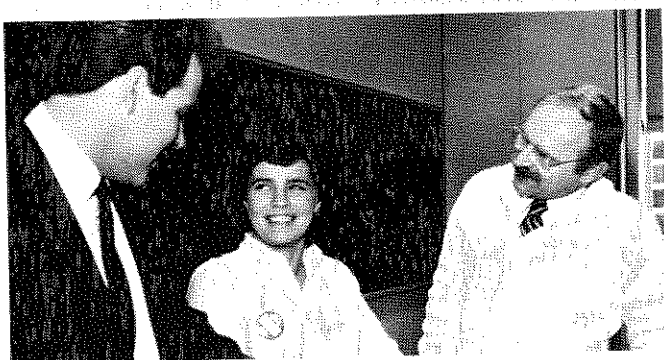
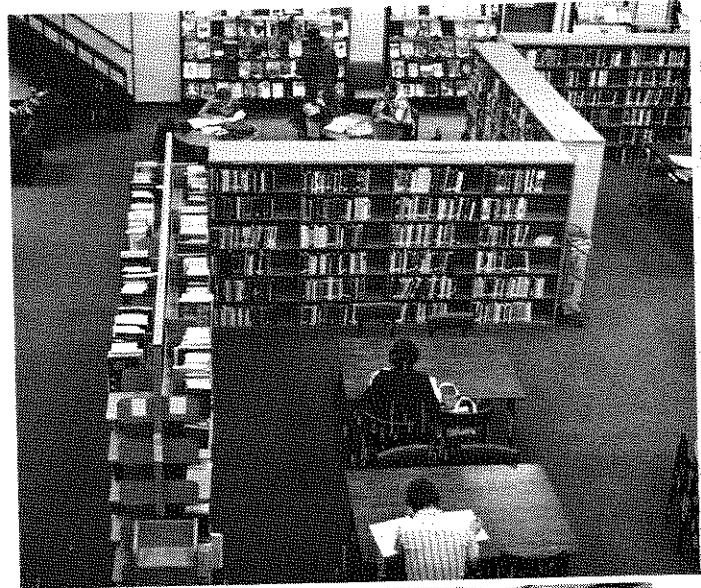
**INDEPENDENT STUDY**

Department of Social Science  
Division of Arts and Sciences

**Credits variable, two to four**

Credit for independent study is available for special projects involving research, reading, or field experiences in any subject area. 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.







## Lansing Community College



Dean James Person



# DIVISION OF BUSINESS



Accounting and Office Systems  
Computer Applications and Software Systems  
Criminal Justice Systems  
Hospitality Systems  
Management Development Center  
Management Systems

## DIVISION OF BUSINESS

James E. Person, Dean

### Goals

Consistent with the overall goals of the College, the Division of Business seeks to facilitate the growth of individuals as productive members of a business organization and of the society in which the organization is found. To achieve such growth, the Division offers instructional programs ranging from those providing instruction in the fundamentals of business operations to those providing means for acquiring more advanced business skills. Within this range, all courses offered will produce credit applicable either toward the requirements for a certificate or degree issued by the College or toward a baccalaureate degree issued by a four-year college when the credit is transferred to such an institution.

As a means of assuring the applicability of such credits, the Division of Business utilizes the services of a wide variety of advisory committees. The membership of these committees is comprised of leaders in occupational career fields. These advisory committees assist the Division in planning programs to meet the needs of businesses, industries, educational institutions, labor organizations, and governmental agencies for the development and training of their personnel.

In respect to the instructional methodologies and processes used by the Division of Business, the faculty has a basic commitment to:

1. provide pre-professional and career-oriented students a personalized process of instruction,
2. maintain constant evaluation and assessment of themselves and their instructional methodologies in terms of student needs,
3. structure and focus all educational subject matter around a career development theme so that such subject matter is meaningful and relevant to the student,
4. provide all persons completing a program of the Division with the knowledge and skills necessary to (a) enter the labor market with a marketable skill, to (b) be up-graded and up-dated in their chosen field of work, or to (c) prepare them for pursuing further education,
5. provide an instructional system which utilizes and coordinates its activities with the resources of the business, industrial, and governmental communities in the service area of the College,
6. provide or assure the availability to all its students the guidance, counseling, and instruction needed by them to develop self-direction, to expand occupational awareness and aspirations, and to develop an understanding of the personal and social significance of work,
7. provide articulation services to each student so that he or she will know the next step toward personal development whether it be employment, further education, or re-entry into an educational program from the world of work.

### Curriculum Guides

Curricular guides for each program offered by the Division are available in the counseling offices and in the offices of the respective program directors. These guides may be modified sometimes by an advisor or a director of a program for a particular student if warranted in terms of the student's background, abilities, and goals.

Prospective students should be aware that they may enroll in a single course or in a combination of selected courses from several programs without committing themselves to the completion of requirements for a certificate or degree. Also, they should be aware that some courses are required for the completion of some programs and permitted as an elective for the completion of other programs. For these reasons all students should consult with a counselor, advisor, or instructor if they are unsure about their educational objectives.

### Occupational/Career Fields and Positions in Business

The following list includes the names of some occupational fields as well as some job positions. The Division of Business offers education and training for each of the listed fields and positions.

Accounting	Labor Relations Personnel
Accounting/Data Processing	Law Enforcement
Administrative Assistant	Legal Assistant
Banking	Legal Secretary
Computer Applications Systems	Management
Computer Operations	Marketing and Sales
Computer Programming	Medical Secretary
Computer Software Systems	Medical Transcriptionist
Computer Systems Analyst	Property Assessment
Corrections	Real Estate
Court Reporting	Registered Chef
Credit Union Operations	Secretary
Data Entry	Security
Food Specialist	Small Business Management
General Clerical	Stenographer
Hotel-Motel Management	Transportation Management
Insurance	Travel Agency
International Business	Word Processing

### Programs Offered

Transfer Programs for Business. 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. As stated in the objectives previously listed, an important function of the Business Division is serving the educational and training needs of local business, industrial, labor, and governmental organizations. To fulfill this function, the Division provides a variety of courses and seminars to retrain employees or to upgrade their skills. Within reasonable limits, the Division stands ready to tailor courses or programs to meet the needs of these organizations. Also, the courses or programs may be developed for single or multiple sessions, depending on the needs of the students to be served.

Cooperative Internship Program. A Cooperative Internship is an on-the-job work experience coupled with individual conferences and with college personnel for coordinated and integrated instruction in theory and related areas. The student works part time in business or industry to gain actual experience in a chosen vocational field. With the work place of business, industry, and government serving as laboratories staffed with highly competent supervisors cooperating with the College and its Coordinators, an individual curriculum may be developed for almost any type of position that students or business, governmental, industrial or labor organizations.

One of the greatest attributes of the internship to a student is that it can develop occupational competency at the skilled or semi-professional level leading to jobs which represent the most rapid growth area of employment in our economy. Also, the combination of theory and actual practice has proven to increase motivation of students, and provides excellent training in human relations. In addition, an 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. Finally, the student usually gains a broader and more meaningful appreciation of the practical value of the student's total academic endeavors.

Placement for this training is made through the internship coordinator who makes special arrangements for each student in terms of the student's interests and aptitudes. The student will receive course credit and usually a wage for time spent at work. Students may average fifteen or more work hours per week with the wage rate per hour comparable to that of workers in like positions.

To qualify for job placement, students must be able to secure program area approval through the Coordinator and have completed the necessary basic courses for job entry. The areas of employment are wide and varied and these offer challenging opportunities to those students with initiative, interest and skill.

## Accounting and Office Systems Division of Business

Dr. Ronald K. Edwards, Chairperson

The programs of Accounting and Office Systems are based on the basic belief that each student brings a unique combination of educational needs, abilities, and motivations. Ongoing research and innovative methods are used to present the most current information in a variety of programs. A policy of the Program Area is to maintain small class sizes for traditional teaching, and to provide individualized/self-paced instruction for alternative styles of learning. Each method provides the opportunity for maximum student-teacher contact in the learning situation.

### Objectives of Programs and Instructional Methods Used

Accounting and Office Systems is dedicated to programs providing the opportunity for quality, college-level education in which each course has updating/upgrading objectives, and each program leads to specific employment or transfer to four-year institutions.

Objectives. The specific objectives of Accounting and Office Systems reflect the objectives of the Business Division and Lansing Community College as a whole. They are:

1. to maintain a personalized process of instruction that emphasizes learning and helps to develop integrity, loyalty, and dependability in the students' lives and in meeting future job responsibilities.
2. 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.
3. 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.

**Curriculum Guides.** General curricular guides for each program offered by Accounting and Office Systems are available in the counseling offices and the Chairperson's office; however, guides are frequently modified to accommodate an individual student's background, goals, and abilities. The student

is encouraged to discuss unique situations with an academic advisor within Accounting and Office Systems.

**Instructional Methods.** Accounting and Office Systems has developed a system of instruction known as audio-visual-tutorial instruction which provides the opportunity for learning on an individual basis with continuous assistance and 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 audio-visual-tutorial system of instruction, was designed to replace the traditional classroom by programming instruction and demonstrations on audio-visual media such as 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 designation "AVT."

#### Accounting Programs

##### Certificate Program

Curriculum Code: 405 Minimum 45 credits

The curriculum for the accounting certificate is designed for students desiring to rapidly acquire those skills for entrance into paraprofessional levels of accounting employment such as those of account clerks, cashiers, and bookkeepers.

##### Associate Degree Program

Curriculum Code: 410 Minimum 90 credits

The two-year (90 credit) 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 of this program is designed to help the student develop habits of critical and 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 many levels of accounting positions.

##### Pre-Accounting Transfer

Curriculum Code: 412 Minimum 90 credits

The pre-accounting transfer curriculum is designed for students preparing to transfer to four-year institutions. Since the requirements vary for different four-year institutions, students should check with the program area for specific course requirements at these institutions.

##### Accounting/Data Processing Program

Curriculum Code: 411 Minimum 105 credits

The accounting/data processing curriculum offers, in an associate degree program, the opportunity to have two full majors, one in accounting and one in data processing. Completion of this program will enable the student to seek a position in accounting or a position in data processing or a position which requires substantial knowledge in both areas. This provides the student with a great amount of flexibility in a rapidly changing business environment.

##### Court and Conference Reporting Program

Associate Degree Program for Court and Conference Reporting  
Curriculum Code: 415 Minimum 90 credits

The two-year court and conference reporting program, which is offered in two regular school years and the summer months between those 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, hearings reporters, legislative reporters and general free-lance reporters. The program provides instruction in machine shorthand and helps develop the skill necessary for verbatim reporting. In addition, the program provides instruction in the legal, medical, and other technical vocabularies and essential information for success on the job. The program begins each fall and spring term.

##### Insurance - Chartered Life Underwriter Program

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.

##### Associate Degree in General Business Program

Curriculum Code: 401 Minimum 90 credits

While students are encouraged to choose a particular major, some seem unable or reluctant to make a choice and seem to need an opportunity to sample different areas of business. The general business degree program offers a two-year associate degree with courses selected from accounting, business law, economics, office occupations, management, marketing, and labor relations, as well as some from the liberal arts areas of study.

##### Credit Union Management Program

In cooperation with the Michigan Credit Union League, Lansing Community College is offering courses leading to the Credit Union Certificate and the Certified Credit Union Executive designations.

##### General Clerical Program

Certificate Program  
Curriculum Code: 420 Minimum 45 credits

The one-year general clerical program is designed for those students who want 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 Program

Associate Degree Program  
Curriculum Code: 425 Minimum 90 credits

The administrative assistant curriculum offers opportunities for those persons who want responsible office positions in other than the stenographic areas. Successful graduates of the program are equipped to handle efficiently the functions in most offices. 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)

##### Legal Assistant Program

Associate Degree Program  
Curriculum Code: 442 Minimum 90 credits

A legal assistant is a paraprofessional who will work under the supervision of a lawyer performing many duties from office management to preparing case materials for trial. The majority of the graduates will seek employment with legal firms. Opportunities also exist in banks, real estate offices, welfare offices, credit and collection agencies, 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 Program

Associate Degree Program  
Curriculum Code: 400 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 method, and audio-visual-tutorial instruction.

##### Medical Secretary Program

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 Program

Certificate Program  
Curriculum Code: 423 Minimum 45 credits

The medical transcriptionist program combines medical terminology knowledge with typing skills and office procedures to prepare the student for a transcriptionist's position in a medical office, hospital, clinic, extended care facility, or other health related institution.

##### Executive Secretarial Program

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, and audio-visual-tutorial instruction.

#### Stenographic Program

Certificate Program

Curriculum Code: 430

Minimum 45 credits

This 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, and audio-visual-tutorial instruction.

#### Information/Word Processing Program

Associate Degree Program

Curriculum Code: 418

Minimum 90 credits

Word processing has been developed by businesses to improve the effectiveness and efficiency of their communications. The two-year information/word processing program prepares the individual with the skills of the word processor in typewriting, machine transcription and using advanced automated word processing equipment. In addition, sufficient background in related areas of business are provided so that the graduate may meet the needs of modern business and accept the opportunities provided in this exciting field. Varied teaching techniques are used including classroom lectures, and audio-visual-tutorial courses.

#### Information/Word Processing Program

Certificate Program

Curriculum Code: 419

Minimum 45 credits

The one-year certificate program is designed for those individuals who want to develop entry-level, employable skill levels in typewriting, machine transcription, and automated word processing equipment. The word processor produces letters, reports, and other typewritten documents from hard copy and dictation. Varied teaching techniques are used including classroom lecture, and audio-visual-tutorial courses.

Courses Offered in Accounting (ACC) by Accounting and Office Systems —by Course Number, Title, Credits Allowed, and Description.

#### ACC 100 Practical Accounting for Non-Majors 4(4-0)

Emphasis is on accounting terminology, journalizing, and posting economic information, trial balance preparation, payroll, preparation and posting accounts receivable and payable. This course is recommended for students who do not plan to transfer to a four-year institution or who do not plan to take additional accounting courses.

#### ACC 101 Accounting Information for Management 4(4-0)

This course is intended for general management students who do not plan to transfer to a four-year institution. Its emphasis is on accounting terminology, and the use of accounting information for decision making. Topics covered include financial statement analysis, budgeting, and decision making.

#### ACC 140 Individual Income Tax 4(4-0)

This is a basic course designed to give the skills and knowledge necessary to complete and file all returns required of individual income tax taxpayers. Course covers the basic concepts and terminology required for working with the federal, state, and local tax regulations pertaining to individuals. The course includes practical experience in filling out all common individual tax forms and schedules.

#### ACC 210 Principles of Accounting I (AVT) 4(0-8)

This course provides instruction 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.

#### ACC 211 Principles of Accounting II (AVT) 4(0-8)

Prerequisite: ACC 210. This course is a continuation of Accounting 210. Topics covered include payroll and tax accounting, controlling accounts and subsidiary ledgers, accounting systems and internal control, the voucher system, partnerships, corporations, and bonds.

#### ACC 212 Principles of Accounting III 4(4-0)

Prerequisite: ACC 211. This course is a continuation of accounting 211. Topics covered include analysis and comparison of financial statements, branch

accounts, manufacturing companies, cost accounting, budgeting, and sources and application of funds.

#### ACC 220 Intermediate Accounting I 4(4-0)

Prerequisite: ACC 212. This course provides instruction in the balance sheet; income and retained earnings statements; in-depth review of the accounting cycle and theory, cash and temporary investments; receivables; current liabilities, and present value of assets.

#### ACC 221 Intermediate Accounting II 4(4-0)

Prerequisite: ACC 220. Topics to be covered in this course include inventories, operational assets, and stockholder's equity.

#### ACC 222 Intermediate Accounting III 4(4-0)

Prerequisite: ACC 221. This course is a continuation of ACC 221. Topics to be studied include long-term liabilities, long-term investments, leases, pensions, sources and applications of funds, and financial statement analysis.

#### ACC 230 Cost Accounting I 4(4-0)

Prerequisite: ACC 212. This course will provide an explanation of the cost accountant's role in a business organization. It will stress the objectives of planning and controlling routine operations, decision making, inventory valuation, and income determination. Other topics to be 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.

#### ACC 231 Cost Accounting II 4(4-0)

Prerequisite: ACC 230. This course emphasizes long-range planning, goal setting, and non-routine decision making. Topics to be included are 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.

#### ACC 240 Federal Taxes I 4(4-0)

Prerequisite: ACC 212. This course deals with all aspects of federal income taxes pertaining to individuals. Topics include gross income, adjustments from gross income, and itemized deductions. Other topics include basis of assets, capital gains and losses, and various special topics.

#### ACC 241 Federal Taxes II 4(4-0)

Prerequisite: ACC 240. This course is an in-depth study of federal tax laws relating to business and professional organizations. Special topics to be included are partnerships, subchapter S corporations, and estates and trusts.

#### ACC 250 Advanced Accounting 4(4-0)

Prerequisite: ACC 222 or Program Area approval. Areas of emphasis to be included in this course are partnerships, governmental accounting, business combinations as a "pooling of interests" vs. a purchase, and preparation of consolidated statements.

#### ACC 251 Accounting Seminar 1(1-0)

This seminar is constituted of 8-14 classroom hours dealing with special topics of current interest as offered by the program area.

#### ACC 252 Accounting Seminar 1(2-0)

This seminar is constituted of 15-24 classroom hours dealing with special topics of current interest as offered by the program area.

#### ACC 253 Accounting Seminar 3(3-0)

This seminar is constituted of 25-34 classroom hours dealing with special topics of current interest offered by the program area.

#### ACC 260 Accounting with Computers 4(4-0)

Prerequisite: ACC 212. Accounting Systems is a course designed to prepare students to deal with problems and issues related to computer-based accounting information systems. Students will do bookkeeping and solve accounting problems using microcomputers. Previous familiarity with computers; is not necessary.

#### ACC 266 Independent Study 1(1-0)

Prerequisite: Program Area approval. This course on special projects in accounting will require 20 to 30 hours of study on topics not available through regular courses.

#### ACC 267 Independent Study 2(2-0)

Prerequisite: Program Area approval. This course on special projects in accounting will require 40-50 hours of study on topics not available through regular courses.

**ACC 268 Independent Study 3(3-0)**

Prerequisite: Program Area approval. This course on special projects in accounting will require 60 or more hours of study on topics not available through regular courses.

**ACC 271 Principles of Finance 4(4-0)**

Prerequisite: ACC 212. This course emphasizes the short- and long-term decisions a financial manager can be expected to face. Topics to be included are working capital management, risk, cost of capital, capital markets, long-term debt, stocks and dividend policy, as these topics relate to obtaining financing for a business.

**ACC 275 Financial Decision Simulation Game 4(4-0)**

Prerequisite: ACC 212. This course is a game in which participants make decisions which affect their simulated company. The instructor takes care of all computer involvement so the student needs no computer background. Lectures cover various financial topics, particularly those which help the student manage the finances of his imaginary company.

**ACC 280 Governmental Accounting 4(4-0)**

Prerequisite: ACC 212 or Program Area approval. This course 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 other topics to be covered.

**ACC 281 Governmental Budgeting and Institutional Accounting 4(4-0)**

Prerequisite: ACC 212 or Program Area approval. This course is a continuation of Governmental Accounting (ACC 280) and it offers detailed accounting procedures and accepted practices in governmental and institutional accounting. Considerable instruction and work is devoted to program budgeting and performance measurement with emphasis on recent changes and current practices in different government units.

**ACC 290 Auditing 4(4-0)**

Prerequisite: ACC 222 or Program Area approval. Specific topics covered in this course are professional ethics, 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.

**C.P.A. Review Courses**

Four C.P.A. review courses are offered beginning about August 30 of each year. These courses are designed to prepare candidates for the Uniform Certified Public Accounting Examination. Past candidates who participated in the LCC review courses have earned a passing percentage significantly higher than that earned by 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.

**ACC 295 Theory of Accounts Review 2(2-0)****ACC 296 Commercial Law Review 2(2-0)****ACC 297 Auditing Review 2(2-0)****ACC 298 Accounting Practice Review 4(4-0)**

Courses Offered in Business (BUS) by Accounting and Office Systems—by Course Number, Title, Credits Allowed, and Description.

**BUS 100 Typewriting I (AVT) 3(0-6)**

This course emphasizes mastery of the keyboard, and building speed and accuracy in straight copying. Other topics include business letters and short reports. Performance levels of 25-35 w.p.m. are expected to be reached.

**BUS 101 Typewriting II (AVT) 3(0-6)**

Prerequisite: BUS 100 or equivalent. This course involves improving speed, accuracy and machine operation. Topics include tabulation, manuscripts, footnotes, business letters, and special communication forms. Performance levels 40-50 w.p.m. are expected to be reached.

**BUS 102 Typewriting III (AVT) 3(0-6)**

Prerequisite: Program Area approval or BUS 101. This course is designed to improve judgment, skill and accuracy on straight copy and tabulated reports, business forms, programs, speeches, financial statements, job applications, special business letter forms, news releases, and special technical reports. Performance levels 55-65 w.p.m. are expected to be reached.

**BUS 104 Beginning Shorthand I 4(4-0)**

This course deals with the principles of Gregg shorthand and basic business vocabulary, with emphasis on theory and brief forms. Dictation speed per-

formance levels of 60-80 words per minute (one-minute test) are expected by the end of the term for satisfactory completion of the course.

**BUS 105 Intermediate Shorthand II 4(4-0)**

Prerequisite: Program Area approval or BUS 104. This course is designed to develop speed and accuracy in reading from plates and individual notes with emphasis on dictation skills. Dictation speed performance levels of 70-90 words per minute (two-minute test) is required for satisfactory completion of the course.

**BUS 106 Advanced Shorthand III 4(4-0)**

Prerequisite: COM 051. This course emphasizes higher speed in business dictation. Dictation speed performance levels of 80-100 words per minute (three-minute test) are expected for satisfactory completion.

**BUS 107 Business Machines I (AVT) 1, 2, or 3**

Prerequisite: BUS 117. This course utilizes the 10-key adding machine, printing calculator, and/or the electronic display and electronic printing calculator; operations of addition, subtraction, multiplication, and division, plus business-type problems dealing in percentages, interest, etc. The amount of credit allowed is dependent upon the number of machines the student learns to operate.

**BUS 114 Speedwriting I 4(4-0)**

This course provides instruction in an alphabetic-type shorthand system for taking notes or dictation. It stresses writing principles and basic vocabulary. Dictation speed performance levels of 60 to 80 wpm for periods of two minutes must be reached.

**BUS 115 Speedwriting II 4(4-0)**

This course is designed to develop speed and accuracy in reading and writing individual notes, through timed dictation and transcription. Dictation speed performance levels of 70 to 100 wpm for periods of three minutes must be reached.

**BUS 117 Business Mathematics 4(4-0)**

This course is designed to develop skill and accuracy in mathematics. It deals with computations involving decimals, fractions, aliquot parts, percentages, discounts, inventory, payroll, and interest. An audio-visual-tutorial laboratory class is also available for instruction at convenient times daily and on weekends.

**BUS 119 Office Methods 3(3-0)**

Prerequisite: BUS 101. Clerical office procedures and responsibilities and the study and evaluation of effective personality traits are areas of emphasis.

**BUS 120 Keyboarding 2(2-0)**

This course is designed to develop basic keyboarding skill for microcomputer or computer operators in the inputting and retrieval of information. Speed and accuracy skill is emphasized.

**BUS 153 Shorthand Refresher 2(2-0)**

Prerequisite: Gregg shorthand, at 60 w.p.m. This course reviews theory, brief forms, word phrases and basic business vocabulary. It also is designed to refine and increase existing skill with emphasis on producing accurate transcripts.

**BUS 160 Refresher Typing 3(3-0)**

Prerequisite: Previous typing courses and experience. This course reviews basic typing techniques and the typing of memoranda, personal and business letters, letter styles, vertical and horizontal centering, tables, proofreading, and resumes.

**BUS 175 Time Management in the Office (AVT) 1(0-1)**

This course is comprised of six modules including using time effectively; tools for managing your time; helping the executive use time effectively; analyzing your working habits; the Office Procedures Manual; and a time management simulation.

**BUS 185 Secretarial Career Renewal 6(3-6)**

Prerequisite: Previous secretarial experience. This course is designed to renew and update secretarial skills and knowledge of the latest office techniques. The course provides highly concentrated activities in lecture and laboratory work in a period of only seven weeks. It is designed for secretaries planning to re-enter the job market after a number of years of absence from the field.

**BUS 199 Medical Vocabulary (AVT) 3(0-4)**

This course provides instruction in spelling, definition, structure and concepts of medical terms from various fields of medicine.

<b>BUS 200 Shorthand IV</b>	<b>4(4-0)</b>	<b>BUS 231 Office Seminar</b>	<b>1(1-0)</b>
Prerequisite: BUS 106. This course is designed to develop shorthand speeds up to and beyond 120 wpm. This course is meant for students who can take dictation at 100 wpm.		Classroom instruction on special topics of current interest. 8 - 14 hours.	
<b>BUS 203 Secretarial Procedures and Administration</b>	<b>3(3-0)</b>	<b>BUS 232 Office Seminar</b>	<b>2(2-0)</b>
Prerequisite: Program Area approval. The topics of the course include typing; reprographics; composition; handling incoming and outgoing mail; postal and shipping services; telephone and telegraph services; records management; planning meetings and conferences; collecting, processing, and presenting business data; and handling financial statements, payroll and legal responsibilities.		Classroom instruction on special topics of current interest. 20 - 24 hours.	
<b>BUS 204 Business Correspondence</b>	<b>3(3-0)</b>	<b>BUS 233 Office Seminar</b>	<b>3(3-0)</b>
Prerequisite: COM 051 and WRI 111. This course identifies simply written, easy to understand correspondence. Techniques for editing and writing business letters, and writing various types of letters such as requests, persuasion, sales, and refusal are emphasized.		Classroom instruction on special topics of current interest. 30 - 34 hours.	
<b>BUS 206 Legal Terminology/Transcription</b>	<b>3(0-6)</b>	<b>BUS 240 Office Internship</b>	<b>3(3-0)</b>
Prerequisite: Previous typing. This course utilizes basic legal terminology of general and specialized areas of law. It defines legal terms their uses in legal contexts.		Prerequisite: Program Area approval.	
<b>BUS 207 Medical Terminology and Transcription</b>	<b>3(1-4)</b>	<b>BUS 241 Office Internship</b>	<b>3(3-0)</b>
Prerequisite: BUS 199, WRI 111, and typing speed of 50 wpm. This course is designed to develop skill in defining, writing and transcribing medical words, phrases, and reports with the use of a transcriber and self-correcting type-writer.		Prerequisite: Program Area approval.	
<b>BUS 208 Business Theory for Professional Secretaries</b>	<b>4(14-0)</b> <b>2 sections, 4 credits each (fall and winter terms)</b>	<b>BUS 242 Office Internship</b>	<b>3(3-0)</b>
Prerequisite: Employed as a secretary. This course is designed to prepare the student for the international Certified Professional Secretary examination or to improve his or her knowledge and skills in four areas of the exam: Office Administration and Technology, Communication Applications, Behavioral Science in Business, and Economics and Management.		Prerequisite: Program Area approval. Approval for an office internship is based on the successful completion of basic business courses; Placement is made in an approved training station to earn credits for satisfactory work performance and earn wages for work performed. Occupational interests of the student are considered along with his or her background or having completed related classes in determining employment arrangements.	
<b>BUS 210 Administrative Development for Office Personnel</b>	<b>3(3-0)</b>	Courses Offered in Court and Conference Reporting (CCR) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.	
Prerequisite: Employed as a secretary. This course provides instruction in the administrative functions of office: coordination and supervision of personnel; writing and editing reports; making speeches; attending meetings; and handling correspondence. Emphasis is given to the development of the leadership role for office personnel.		<b>First Year CCR - Day Sequence Courses</b>	
<b>BUS 215 Records Management I</b>	<b>3(3-0)</b>	<b>CCR 101 Machine Shorthand I</b>	<b>6(8-0)</b>
This course deals with records management; managing the creation, protection, storage, and disposition of business records; alphabetic indexing; the foundation of other storage methods; selection of proper equipment; and procedures for the operation and control of filing methods and systems.		This course involves basic touch shorthand computer-compatible theory taught on a stenograph machine and developing speeds up to 80 wpm.	
<b>BUS 216 Records Management II</b>	<b>3(3-0)</b>	<b>CCR 102 Machine Shorthand II</b>	<b>6(8-0)</b>
Prerequisite: Program Area approval or BUS 215. Topics of this course include the establishment, implementation, and maintenance of records control programs.		Prerequisite: Program Area approval or CCR 101. This course provides additional touch shorthand theory and speed building up to 100 wpm.	
<b>BUS 217 Micro-Records</b>	<b>2(2-0)</b>	<b>CCR 103 Machine Shorthand III</b>	<b>6(8-0)</b>
This course deals with micro-forms represented by micro-film, roll film, aperture card, cartridge cassette, and micro-opaques. It also provides information for consideration in making a decision as to whether one should micro-film, concerning retrieval methods, and concerning privacy laws.		Prerequisite: Program area approval or CCR 113. This course includes intermediate speed building with shorthand skills up to 120 wpm and an introduction to jury charge and legal abbreviations.	
<b>BUS 220 Office Management I</b>	<b>3(3-0)</b>	<b>CCR 104 Machine Shorthand IV</b>	<b>6(8-0)</b>
Prerequisite: Sophomore status in the college or Program Area approval. Principles; office organization and layout; work flow; procedures; standards; personnel and supervision procedures; equipment; centralized services; and automation trends are all topics dealt with in this course.		Prerequisite: Program Area approval or CCR 103. This course involves advanced speed building up to 140 wpm and medical terminology and dictation.	
<b>BUS 221 Office Management II</b>	<b>3(3-0)</b>	<b>First Year CCR - Night Sequence</b>	
Prerequisite: BUS 220. Automation and trends in the problem areas of social, economic organization, management, feasibility, and automated service centers are topics in the course.		<b>CCR 111 Machine Shorthand I - N</b>	<b>4(4-0)</b>
<b>BUS 222 Advanced Medical Transcription</b>	<b>3(0-6)</b>	This course includes basic touch shorthand, computer-compatible theory taught on the stenograph machine, and developing speeds up to 70 wpm.	
Prerequisite: BUS 207. This course is designed to develop skill in defining, writing, and transcribing words and phrases commonly used in medical language. Transcription of actual medical reports from hospitals are utilized.		<b>CCR 112 Machine Shorthand II - N</b>	<b>4(4-0)</b>
		Prerequisite: Program Area approval or CCR 111. This course provides additional touch shorthand theory and machine shorthand speed building up to 90 wpm are emphasized in this course.	
		<b>CCR 113 Machine Shorthand III - N</b>	<b>4(4-0)</b>
		Prerequisite: Program Area approval or CCR 112. This course includes touch shorthand theory and machine shorthand speed building up to 100 wpm.	
		<b>CCR 114 Machine Shorthand IV - N</b>	<b>4(4-0)</b>
		Prerequisite: Program Area approval or CCR 113. This course includes intermediate machine shorthand speed building with skills up to 110 wpm. Introduction to jury charge and legal abbreviations.	
		<b>CCR 115 Machine Shorthand V - N</b>	<b>4(4-0)</b>
		Prerequisite: Program Area approval or CCR 114. This course involves intermediate machine shorthand speed building with skills up to 130 wpm. It includes additional jury charge dictation.	
		<b>CCR 116 Machine Shorthand VI - N</b>	<b>4(4-0)</b>
		Prerequisite: Program Area approval or CCR 115. This course involves advanced machine shorthand speed building up to 140 wpm. Medical terminology and dictation are emphasized.	

## Second Year CCR Classes

**CCR 200 Medical Testimony 3(3-0)**

Prerequisite: Program Area approval or CCR 104 and BUS 199. Reinforces knowledge of medical vocabulary through classroom drills, writing and transcribing 2-voice testimony that may be encountered by court, deposition, or hearings reporters.

**CCR 201 C.A.T. Xscribe 2(2-0)**

Prerequisite: CCR 104. This course is designed to give students hands-on experience with computer-aided transcription for the court reporter.

**CCR 211 Q & A I 4(4-0)**

Prerequisite: Program Area approval or CCR 104 or CCR 116. This course involves two-voice testimony dictation and machine shorthand speed building up to 140 - 160 wpm.

**CCR 212 Q & A II 4(4-0)**

Prerequisite: Program Area approval or CCR 211. This course involves two-voice testimony dictation machine shorthand and speed building up to 160 - 180 wpm.

**CCR 213 Q & A III 4(4-0)**

Prerequisite: Program Area approval or CCR 212. This course involves two-voice testimony dictation and machine shorthand speed building up to 180 - 200 wpm. It also introduces four-voice testimony.

**CCR 114 Q & A IV 4(4-0)**

Prerequisite: Program Area approval or CCR 213. This course includes two-voice testimony dictation and machine shorthand speed building, as well as four-voice testimony dictation with speeds up to 210 - 230 wpm. It also includes expert witness testimony dictation.

**CCR 221 Jury Charge I 2(2-0)**

Prerequisite: Program Area approval or CCR 104 or CCR 116. Jury charge dictation and machine shorthand speed building up to 130 - 140 wpm.

**CCR 222 Jury Charge II 2(2-0)**

Prerequisite: Program Area approval or CCR 221. This course includes jury charge dictation and machine shorthand speed building up to 150 - 160 wpm. Land descriptions, informations and statutes dictation are other topics included.

**CCR 223 Jury Charge III 2(2-0)**

Prerequisite: Program Area approval or CCR 222. This course includes jury charge dictation and machine shorthand speed building up to 170 - 180 wpm. It also indicates legal argument dictation.

**CCR 224 Jury Charge IV 2(2-0)**

Prerequisite: CCR 223. This course includes jury charge dictation and machine shorthand speed building up to 190 - 200 wpm. Legal opinion dictation is also included.

**CCR 231 Literary I 4(4-0)**

Prerequisite: Program Area approval or CCR 104 or CCR 116. Literary dictation and machine shorthand speed building up to 110 - 130 wpm are included in this course.

**CCR 232 Literary II 4(4-0)**

Prerequisite: Program Area approval or CCR 231. This course includes literary dictation, machine shorthand speed building and specialized terminology dictation. Dictation speeds of 130 - 150 wpm are included in the course.

**CCR 233 Literary III 4(4-0)**

Prerequisite: Program Area approval or CCR 232. This course includes literary dictation and machine shorthand speed building up to 150 - 170 wpm. Specialized terminology dictation is also covered.

**CCR 234 Literary IV 4(4-0)**

Prerequisite: Program Area approval or CCR 233. This course includes literary dictation and machine shorthand speed building. A performance level of 180 wpm must be reached. Specialized terminology dictation is included.

**CCR 240 Court Internship 4(4-0)**

Prerequisite: Q & A speed: 190 wpm. A student placed in this internship will spend 10-12 hours per week with and experienced shorthand reporter recording and transcribing notes into proper form concerning courtroom trials, conferences, hearings, or depositions.

Courses Offered in Cooperation With Chartered Life Underwriter (CLU) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**CLU 101 Individual Life and Health Insurance (Economic Security) 3(3-0)**

This is 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.

**CLU 102 Life Insurance Law and Mathematics 3(3-0)**

This 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.

**CLU 103 Group and Social Insurance 3(3-0)**

This course includes 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.

**CLU 104 Economics 3(3-0)**

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.

**CLU 105 Insurance Accounting/Finance 3(3-0)**

The importance and techniques of financial record-keeping and income measurement are presented in detail in this course. Budgeting and methods of financing are also covered.

**CLU 106 Investments and Family Financial Management 3(3-0)**

Various types of investments are discussed in this course as these relate to family financial planning. Stocks, securities, mutual funds and real estate are among the other topics covered.

**CLU 107 Income Taxation 3(3-0)**

This course deals with the federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates are also discussed.

**CLU 108 Pension Planning 3(3-0)**

The forces underlying the pension movement and basic features of pension plans are discussed in this course. Included are tax considerations and various types of funds.

**CLU 109 Business Insurance 3(3-0)**

The basic concepts of proprietorships, partnerships, and corporations are discussed in this course with emphasis on the problems of a variety of corporate agreements and their relation to the insurance industry. Included also are management techniques and professional ethics.

**CLU 110 Estate Planning and Taxation 3(3-0)**

This course is an introduction to estate planning including acquisition, administration, disposition and taxation of property. Federal estate, gift and capital gains taxes are discussed in depth.

Courses Offered in Data Entry (DE) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**DE 101 Fundamentals of Data Entry 3(0-3)**

Prerequisite: Bus 100 or Bus 120 or equivalent. The basic concepts of Data Entry Operations are learned on a Microcomputer. Data entry, editing, and document handling skills are also developed in this course.

**DE 102 Key To Diskett 2(0-4)**

Prerequisite: DE 101. This course is directed toward the refinement of the skills attained in the previous course. The student will enter data onto a diskette, learn complex job layouts, and the use of program and data diskettes. At the completion of the course, the student should have acquired the skills needed for employment.

**DE 103 Advanced Data Entry—Visual Display Terminal 3(0-6)**

Prerequisite: DE 102. The student will learn to operate the IBM Microcomputer, perform data entry, edit the activity at 99-100% accuracy level, and edit and correct errors.

Courses Offered in Economics (EC) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**EC 101 Applied Economics 3(3-0)**

This course is an introductory survey of business economics. The course work focuses attention on the major economic problems and issues within the American economy. It provides an overview and some tools of economic analysis to aid in logical interpretation. Major subject areas included relate to an overall look at the economic system; government policy; prices and their application; money; income; and national income accounts of the United States.

**EC 201 Principles of Economics I 4(4-0)**

This course is designed to develop objective consideration of economic issues and provide information and understanding of how resources are allocated by prices. Topics for study include price theory; consumer demand; cost and market structure, the role of government in the market; factor pricing, and income distribution.

**EC 202 Principles of Economics II 4(4-0)**

Prerequisite: Program Area approval or EC 201. This course deals with the theory of national income, employment, prices, and with government fiscal and monetary policies designed to influence aggregate economic activity. It also includes the relationship of the domestic economy to international economic activity.

**EC 203 Economic/Business History 3(3-0)**

This course provides a survey of American economic and business history, change, and growth since the civil war. Topics include an overview of business organization, the role of government, technological change, American industrial development, labor unions, and capitalization patterns.

**EC 218 Money and Banking 4(4-0)**

Prerequisite: EC 202. This course covers the nature of money and the role of the Federal Reserve, the commercial banks, and other financial institutions in determining the money supply. Also, the course includes information about the money market, capital markets, determination of interest rates and the relationship between monetary policy and economic activity.

**EC 224 Intermediate Microeconomic Theory 4(4-0)**

Prerequisite: EC 201. This course covers the theory of consumer behavior, the production and cost relationships of individual firms, the actions of those firms in different market structures, the theory of resource firms, and general equilibrium theory. The discussion of each of these areas will begin with a review of the principles of economics as covered in EC 201.

**EC 266 Special Projects/Economics 1(1-0)**

This course includes 20 to 30 hours of study in special economics projects and it is available only with program area approval.

**EC 267 Special Projects/Economics 2(0-2)**

Two credits requiring 40 to 50 hours of study.

**EC 268 Special Projects/Economics 3(0-3)**

Three credits requiring 60 or more hours of study.

Courses Offered in Insurance (INS) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**INS 265 Principles of Risk and Insurance 4(4-0)**

This course presents the fundamental principles involved within the business environment for handling risk, with emphasis on those indicating insurance solutions. It covers property, casualty, life, accident and health insurance.

Courses Offered in Information/Word Processing (IWP) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**IWP 101 Concepts in Information/Word Processing 3(3-0)**

This is a survey course of the principles, terminology, equipment, equipment selection criteria, and implementation procedures used in information/word processing technology as well as investigating career paths.

**IWP 102 Proofreading 1(1-0)**

The course is designed to teach proofreading and editing skills essential to the production of accurate and coherent business communications.

**IWP 105 Machine Transcription 4(4-0)**

Prerequisite: Bus 101 and WRI III. This course is designed for the production

of mailable communications by using transcribers, recorded cassettes, and the IBM Correcting Selectric Typewriters. Development of proficiency in spelling, punctuation, grammar, and business vocabulary is emphasized. Production skills are measured.

**IWP 110 Electronic Typewriting 3(3-3)**

Prerequisite: BUS 102. Electronic Typewriting features hands-on experience on three brands of electronic typewriters. The machines utilize various function codes to perform operations, such as storage of text, automatic centering, underlining, corrections, etc.

**IWP 115 Text Editing, Introduction 4(4-0)**

Prerequisite: IWP 105. This course is designed to develop a basic skill on the Wang Word Processor for rapid production, revision, and retrieval of routine business documents, i.e. letters, envelopes, memoranda, tables, reports, short manuscripts, and repetitive correspondence.

**IWP 120 Text Editing, Intermediate 4(4-0)**

Prerequisite: IWP 115. This course is designed to expand on the basic skill developed in the introductory text editing course on the Wang Word Processor; and to increase the complexity of the document training for rapid production, revision, and retrieval of business documents, i.e. multiple-page documents, technical reports, manuals, statistical data, legal documents, and repetitive correspondence.

**IWP 125 Text Editing, Advanced 4(4-0)**

Prerequisite: IWP 120. This course is designed to develop an advanced skill on the Wang Word Processor for rapid production, revision, retrieval, and transmittal of business documents and forms using the advanced features of the equipment i.e. glossary, math, and telecommunications.

**IWP 205 Information/Word Processing Management 4(4-0)**

This course will include identifying methods to develop a realistic, practical approach to anticipating and solving managerial problems. It also includes planning and organizing systems for implementing and maintaining word processing operations plus defining, reviewing, and examining the manager/supervisor's role.

Courses Offered in Law (LAW) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

**LAW 100 Legal Rights 3(3-0)**

This course is an analysis of landlord-tenant law, debtor-creditor laws, contract relationships, consumer credit, consumer rights, and other legal regulations affecting private citizens.

**LAW 105 Law and Social Issues 2(2-0)**

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

**LAW 115 Legal Processes 3(3-0)**

This course is a survey of the nature and sources of law, including the relationship between the law-making functions of federal and state governments. The course content includes an exploration of the operation of the court system and the fundamentals of legal reasoning.

**LAW 120 Legal Research I 4(4-0)**

Prerequisite: LAW 115, LAW 212, LAW 216. This course includes research procedures and methods, including problem analysis. It provides in-depth treatment of the following federal, national and/or Michigan research publications: practice manuals, encyclopedias, digests, reporters, statutes, periodicals, citators, treatises, court rules, administrative publications, and other. Research assignments are given using the above-mentioned publications together with constructing citations using the Michigan Uniform Systems Citations. Some classes may be held at off-campus libraries.

**LAW 121 Legal Writing 4(4-1)**

Prerequisite: LAW 115 and LAW 216. Lecture, class discussion, and writing assignments are used in this course covering identification of issues, statement of facts, and arguments of law as they apply to writing briefs, pleading opinions, client letters, and drafting instruments.

**LAW 130 Introduction to the Michigan Judicial System 2(2-1)**

A survey course designed to provide an understanding of Michigan's overall judicial system.

**NOTE:** LAW courses 210, 211, 212, 221, 222, 223, 224, and 225 are designed to view the technical problems of the respective legal areas from the stand point of the legal assistant.

**LAW 210 Pre-Trial Procedures 4(4-0)**

Prerequisite: LAW 212 and LAW 216. This course covers 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 is used through drafting of Complaints, Answers, Motions for Accelerated Judgment, Motions for Summary Judgment, Interrogatories, Request for Admissions, Pre-Trial Statements, and others. Emphasis is made on the role of the Legal Assistant in preparing a case for trial. It also includes witness preparation, discovery, and exhibit preparation.

**LAW 211 Trial and Appellate Procedures 4(4-0)**

Prerequisite: LAW 210. This course is 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. An emphasis on the role of the legal assistant in preparing for trial and appeals is made.

**LAW 212 Legal Field Specialties 4(4-0)**

Prerequisite: BUS 101. This course is an overview of specialty areas of law, including drafting of pleadings and related legal instruments. It includes real estate, divorce, criminal law, bankruptcy, probate, personal injury, Michigan's no-fault automobile insurance laws, Worker's Disability Compensation, applicable statutes, case law, and court rules.

**LAW 215 Business Law I 4(4-0)**

This course covers fundamental principles of our law for business and non-business students, to develop an understanding of our legal system (Federal, State, and local), its purposes and importance to society. The course content includes a study of the nature and sources of law, study of courts and court procedure, legal reasoning, crimes, torts, contracts, personal and real property, and bailments.

**LAW 216 Business Law II 4(4-0)**

Prerequisite: LAW 215. This course includes the nature and law of sales, commercial paper, security devices, agency, employment, partnerships, profit and non-profit corporations, insurance, and the 1972 Michigan Uniform Commercial Code.

**LAW 221 Real Estate Transactions 4(4-0)**

Prerequisite: LAW 212. This course is an in-depth treatment of real property and common types of real estate transactions and conveyances. Included are prorations, closing statements, closings, examination of title insurance, abstracts and title opinions, legal descriptions, title searches, recording systems, landlord/tenant problems, summary proceedings, and drafting legal documents.

**LAW 222 Probate 4(4-0)**

Prerequisite: LAW 212. This course reviews practical problems in probating estates, including all procedures involved in the commencement of probate through closing of the estate. It includes independent probate, supervised administration, and small estates.

**LAW 223 Domestic Relations 4(4-0)**

Prerequisite: LAW 212. This course covers the topics of divorce, separate maintenance, annulments, and paternity proceedings. Included also are custody, support, alimony, property, visitation, injunctions, modifications, enforcement, judgments, mediation, tax, and role of the Friend of the Court; applicable statutes, case law, and Court rules. It stresses the role of the legal assistant in domestic relations matters.

**LAW 224 Administrative Law 4(4-0)**

Prerequisite: LAW 212. This course is a study of government agencies and their relationships with private activities and citizens affected thereby. It covers rulemaking, adjudication, licensing, and informal action.

**LAW 225 Legal Research and Writing II 4(4-0)**

Prerequisite: LAW 120 and LAW 121. This course reviews principles of legal research and writing; analysis of facts, problems, and legal issues; citations; extensive research assignments in Federal, National, and Michigan publications; drafting legal memoranda, opinion letters, and Appellate Brief. An intense, comprehensive course. Some classes will be held at off-campus libraries.

**LAW 266 Independent Study 1(1-0)**

This special course is available only with program area approval for special projects in law requiring 20 to 30 hours of study and which are not available through regular courses.

**LAW 267 Independent Study 2(2-0)**

Special projects in law which are not available through regular courses may be designed. 40 - 50 hours.

**LAW 268 Independent Study 3(3-0)**

Special projects in law which are not available through regular courses may be designed. 60 or more hours.

Courses Offered in Life Underwriters Training (LUT) by Accounting & Office Systems—by Course Number, Title, Credits Allowed, and Description.

The Life Underwriters Training program is a four-part pragmatic sales program for currently licensed agents. Applicants must have a company sponsor and have sold at least 50 contracts before enrolling. In addition to text and workbook assignments, the student will make sales appointments correlating with 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	LUTC Part I	3(3-0)
LUT 102	LUTC Part I	3(3-0)
LUT 103	LUTC Part I	3(3-0)
LUT 201	LUTC Part II	3(3-0)
LUT 202	LUTC Part II	3(3-0)
LUT 203	LUTC Part II	3(3-0)
LUT 213	LUTC Part III	3(3-0)
LUT 214	LUTC Part V	3(3-0)

**Computer Applications and Software Systems—Division of Business**

Chuck Parker, Program Director

The Computer Applications and Software Systems programs strive to provide the student an opportunity to develop marketable computer skills and knowledge. This is accomplished by maintaining relevance and high quality in all aspects of the program. The curricula and course content are continually evaluated as to relevance and quality by students, faculty, administration, and an advisory committee comprised of leaders of the local data processing community. Most faculty are employed full-time in computer-related careers. This provides the student with a unique and diverse view of computer applications in the business community. This also assures the student of receiving an up-to-date and relevant orientation of the information and concepts introduced by the instructor.

The programs offered include those designed to prepare the graduate earning an associates degree or, in some cases, a certificate of achievement to become a computer applications programmer; a computer salesman; a computer operations manager; a computer systems analyst; a computer security and control specialist; a microcomputer applications specialist; a computer operator; or a microcomputer operator using BASIC programming language.

The associate degree programs, requiring a minimum of 90 credits, include curriculums 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 knowledge of modern, high speed data processing machines.

The certificate of achievement programs, requiring a minimum of 45 credits, are designed to be of special value to persons who desire rapid and comprehensive training for entering the labor market as soon as possible. A certificate of achievement is granted to those completing such programs and credits may also be transferred toward meeting the requirements in a related associate degree program.

General curricular guides for each program offered by Computer Applications and Software Systems are available in the Counseling offices and the Program Director's office. The student is encouraged to discuss any of these programs with an advisor from the Computer Applications and Software Systems office.

**Applications Program**

Associate Degree Program

Curriculum Code: 450

Minimum 90 credits

Designed for people wishing to be applications programmers in a business environment. The student learns to program in BASIC, COBOL, RPG, and Assembly. Other courses include data base concepts, operating systems, data communications, and systems analysis.

**Data Processing and Management**

Dual Associate in Business

Curriculum Code: 452

Intended as a second degree following the 450 degree. Additional management and business concepts are studied. Requires a minimum of 30 additional credit hours after completing the applications programmer associate degree (450).

**Computer Sales Specialist**

Associate Degree Program

Curriculum Code: 479

Minimum 90 credits

Trains persons in computer sales. The course work is divided among data processing, marketing, and business subjects.

**Computer Operations Management**

Associate Degree Program

Curriculum Code: 486

Minimum 90 credits

Designed for people who aspire to management positions in the computer operations area. After earning the computer operator certificate (453) 45 additional credits are required for this associate degree.

**Systems Analysis**

Associate Degree Program

Curriculum Code: 487

Minimum 90 credits

Set up as a second associate degree to follow the applications programmer degree (450). The student takes some advanced data processing courses as well as additional communications courses.

**Computer Security and Controls**

Associate Degree Program

Curriculum Code: 488

Minimum 90 credits

Covers fundamentals and techniques in both accounting and data processing. In addition, some law and economics courses are required.

**Microcomputer Systems**

Associate Degree Program

Curriculum Code: 489

Minimum 90 credits

Designed for those who wish to specialize in microcomputer applications. Advanced BASIC, machine language, and data processing courses are required as well as two approved sequences of courses. At least one course sequence must be outside the data processing area.

**Computer Operator**

Certificate Program

Curriculum Code: 453

Minimum 45 credits

Intended for persons wishing to become computer operators. Included are basic data processing courses as well as certificate Program

Curriculum Code: 454

Minimum 45 credits

Planned for the microcomputer enthusiast. The BASIC programming language is emphasized. Pascal, micro assembler and additional data processing courses are also required. Can lead into microcomputer systems (489) associate degree program.

Courses Offered in Computer Applications for Business (CAB) by Computer Applications and Software Systems—by Course Number, Title, Credits Allowed, and Description.

(NOTE—former course codes are in parentheses after the descriptions.)

**CAB 102 Small Business Computing 2(1-1)**

Provides basic information useful in selecting and installing a microcomputer in business. Hands-on survey of general purpose software (spreadsheet, data base manager, word processor, etc.).

**CAB 111 WordStar (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Beginner-level training for the popular, screen-oriented word processing program. Provides hands-on experience on how to perform most word processing commands. (CS 108)

**CAB 113 Multimate (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Beginner-level training on use of this Wang(R)-like word processing program. Provides hands-on experience on how to perform most word processing commands. (CS 106)

**CAB 114 WordPerfect (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Beginner-level training on use of one of

the most versatile word processing programs. Provides hands-on experience on how to perform most word processing commands. (CS 109)

**CAB 122 MultiPlan (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Create, manipulate and generate reports and tables. File handling, disk management included. (CS 107)

**CAB 123 Lotus 1-2-3 (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Create worksheets and data bases, manipulate and generate reports, tables, and graphs. File handling, disk management, MACROS included. (CS 105)

**CAB 131 dBase II (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Create data base structure, enter data; display data on screen, sort data on various factors, prepare reports, add and edit data base. (CS 104)

**CAB 132 Programming dBase II (R) 2(1-1)**

Prerequisite: CAS 131. A continuation of CAS 131. Includes a review of programming principles and explanations of file creation and indexing, screen I/O, file processing, reports, and menus.

**CAB 133 dBase III (R) 2(1-1)**

Prerequisite: BUS 120 or equivalent. Create data base structure, enter data; display data on screen, sort data on various factors, prepare reports, add and edit data base.

**CAB 171 Symphony (R) 3(2-1)**

Prerequisite: BUS 120 or equivalent. An introduction to an all-in-one software system. Hands-on training for its spreadsheet, business graphics, data base manager, and word processor. Communications is discussed. Knowledge of Lotus 1-2-3(R) is not assumed. (CS 171)

**CAB 172 Framework (R) 3(2-1)**

Prerequisite: BUS 120 or equivalent. An introduction to a comprehensive microcomputer program. Hands-on training covers its unique outlining feature, word processor, spreadsheet, data base manager, and automatic graphics. Communications is discussed. (CS 172)

**CAB 311 Educational Computer Applications I 3(3-1)**

An introductory course in computer applications for classroom use. Grade on a P/Z basis only. (CS 311)

**CAB 312 Educational Computer Applications II 3(3-1)**

Prerequisite: CAB 311. A more in-depth study of applications covered in CAB 311. Graded on a P/Z basis only. (CS 312)

Courses Offered in Computer Applications Systems (CAS) by Computer Applications and Software Systems—by Course Number, Title, Credits Allowed, and Description.

(NOTE: Former course codes are in parentheses after the descriptions.)

**CAS 100 Introduction to Data Processing 4(4-1)**

Concepts of data processing: what a computer is, how it functions, and influence on all facets of society. (DP 100)

**CAS 105 Software Law 2(2-1)**

Overview of laws relevant to selling and protecting computer software. How market and protect your software. (DP 220)

**CAS 111 Forms Design and Control 3(3-1)**

Initial phase of recognizing that a form is needed through utilization of form. Includes layout of items by importance, design of margins and padding, spacing, grades of paper, reproduction and binding, and forms processing users. (DP 221)

**CAS 121 Data Processing Math and Logic I 5(5-1)**

Prerequisite: MTH 012 or equivalent. Designed to be taken concurrently with CAS 151. Introduces basic logical forms. Includes flowcharting, set theory, truth tables, Warnier diagrams, and non-decimal number systems. (DP 111)

**CAS 122 Data Processing Math and Logic II 5(5-1)**

Prerequisite: CAS 121. Introduces analytical tools. Includes linear equation graphing, linear programming, properties and applications of matrices, sequences, series, normal distribution, PERT and CPM networks. (DP 116)

<b>CAS 123 Data Processing Math and Logic III</b>	<b>5(5-0)</b>	multiple base registers, subprogram communication conventions, linked lists, and macro writing. (DP 183)
Prerequisite: CAS 122. An introduction to analytical tools of computer science. Not designed to assist in business programming. Includes non-linear functions, sorting and searching methods, data structures, computer graphics. (DP 117)		
<b>CAS 134 Documentation</b>	<b>4(4-0)</b>	<b>CAS 187 Micro Assembler</b> <b>4(4-3)</b>
Prerequisite: CAS 121 and CAS 151. Fundamental documentation tools in use on both the systems and programming level. (DP 134)		
<b>CAS 137 Introduction to Operations</b>	<b>4(4-0)</b>	Prerequisite: CAS 152. Inter-relationship between BASIC and the 8088 micro assembler. Includes interrupt routines and I/O routines. (DP 187)
Prerequisite: CAS 100. Function and responsibilities of the computer operator; includes machine maintenance, console response, and malfunction recovery. (DP 143)		
<b>CAS 141 Home Computer BASIC</b>	<b>2(2-1)</b>	<b>CAS 189 Pascal</b> <b>4(4-3)</b>
Prerequisite: CAS 121 and CAS 151. Write structured programs in Pascal, an ALGOL-like language. Covers queues, stacks, linked-lists, disk files, and real-time simulations. (DP 125)		
A brief programming course for the computer hobbyist or anyone interested in a rudimentary introduction to microcomputers. Write and debug simple programs in the BASIC language. (CS 151)		<b>CAS 201 EDP Security and Controls I</b> <b>4(4-0)</b>
<b>CAS 142 More Home Computer BASIC</b>	<b>2(2-1)</b>	Prerequisite: CAS 100. Study types of security and controls over computer systems. Includes administrative, operational, and documentation controls, invasion of privacy, and computer fraud. (DP 207)
Prerequisite: CAS 141. More advanced features of the BASIC language, such as arrays, functions, and file handling. (CS 152)		
<b>CAS 151 Business BASIC I</b>	<b>4(4-3)</b>	<b>CAS 202 EDP Security and Controls II</b> <b>2(2-0)</b>
Prerequisite: CAS 121 or concurrent. Designed to be taken concurrently with CAS 121. A beginning course in computer programming for CAS majors and others wanting an intensive introduction to problem-solving techniques using the BASIC programming language. (DP 105)		
<b>CAS 152 Business BASIC II</b>	<b>4(4-3)</b>	Prerequisite: CAS 201. Study security and control problems of an actual computer center. Based on these studies, recommendations for improvement in the operation's security and control are made. (DP 208)
Prerequisite: CAS 121 and CAS 151. Intermediate BASIC language. Special considerations for use on microcomputers. Includes tape and disk files, comparison of different machines, and computer graphics. (DP 106)		
<b>CAS 153 Business BASIC III</b>	<b>4(4-3)</b>	<b>CAS 203 EDP Security and Controls III</b> <b>2(2-0)</b>
Prerequisite: CAS 152. Advanced BASIC language, writing a system of business application programs for a microcomputer. Disk file usage and data structures. (DP 107)		
<b>CAS 161 Beginning RPGII</b>	<b>4(4-3)</b>	Prerequisite: CAS 201. Study security and control problems in computer applications. Based on these studies, recommendations for improvement in the application's security and control are made.
Prerequisite: CAS 121 & CAS 151. Understanding RPGII and how to program with it. Includes problem definitions, card procedures, control levels, and multiple-record files. (DP 163)		
<b>CAS 162 Advanced RPGII</b>	<b>4(4-3)</b>	<b>CAS 221 Introduction to Systems Analysis</b> <b>4(4-0)</b>
Prerequisite: CAS 161. Reinforce concepts learned in CAS 161 and provide ability to design and implement systems in a team environment. (DP 164)		
<b>CAS 171 COBOL I</b>	<b>4(4-3)</b>	Prerequisite: CAS 171 or CAS 152 or CAS 161. Concepts and methods of systems analysis. Includes the "systems life cycle," project planning, scheduling, estimating, investigation, and analysis. (DP 223)
Prerequisite: CAS 121 and CAS 151. Basic components of the COBOL language applied to write efficient programs. (DP 171)		
<b>CAS 172 COBOL II</b>	<b>4(4-3)</b>	<b>CAS 222 Structured Design Techniques</b> <b>4(4-0)</b>
Prerequisite: 2.0 GPA in CAS 171. Includes disk file organization and processing. Program business applications such as input editing, merging files, random and sequential file updating, creating and using ISAM files. (DP 172)		
<b>CAS 173 COBOL III</b>	<b>4(4-6)</b>	Prerequisite: CAS 221. Comprehensive review of structured system design techniques and system development management; requirements for developing computerized systems and managing the development process. Emphasis on the data flow systems approach. (DP 224)
Prerequisite: CAS 172 and CAS 221. Advanced programming experience in the ISAM data base environment. (DP 173)		
<b>CAS 174 COBOL Maintenance</b>	<b>4(4-3)</b>	<b>CAS 225 Artificial Intelligence</b> <b>4(4-0)</b>
Prerequisite: CAS 173. Develops methods of debugging, modifying, and re-writing programs. Includes treatment of development tools such as flowcharts, Warnier diagrams, hipo charts, structured walkthrus, and pseudo-code. Considers code standardization and machine or language conversion factors. (DP 174)		
<b>CAS 181 Assembly I</b>	<b>4(4-3)</b>	Prerequisite: CAS 121 and CAS 151. Introduction to problems and techniques of artificial intelligence. Includes problem-solving strategies, knowledge representation, and approaches used by state-of-the-art problem-solving systems. (DP 280)
Prerequisite: CAS 121 and CAS 151. Introduces machine language concepts and the basic assembly language instructions for the IBM System/370. (DP 182)		
<b>CAS 182 Assembly II</b>	<b>4(4-3)</b>	<b>CAS 231 Data Communications</b> <b>4(4-0)</b>
Prerequisite: CAS 181. Includes scanning records for data, extracting variable length data from records, validation of data, extended addressability,		
		Prerequisite: CAS 121 and CAS 151. Includes general terminology, hardware and software, basic steps in designing a teleprocessing system. (DP 231)
		<b>CAS 241 Operating Systems</b> <b>4(4-0)</b>
		Prerequisite: CAS 181. What operating systems are, why they exist, how they work, how they interface with the operators and programmers. (DP 238)
		<b>CAS 251 Data Base Concepts I</b> <b>4(4-0)</b>
		Prerequisite: CAS 181. Objectives of a data base organization and investigating the extent to which these objectives are met by state-of-the-art data base management software. Also, the CODASYL proposal and relational theory. (DP 226)
		<b>CAS 252 Data Base Concepts II</b> <b>4(4-0)</b>
		Prerequisite: CAS 251. Examine issues involved in managing data resources. Includes data dictionaries, data base design, end user concerns, management concerns, implementation considerations. (DP 227)
		<b>CAS 275 Design Project</b> <b>4(0-4)</b>
		Prerequisite: Program Area approval. Design and documentation of micro-computer software system project. Must have successfully completed CAS 152 or CAS 221. (DP 291)
		<b>CAS 276 Implementation Project</b> <b>4(0-4)</b>
		Prerequisite: Program Area approval. Coding, debugging, and implementing project designed in CAS 275. (DP 292)
		<b>CAS 281 Operations Internship I</b> <b>3(3-0)</b>
		Prerequisite: Program Area approval. The first of a two-term internship designed exclusively for the Computer Operator Certificate of Achievement (curriculum 453). One hundred hours of on-the-job training in a data processing installation. (DP 244)



- CAS 282 Operations Internship II** 3(3-0)  
Prerequisite: Program Area approval. Additional experience through 100 more hours of on-the-job training at a different data processing site. (DP 245)
- CAS 291 Programming Internship** 5(5-0)  
Prerequisite: Program Area approval. For students who have completed all of the programming language requirements of the applications programmer degree. Two hundred hours of on-the-job programming experience. (DP 247)
- CAS 850 CDP - Review** .5(5-0)  
Overview of five topics covered in CDP (Certified Data Processor) exam: software, hardware, systems, management, and quantitative methods. (DP 850)
- CAS 851 CDP - Software** .5(5-0)  
Review session for CDP (Certified Data Processor) exam. Includes principles of programming, meta programming systems, and programming languages. (DP 851)
- CAS 852 CDP - Hardware** .5(5-0)  
Review session for CDP (Certified Data Processor) exam. Includes evolution of computers, computer components and functions, internal processing, and peripherals. (DP 852)
- CAS 853 CDP - Systems** .5(5-0)  
Review session for CDP (Certified Data Processor) exam. Includes project responsibility, data processing systems analysis, data processing systems design and implementation, and planning and controls. (DP 853)
- CAS 854 CDP - Management** .5(5-0)  
Review session for CDP (Certified Data Processor) exam. Includes principles of management and principles of data processing management. (DP 854)
- CAS 855 CDP - Quantitative Methods** .5(5-0)  
Review session for CDP (Certified Data Processor) exam. Includes study of the basic accounting process, cost accounting, computer auditing and control, mathematics and statistics. (DP 855)

## CRIMINAL JUSTICE SYSTEMS— DIVISION OF BUSINESS

### C. F. Pegg Center for Criminal Justice Systems Division of Business

Jane P. White, Program Director

(In recognition of his substantial contribution in founding the Law Enforcement program and establishing the Mid-Michigan Police Academy at Lansing Community College, the Center was named in 1981 for Charles F. Pegg, Chief of Police, educator and leader in professionalism of law enforcement throughout Michigan.)

Criminal justice education can be defined as an interdisciplinary study of the structure, functions, decision processes, and problems of various systems that encompass criminal justice. Agencies include the police, courts, and correctional organizations, as well as security operations.

The programs of the Criminal Justice Systems are designed to prepare men and women for entering a variety of occupations such as law enforcement, corrections, juvenile work, parole and probation areas, security operations, in line responsibilities management, and administration. As set forth in the curriculum guides described later, the programs are designed to provide the student with a general background concerning criminal justice prior to their entering the specialized and pragmatic aspects of a particular occupation.

Additionally, continued education is offered for the practitioner in a variety of areas. The C. F. Pegg Center presents in-service training on an on-going basis and is available to criminal justice agencies to conduct and organize seminars as needs are expressed.

Curricular guides for each curriculum offered by Criminal Justice Systems are available in the Counseling offices and the Program Director's office; however, these guides are frequently modified to accommodate an individual student's background, goals, and abilities. The student is encouraged to discuss unique situations with an academic advisor within the Criminal Justice Systems area.

#### Law Enforcement Program

Associate Degree Program  
Curriculum Code: 460 Minimum 90 credits  
460 (Dual), 461 (Transfer)

Three different options are available for the student: Associate Degree, Associate Degree-Dual Career for entry into the Mid-Michigan Police Academy,

or the Associate Degree for transfer to a four year institution. These career degrees allow the student to focus on law enforcement with potential employment in a police agency.

#### Mid-Michigan Police Academy Program

Associate Degree Program  
Curriculum Code: 460 (Dual) Minimum 90 credits

The 460 (Dual Career) curriculum allows a student to apply to the Police Academy at Lansing Community College towards the end of this two year program. Michigan Law Enforcement Training Council mandates that a pre-service applicant must be eligible for a two-year Associate's degree upon completion of the Academy. A Spring and Fall Police Academy, 12 weeks long and in excess of 40 hours per week, occurs each year. Physical and general education pre-testing as well as other selection criteria are utilized for selection as mandated by law in Michigan. Staff is comprised of training officers from Lansing and East Lansing Police Departments, Michigan State University Department of Public Safety, and the Ingham and Eaton County Sheriff's Department.

#### Law Enforcement - Natural Resources Officer (option)

Associate Degree Program  
Curriculum Code: 463 Minimum 90 credits

For those students seeking employment in Department of Natural Resources. State of Michigan option to transfer to a four-year institution.

#### Corrections Certificate

Curriculum Code: 464 Minimum 23 credits

The Corrections Officers Training Act of 1982 mandates that 23 credits must be obtained for entry level into State and Local correctional officer positions.

#### Corrections Administration Program

Associate Degree Program  
Curriculum Code: 465 Minimum 90 credits

An Associate Degree is available in the Criminal Justice Systems Program in the area of Corrections Administration. A broad base of knowledge is afforded to corrections personnel as well as those anticipating entering this occupation. Many career paths are available including those of parole and probation officer, institutional corrections officer, half-way house supervisor/administrator, and various positions in juvenile correctional institutions. This is one of the fastest growing occupational fields in Michigan.

#### Security Administration Program

Associate Degree Program  
Curriculum Code: 469 Minimum 90 credits

An Associate Degree is designed to provide graduates for entry into many different occupations or to transfer to a four year institution. Employment opportunities include business firms, bank/financial industry, wholesale/retail industry, hospital/medical facilities, institutional facilities and manufacturing companies. The concepts of prevention and service by trained security personnel to their employer is emphasized. The private security industry has developed into a multi-billion dollar a year business and has grown in employment by 15 percent each year over the last decade.

Courses Offered in Criminal Justice (CJ) by Criminal Justice Systems—by Course Number, Title, Credits Allowed, and Description.

(NOTE—former course codes are in parentheses after the descriptions)

- CJ 101 Introduction to Criminal Justice** 4(4-0)  
Study of the process of criminal justice with emphasis on historical, constitutional and organizational systems. (LE 101)
- CJ 102 Crime: Causes and Conditions** 3(3-0)  
Analysis of causes and control of crime, sociological and psychological theories; measurement of crime; perspectives on punishment. (LE 102)
- CJ 103 Criminal Law** 4(4-0)  
Prerequisite: Program Area approval or CJ 101. Study of criminal law, classification of crimes, the elements of crime and defenses against criminality. Also the application of concepts to specific offenses and how to research the law. (LE 103)
- CJ 104 Basic Elements of Criminal Investigation** 4(4-0)  
Prerequisite: Program Area approval or CJ 103. Fundamentals of crime scene investigation and collection and preservation of physical evidence. (LE 104)

- CJ 105 Criminal Offense Investigation: Techniques and Procedures 4(4-0)**  
Prerequisite: Program Area approval or CJ 104. Advanced criminal investigation dealing with specific crimes, including preparing cases for prosecution and courtroom testimony. (LE 105)
- CJ 106 Juvenile Problems: Control and Prevention 4(4-0)**  
Legal basis for the criminal justice practitioner in dealing with the juvenile offender and juvenile victim as defined by Michigan law. (LE 106)
- CJ 107 Juvenile Problems: Control and Prevention Part II 4(4-0)**  
Prerequisite: CJ 106. Legal and procedural methods of the juvenile justice systems and agencies; specific behavioral patterns of juveniles identified. (LE 107)
- CJ 113 Women and Men in Criminal Justice 3(3-0)**  
Explores the issue of the woman's entry into the criminal justice work force; survey of self-awareness, career awareness, decision making processes. (LE 113)
- CJ 130 Introduction to Corrections 4(4-0)**  
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. Includes overview of history, sentencing, probation and parole and community corrections. (COR 111)
- CJ 131 Legal Issues in Corrections 4(4-0)**  
Study of current constitutional, Federal and State law as it pertains to penal institutions, inmates and correctional employees. Will acquaint the student with basic correctional law and inmate rights. The course will provide students with insight into policy considerations behind State and Federal law, legal process and court decisions. (COR 113)
- CJ 132 Probation and Parole 4(4-0)**  
An introductory level course in probation and parole with strong emphasis on counseling and interviewing skills, the proper use of supervision techniques and the writing of reports such as pre-sentence reports, initial interview reports, quarterly follow-up reports, probation and parole violation reports, etc. The history and theory of probation and parole. (COR 115)
- CJ 133 Juveniles in Corrections 3(3-0)**  
Prerequisite: Program Area approval or CJ 130. Legal aspects of the juvenile court process, detention case supervision and juvenile institutions after care will be examined. Both public and private agencies will be discussed in the treatment of the juvenile offender. (COR 133)
- CJ 150 Introduction to Private Security 4(4-0)**  
The course will provide an overview of the rapidly growing field of private security. Topics covered include development, philosophy, responsibility and functions. In addition, a perspective of the present state of private security, principles, legal authority and effect on society in general is presented. (SEC 111)
- CJ 151 Legal Aspects of Private Security 4(4-0)**  
Prerequisite: Program Area approval or CJ 150. The course presents the legal rights available to security officers, corporations, partnerships and individually owned businesses for the protection of assets from loss. Topics covered include powers of arrest, search and seizure, interrogation and interview and other laws applicable to private security officers and administrators. (SEC 113)
- CJ 152 Loss Prevention, Controls and Concepts 4(4-0)**  
Prerequisite: Program Area approval or CJ 150. The course addresses the "whip" of security as well as the problems of loss. The course adopts the concept of conceding loss control prevention is the primary effort needed. The course work will present a new perspective in looking at a persistent problem, loss of assets. (SEC 115)
- CJ 201 Criminal Justice Organization and Administration 4(4-0)**  
Prerequisite: CJ 101. Principles of organization including setting policy and procedure, planning, budgeting and goal setting for criminal justice agencies. (LE 201)
- CJ 202 Criminal Justice Management and Supervision 3(3-0)**  
Prerequisite: Program Area approval or CJ 201. Managerial functions including role and responsibility of supervisory employed in criminal justice agencies and implementing the policy and procedures. (LE 202)
- CJ 203 Criminal Procedure 4(4-0)**  
Prerequisite: Program Area approval or CJ 101. Pre-trial procedures with emphasis on U.S. and Michigan Constitutions. Includes law of arrest, search and seizure, interrogation and confessions and rules of evidence. (LE 203)
- CJ 204 Highway Traffic Administration 4(4-0)**  
Prerequisite: CJ 101. Study of Michigan Vehicle Code; effective traffic control procedures; elements of "selective" enforcement, parking and intersection control; procedures and policies for vehicle accident investigation; review of fatalities, causes, prevention and scope of accident investigation. (LE 204)
- CJ 206 Interviewing and Interrogation 3(3-0)**  
Prerequisite: Program Area approval. Techniques and procedures utilized in successfully interviewing or interrogating; behavioral guidelines; constitutional and court decisions regulating appropriate guidelines. (LE 206)
- CJ 207 Drug Investigation 3(3-0)**  
Analysis of drug abuse historically; current criminal activity in illegal drug trafficking; Federal and State laws regarding same. (LE 207)
- CJ 208 Organized Criminal Activities 3(3-0)**  
Development and history of organized crime throughout the world. Shows evolution of crime as a economic entity in legitimate, as well as illegitimate, sources of the business world. (LE 208)
- CJ 209 Patrol Procedures 3(3-0)**  
Prerequisite: Program Area approval or CJ 201. Study of basic patrol operation vital to police and security as a primary function; purposes, methods, types and means as well as deployment methods. (LE 209)
- CJ 211 Introduction to Crime Behavioral Analysis 3(3-0)**  
Prerequisite: Program Area approval and sophomore status. Review of basic concepts in human behavior applied to the investigation of crime scenes. Emphasis is placed on the origin and development of human motives and derivatives of behavior. (LE 211)
- CJ 212 Crime Scene Behavioral Analysis I - Homicide 3(3-0)**  
Prerequisite: Program Area approval or CJ 211. The criminal termination of human life is critically examined from the perspective of psychological motives. Emphasis is placed on the relationship between elements of a crime scene and the motives factors which may be inferred. (LE 212)
- CJ 213 Crime Scene Behavioral Analysis II - Sex Offenses 3(3-0)**  
Prerequisite: Program Area approval or CJ 212. Criminal sexual conduct is critically considered in terms of the behavioral motives understood to contribute to these offenses. An emphasis is placed on mapping the relationship between crime scene and perpetrator dynamics. (LE 213)
- CJ 214 Crime Scene Behavioral Reconstruction 3(3-0)**  
Prerequisite: Program Area approval or CJ 213. Emphasis is place on the skills for reconstructing the behavior involved in establishing the crime scene. From this dimension of reconstruction, the psychological dynamics of perpetrator conduct is considered with an emphasis on creating a demographic and life-style profile for the purpose of assisting criminal investigators.
- CJ 235 Basic Firearms 4(4-0)**  
Prerequisite: Program Area approval and sophomore status. Provides basic marksmanship, safety rules and regulations, range procedures, nomenclature and function of the various types of weapons. (LE 235)
- CJ 236 Basic Combat Firearms 4(4-0)**  
Prerequisite: Program Area approval and CJ 235. Intermediate instruction as a transition from bull's eye to field and combat shooting. (LE 236)
- CJ 242 Unarmed Defense 4(4-0)**  
Correct and effective methods of disarming and applying techniques to subdue subjects; search techniques and legal aspects of physical control. (LE 242)
- CJ 245 Report Writing/Criminal Justice 2(2-0)**  
Methods of precise writing techniques; proper documentation of work effort; application of skills in writing exercises.
- CJ 250 Correctional Institutions 4(4-0)**  
Examines the historical development of correctional institutions in the United States; organizational structure, purpose, programs, custody and security aspects and prisoner due process rights as well as the future projections of correctional institutions. (COR 210)

**CJ 251 Correctional Clients 3(3-0)**

Emphasis of this course is placed on the needs and identities and development of the recipient of correctional services. The purpose of the course is to assist the student in gaining insights into the development of sensitivity to the behavior and motivations of corrections clients. Specific problems of prisoners and intervention strategies are reviewed. (COR 212)

**CJ 252 Community Based Corrections 4(4-0)**

Designed to familiarize the student with the various agencies in the community that are utilized in a corrections' program which keep the offender in the community and help to maintain the community ties. (COR 225)

**CJ 255 Human Relations in Corrections 4(4-0)**

Prerequisite: Program Area approval or CJ 130. This course will emphasize the meaning and functions of culture and discrimination. Minorities in Michigan, affirmative action and how attitudes are formed will be reviewed. Ethics, values and professional responsiveness will be discussed. (COR 227)

**CJ 270 Advance Loss Prevention 4(4-0)**

Prerequisite: Program Area approval or CJ 152. A practical skills development course building on the concepts presented in CJ 152. Course work will concentrate on loss control security surveys, development, implementation and application in the field through visitation to on-site locations. (SEC 116)

**C J 271 Computers in Private Security 4(4-0)**

Prerequisite: Program Area approval or basic computer knowledge. Legal, technical and investigative concepts to aid the investigator to identify and pursue case development and prosecution regarding computer crimes. (SEC 220)

**CJ 281 Directed Independent Study 1(1-0)**

Prerequisite: Program Area approval. (LE 231)

**CJ 282 Directed Independent Study 2(2-0)**

Prerequisite: Program Area approval. (LE 232)

**CJ 283 Directed Independent Study 3(3-0)**

Prerequisite: Program Area approval. (LE 233)

**CJ 284 Directed Independent Study 4(4-0)**

Prerequisite: Program Area approval. (LE 234)

**CJ 285 Law Enforcement Internship 3(0-3)**

Prerequisite: Program Area approval and sophomore status. Twelve eight-hour shifts are scheduled with an approved police department. Required reports. (LE 247)

**CJ 287 DNR Officer Internship 15(0-15)**

Prerequisite: Program Area approval and sophomore status. Working in conjunction with State of Michigan, Department of Natural Resources, the student is assigned the entire term to a supervising senior conservation officer. (LE 248)

**CJ 286 Criminal Justice Agency Internship 8(0-8)**

Prerequisite: Program Area approval and sophomore status. Working in conjunction with a public or private human service agency, the student is assigned for 20 hours per week. Required reports. (LE 249)

**CJ 288 Corrections Internship 4(0-4)**

Prerequisite: Program Area approval. Working with a corrections facility, the student is responsible for fifteen eight-hour shifts along with report writing requirements. (COR 231)

**CJ 289 Corrections Internship 15(0-15)**

Prerequisite: Program Area approval. Working with a corrections facility, the student is responsible for an eight week, forty hours per week, assignment. The student is also required to submit written reports. (COR 230)

**Hospitality Systems—Division of Business**

Lawrence R. Mackey, Program Director

The public hospitality industry ranks first among the service industries in its number of employment opportunities. Opportunities for qualified persons are available worldwide. Specially trained supervisory personnel for positions in hotels, motels, and food service establishments are in demand and employers in the industry are showing a preference for college-trained person-

nel. Business authorities are predicting an accelerated growth in the hospitality industry in the latter 1980's and the 1990's.

The programs of the Hospitality Systems are designed to prepare the student for a career in hotel-motel management, food service management, tourism and travel agency operations, and culinary arts. The student receives a balanced program of academic studies and laboratory experience while being trained for one of these careers.

For the laboratory experience, the hotel-motel management and food service students have access to hotels, motels, food service operations, retirement homes, hospitals, clubs, and airline feeding companies where they receive training in the following career-related positions:

hotel-motel manager	food production manager
assistant manager trainee	assistant steward
front office manager	dining room supervisor
catering manager	assistant steward
assistant auditor	dining room supervisor
sales representative	assistant manager-institutional
reservation manager	food service hostess
entertainment director	director of school lunch programs
food service management	bartending
assistant manager/trainee	chef

The Hospitality Systems offers a two-year (90 credits) associate degree program with a choice of three curriculums in hotel-motel and food service management. It also offers an associate degree (90 credits) in a registered chef apprenticeship program sponsored by the U.S. Department of Labor and the American Culinary Federation. Certified Hotel Administrator (CHA) courses are also available, sponsored by the American Hotel-Motel Association. In addition, the Hospitality Systems area offers an associate degree (90 credits) in travel and tourism.

In respect to one-year (45 credits) achievement certificate programs, Hospitality Systems offer one program with a choice of two curriculums in hotel-motel and food service management.

Guides for each curriculum offered by Hospitality Systems are available in the counseling offices and the office of the program director; however, these guides may be modified to accommodate an individual students' background, goals, and abilities. Students are advised to discuss unique or unusual situations with an academic advisor within the Hospitality Systems area.

**Hotel-Motel and Food Service Management Programs**

Associate Degree Program Curriculum Code: 455, 457, 458  
Minimum 90 credits

Certificate Program Curriculum Code: 456, 459 Minimum 45 credits

These programs are designed to prepare the student for mid-management level positions as supervisory personnel in hotels, motels, restaurants, and other hospitality institutions.

**Travel and Tourism—Management Specialist Program**

Associate Degree Program Curriculum Code: 484 Minimum 90 credits

This program is designed to prepare students for careers in the travel and tourism industry. Abundant employment opportunities are available within the travel industry, both domestic and overseas, serving both pleasure and business purposes. Training includes an integration of all types of human travel, functions of travel agents, types of transportation accommodations, and familiarization with all materials used in a travel agency. Destinations, weather, climate, physical characteristics, and major tourist attractions, as well as compiling of charters and tours with the appropriate and successful technologies are discussed.

**Community Service Programs**

Whatever the need, the Hospitality Systems are 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, business people, 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.

Courses Offered in Hotel-Motel and Food Service (HMF) by the Hospitality Systems Area—by Course Number, Title, Credits Allowed, and Description.

**HMF 101 Introduction to Hospitality and Food Service Operations 4(4-0)**

Introduction to the hotel-motel-food service industry, its history, management departments, the industry's responsibilities, and opportunities for employment.

**HMF 102 Communications 4(4-0)**

Principles of oral and written communication and how to get your message accepted.

<b>HMF 103 Training and Coaching Techniques</b>	<b>4(4-0)</b>	<b>HMF 201 Hotel-Restaurant Merchandising</b>	<b>4(4-0)</b>
How to develop supervisory skills needed to train employees; devise economical and efficient work methods; improve day-to-day job performance; and assist in setting realistic job performance standards.		Sales promotion and methods. Why the sales effort fits into the total profit picture. How to measure and gauge accurately the worth of every type of business.	
<b>HMF 131 Food Production I</b>	<b>5(5-0)</b>	<b>HMF 203 Hotel-Restaurant Law</b>	<b>4(4-0)</b>
Basic concepts in menu planning, food purchasing, nutrition, sanitation, service, and food storage.		Creates an awareness of the responsibilities and rights which the law imposes upon and grants to the innkeeper, and illustrates the consequences caused by failure in those responsibilities. The attitude of the courts toward an innkeeper involved in litigation is also discussed.	
<b>HMF 132 Food Production II</b>	<b>5(5-0)</b>	<b>HMF 204 Human Relations/Supervisory Development</b>	<b>4(4-0)</b>
Prerequisite: HMF 131. Applied to quantity operation; managerial methods and concepts utilized in the administration of food functions. Includes preparation and service of food.		Ways to channel human behavior; areas of supervisory concepts and practices; mutual expectations of workers and management; hiring, training, coaching, counseling; leadership and guidance of workers.	
<b>HMF 133 Food Production III</b>	<b>5(5-0)</b>	<b>HMF 205 Hotel-Restaurant Management</b>	<b>4(4-0)</b>
Prerequisite: HMF 132. Quantity production methods. Includes basic terminology with overview of the entire food production and service area.		Subjects and problems of hospitality management: general concepts, personnel, guests, and technical problems of operations. For management in the hospitality industry or second year HMF students.	
<b>HMF 135 Quantity Food Purchasing</b>	<b>5(5-0)</b>	<b>HMF 206 Front Office Procedures</b>	<b>4(4-0)</b>
Standards of quality and quantity as applied to food, beverages, china, glass, silver, linen, furnishings, and supplies. Writing specifications. Procurement policies.		Organization, control, and operation of the front office in the reservation and sale of rooms, service. Keeping of accurate accounts, presenting bills and receipts of payment.	
<b>HMF 142 Meat Cutting I</b>	<b>5(5-0)</b>	<b>HMF 207 Financial Control and Management I</b>	<b>4(4-0)</b>
Preparing, processing, cutting, and merchandising beef and pork utilizing the basic equipment needed in retail meat cutting.		Principles, problems, and practices related to finance and their relative importance in the hospitality industry. Includes financial statements, interpretation of accounts, and statements unique to the hospitality industry.	
<b>HMF 143 Meat Cutting II</b>	<b>5(5-0)</b>	<b>HMF 208 Financial Control and Management II</b>	<b>4(4-0)</b>
Identifying and cutting wholesale and institutional cuts of pork, beef, lamb, poultry, and fish; preparation and merchandising techniques; cutting tests; yield and loss percentages; differences between retail and wholesale cuts.		Prerequisite: Program Area approval or HMF 207. Accounting practices and procedures for the restaurant and hotel manager.	
<b>HMF 144 Meat Cutting III</b>	<b>5(5-0)</b>	<b>HMF 211 Business Franchising</b>	<b>4(4-0)</b>
Wholesale meat cutting, processing, and freezing; best methods to use in cutting and freezing; storage times; best cuts and grades of beef for home, retail, and restaurant use. Preparation of various types of sausage; cleaning, filleting, and preparing fresh fish for cooking and storage.		Nature, scope, history, advantages, and disadvantages to franchiser and franchisee: starting and developing a franchise; recruiting franchise finances; training; real estate selection; franchisee-franchiser relations.	
<b>HMF 170 Menu Design and Layout</b>	<b>3(3-0)</b>	<b>HMF 212 Hotel-Restaurant Security</b>	<b>3(3-0)</b>
Selection of menu items, design and layout, projections of acceptability, and study of market areas. Field project.		Organization for a security program, protection of the physical facilities, guest protection, emergencies, and internal and departmental security measures.	
<b>HMF 190 Internship and Seminar</b>	<b>4(4-0)</b>	<b>HMF 215 Hotel-Restaurant Marketing</b>	<b>4(4-0)</b>
Prerequisite: Program Area approval. Placement in an approved training environment; credits for satisfactory work performance; wages for hours worked.		Applies marketing techniques and concepts to the food and lodging industries to include human factors, consumer demand, planning, and professional considerations.	
<b>HMF 191 Independent Study-HMF</b>	<b>1(1-0)</b>	<b>HMF 223 Club Management and Service</b>	<b>4(4-0)</b>
Prerequisite: Program Area approval.		Application of decision making techniques using concepts of finance, marketing, labor relations, management, and law in management of public and private clubs.	
<b>HMF 192 Independent Study-HMF</b>	<b>2(2-0)</b>	<b>HMF 225 Tourism</b>	<b>4(4-0)</b>
Prerequisite: Program Area approval.		Introduction to principles of tourism, its practices and philosophies.	
<b>HMF 193 Independent Study-HMF</b>	<b>3(3-0)</b>	<b>HMF 229 Convention Management and Services</b>	<b>4(4-0)</b>
Prerequisite: Program Area approval.		Scope and segments of the convention market are explored, what is required to meet customers needs, and methods and techniques that lead to better service.	
<b>HMF 194 Independent Study-HMF</b>	<b>4(4-0)</b>	<b>HMF 232 Food and Labor Cost Control</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval. Explore a topic or problem of interest through readings, research, etc.; at least ten hours work per credit.		Principles and procedures of effective food, beverage, and labor cost control and their adaptations to food and beverage operations.	
<b>HMF 195 Culinary Art Practicum</b>	<b>1(1-0)</b>	<b>HMF 233 Food Service Sanitation</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval.		Training in sanitation, hygiene, and food handling, with emphasis on service of food and beverages.	
<b>HMF 196 Culinary Art Practicum</b>	<b>1(1-0)</b>	<b>HMF 251 Wine Appreciation</b>	<b>2(2-0)</b>
Prerequisite: Program Area approval.		Introduces the five basic types of wine: red, white, rose, sparkling, and fortified. History of wines and their making; presentation and serving; judging by appearance, bouquet, and taste; selecting and storing for restaurant or retail use; and relationship between wines and foods.	
<b>HMF 197 Culinary Art Practicum</b>	<b>1(1-0)</b>		
Prerequisite: Program Area approval.			
<b>HMF 198 Culinary Art Practicum</b>	<b>2(2-0)</b>		
Prerequisite: Program Area approval.			
<b>HMF 199 Culinary Art Practicum</b>	<b>2(2-0)</b>		
Prerequisite: Program Area approval. On-the-job apprenticeship training under the supervision of a qualified chef. Practicum conducted by a staff member of LCC; supervised by an appointed member of the Capitol Professional Chefs' Association of Greater Lansing.			

<b>HMF 254 Mixology</b>	<b>5(5-0)</b>	<b>HMF 285 Food Specialities II</b>	<b>4(4-0)</b>
Opportunity to become a skilled bartender. Master over 100 mixed beverages and the proper serving of wines and beer. Combines the arts of mixology and hospitality with control systems involving alcoholic beverages.		Special Garde-Manger techniques such as ice and tallow sculpturing; manipulation of tools; buffet showpieces such as watermelon baskets, table arrangement of fresh fruits and vegetables, and similar accent decorative showpieces; pulled sugar.	
<b>HMF 256 Practical Bar Management</b>	<b>4(4-0)</b>		
Prerequisite: HMF 254. Aspects of the bar business on a management level. Includes merchandising, controls, purchasing, labor, etc.		Courses Offered in Tourism and Travel Agency Operations (TA) by the Hospitality Systems Area—by Course Number, Title, Credits Allowed, and Description.	
<b>HMF 260 Food Preparation: Basic Cookery</b>	<b>3(3-0)</b>	(NOTE—former course codes are in parentheses after the descriptions)	
Techniques in pre-planning, preparation, service, and cleanup involved in a meal. Includes buying lists, menus, recipes, costs, measuring units, and basic nutritional information.		<b>TA 100 Introduction to Travel Agency Operations</b>	<b>4(4-0)</b>
<b>HMF 261 Food Preparation: Gourmet/Basic</b>	<b>3(3-0)</b>	An introduction to career opportunities in the travel industry, the travel product, the selling of travel, the agencies policies and procedures and how agencies function. (HMF 224)	
Basic cookery using sauces and wines. Preparation of hors d'oeuvres, canapes, fondue, party foods, and meat cookery.		<b>TA 110 Travel Agent Ticketing/Domestic</b>	<b>4(4-0)</b>
<b>HMF 262 Food Preparation: Gourmet/Foreign</b>	<b>3(3-0)</b>	The fundamentals of air scheduling, reading and correctly using domestic air tariffs and calculating the correct fares for air itineraries. Learning correct procedures for issuing accountable and non-accountable tickets. (HMF 226)	
Numerous foreign foods prepared and tasted. Includes uses of wines and cheeses.		<b>TA 115 International Ticketing</b>	<b>4(4-0)</b>
<b>HMF 263 Food Preparation: Gourmet/American</b>	<b>3(3-0)</b>	An overview of international airline ticketing, routing and scheduling. Correctly issuing an accountable airline ticket. (HMF 227)	
Regional American cuisine; preparing and serving gourmet meals. Menus include garnishes, soups, sauces, entrees, vegetables, and desserts.		<b>TA 120 North American Travel I</b>	<b>4(4-0)</b>
<b>HMF 264 Food Preparation: Gourmet/Barbecue</b>	<b>3(3-0)</b>	History and development of the United States, Canada, Mexico and the Caribbean with specific location and identification projects. Major points of tourist interest will be discussed along with climate, ethnic influences, distances and time zones. (HMF 234)	
Meats, vegetables, hors d'oeuvres, salads, and desserts are prepared out-of-doors.		<b>TA 125 Foreign Country Travel II</b>	<b>4(4-0)</b>
<b>HMF 265 Food Preparation: Gourmet/Potpourri</b>	<b>3(3-0)</b>	A study of history and development of Central America, South America and Europe with specific location and identification projects. Major points of tourist interest will be discussed along with climate, distances and time zones. Passports, visas and other entry requirements. (HMF 236)	
A variety of foods and ideas for role as chef.		<b>TA 130 Foreign Country Travel III</b>	<b>4(4-0)</b>
<b>HMF 266 Food Preparation: Chinese Cookery</b>	<b>3(3-0)</b>	A study of history and development of the Middle East, Africa, Asia, and the Pacific with specific location and identification projects. Major points of tourist interest will be discussed along with climate, distance and time zones. Passports, visas and other entry requirements. (HMF 237)	
Chinese dishes such as sweet and sour pork, chicken almondine, and egg rolls; sauteing and red cooking.		<b>TA 140 Introduction to Ground Transportation</b>	<b>4(4-0)</b>
<b>HMF 267 Food Preparation: Advanced Chinese Cookery</b>	<b>3(3-0)</b>	Introduction to career opportunities in ground transportation. Discusses destinations, weather, climate, physical characteristics, major tourist attractions, and marketing techniques. Learn how to compile charters and tours. Introduction to Russell's Official National Motorcoach Guide for the United States and Canada. (HMF 217)	
More elegant and difficult Chinese dishes, and use of traditional Chinese spices and ingredients.		<b>TA 150 Tourism for the Travel Industry</b>	<b>4(4-0)</b>
<b>HMF 268 Food Preparation: Vegetarian Cookery</b>	<b>3(3-0)</b>	Prerequisite: Recommend TA 100. An introduction to the principles of tourism, practices and philosophies and offers a practical and realistic education in the business of tourism. (HMF 225)	
Preparation of nutritious foods using ingredients other than meat: main meals, nutritious snacks, sweets, frostings, beans, seed sprouts, and quick mixes.		<b>TA 190 Internship and Seminar</b>	<b>4(4-0)</b>
<b>HMF 270 Food Preparation: Microwave Cookery</b>	<b>3(3-0)</b>	Available to students who have completed or are approaching 200 hours of work experience in tourism or travel agency operations. A term project is required. (HMF 190)	
Production of various types of food with the microwave oven. Microwave oven capabilities.		<b>TA 200 Profitable Travel Marketing and Counseling</b>	<b>4(4-0)</b>
<b>HMF 271 Food Preparation: Advanced Microwave Cookery</b>	<b>3(3-0)</b>	An introduction to methods and techniques used in the modern travel agency covering the marketing environment, identifying consumer needs, examining the product, price and promotion. (HMF 110)	
Recipes from microwave cookbook and student recipes; covers technical and theoretical principles of microwave cookery.		<b>TA 210 Group Travel Operations</b>	<b>4(4-0)</b>
<b>HMF 275 Bakery Products</b>	<b>3(3-0)</b>	An overview of group tour business, where to find groups, how to organize group travel, and how to expand or start a group travel business. Includes how to assemble the group tour package. (HMF 222)	
Prepare types of baked products, with some cake and pastry decoration.		<b>TA 220 International Relations</b>	<b>4(4-0)</b>
<b>HMF 276 Advanced Pastry and Decorating Techniques</b>	<b>3(3-0)</b>	Discusses political, social, and economic relationships between countries and how it effects the travel and tourism industry. Defining and discussing cultural differences and introducing the foreign monetary system. (HMF 238)	
Decoration and presentation of cake and pastry items. Introduces colors, border design, decorating equipment, simple flowers, icing and sugar molding, cake masking, small cake, and pastry presentations.		<b>TA 230 Travel and Tourism Law</b>	<b>4(4-0)</b>
<b>HMF 280 Food Specialities I</b>	<b>4(4-0)</b>	Creates an awareness of the responsibilities and rights which the law imposes upon and grants to the travel agent, and illustrates the consequences caused by failure in those responsibilities. (HMF 239)	
Advanced Garde-Manger techniques, such as aspic-pates, chaud-froid, terrines, gelatines, and sauces; manipulation of tools; buffet table arrangement and organization.			
<b>HMF 281 Food Specialities III</b>	<b>3(3-0)</b>		
Preparation of soups and sauces from scratch, as well as utilization of convenience foods.			
<b>HMF 282 Food Specialities IV</b>	<b>3(3-0)</b>		
Preparation of vegetables and fruits from scratch, as well as utilization of convenience foods.			

**TA 240 Computerized Reservation Training 4(4-0)**

Prerequisite: TA 100. An introduction to and hands on experience with the M.A.R.S. Plus Computer System, a multi-access airline reservation system. Developing a basic passenger name record, modifying, pricing, finding air fares and rules. (HMF 240)

**TA 250 Advanced Computerized Ticketing 4(4-0)**

Prerequisite: TA 110 and TA 240. This is the second term of a two term course covering ticketing, fare computation (international and domestic) and maximum utilization of the computer with hotel, car rental, and train travel descriptions and bookings. (HMF 241)

**TA 260 Travel Agency Accounting 4(4-0)**

Basic travel agency accounting concepts: how financial statements are compiled and interpreted and accounting systems for the travel agency business. (HMF 221)

## Management Development Center— Division of Business

Olga Holden, Director

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 seminars, courses, and programs to meet the management development and training needs of organizations within the community.
- To provide these programs 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 training programs.
- 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 training 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 training programs consist of specifically prescribed courses and seminars responding to the requests 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 Management Development Center, in addition to developing specialized courses and seminars, offers the following supportive services for the management community:

1. advanced management seminars addressing topics of current interest in which guest speakers are brought in to help bridge the gap between theory and practice.
2. Total Instruction in Management Effectiveness (TIME Series) which is programmed instruction, covering materials on a variety of managerial topics, that can be taken at the individual's own pace and convenience. (MGT 350 through MGT 394)
3. Resource Material. The Center helps individuals in acquiring material to support their educational needs.

### Small Business Development Center (SBDC)

The Lansing Community College Business Division has organized a Small Business Development Center in cooperation with local business, government, and community agencies. The Small Business Development Center will provide services for those interested in starting or improving the management and operation of a small business. This Center is organized to:

1. to contribute to the economic growth and development of the Mid-Michigan area by assisting the small business community;
2. to function as a centralized resource to assist small business management;
3. to provide information concerning available services and educational programs relating to small business operations.

The staff of the Center will provide clients with consultation and information services. Where appropriate, clients will be referred to agencies and organizations which can provide specialized assistance for starting and/or improving the operation of a small business in Michigan.

Areas of small business support provided by the Center and referral agencies include: advising/counseling; economic forecasting & analysis, licensing, laws & regulations, taxes, small business assistance seminar & course offerings.

Courses, Training Programs and Seminars Offered by Management Development Center—by Course Number, Title, Credits Allowed, and Description.

### Total Instruction in Management Effectiveness (T.I.M.E. Series)

Management Development Center  
Division of Business

T.I.M.E. series has courses designed for those who wish to increase their managerial and marketing skills but who are unable to attend classes on a regular basis. Each TIME course is self-paced to allow maximum flexibility in scheduling, enabling participants to study at their own convenience. (See MGT 350 through MGT 399 as described below)

**MGT 350 Computer Basics for Management 2(2-0)**

Conceptual basis for understanding data handling systems, particularly electronic data processing. Includes computer memory, machine language programming, techniques, analysis of data, and creating data files.

**MGT 351 How to Buy and Use Small Business Computers 2(2-0)**

This is a self-study course for those who want to gain some general knowledge in the field of computers as applied to small businesses. Concepts presented are in the areas of hardware, software, evaluation, selection, financing security and systems management.

**MGT 352 Management Information Systems 2(2-0)**

Basic structure of Management Information Systems. Emphasis on communication with analysts, evaluation of potential effectiveness of systems, data collection, and report generation.

**MGT 353 Personal Selling Skills 2(2-0)**

Basic sales process; how to set up sales calls, customer buying habits, and support systems. Not a substitute for MKT 120, but a supplement and an elective.

**MGT 354 Management of Field Sales 1(1-0)**

Covers duties and responsibilities of the field sales manager, such as planning requirements, supervision, research, control, recruiting, selecting, hiring qualities, training, motivating, compensation, and counseling techniques.

**MGT 355 Purchasing Management 2(2-0)**

Understand purchasing activities within the company. Covers negotiations management, value analysis, goal setting, planning, human relations, and the psychology of management.

**MGT 357 Setting and Achieving Personal Goals 1(1-0)**

Define personal goals, identify strengths and weaknesses, overcome obstacles, solve problems, and match personal goals with company goals.

**MGT 358 Assertiveness for Career and Personal Success 1(1-0)**

Covers shifting from habitual reaction to action; increasing ability to get the job done; reducing fears and anxieties; maneuvering through the system; giving feedback; enhancing self-image; saying "no"; and avoiding defensive behavior in social situations.

**MGT 359 How To Build Memory Skills 1(1-0)**

How to increase concentration and power of retention, and how to organize thinking. Learn to remember facts, important dates, names, figures, reports, details, and speeches. Emphasis on sensory approach to memory, mnemonics, key-word alphabet, reading effectively, remembering what was heard, and memorizing a speech or presentation in minutes.

**MGT 360 Communication Skills for Managers 2(2-0)**

Understanding the communication process in modern business. Includes practical application in speaking, listening, interaction, and various channels of communication. How to receive and interpret feedback in organizations.

**MGT 361 A Manager's Guide to Human Behavior 2(2-0)**

Understanding of human behavior applied to management of productive organizations. Includes psychological concepts, interpersonal relations, and group behavior.

**MGT 362 Transactional Analysis for Managers 2(2-0)**

Principles and language of Transactional Analysis. How the theoretical approach to TA can be applied in a variety of business situations.

**MGT 363 Basic Business Psychology 1(1-0)**

How to use psychology to help select the right person for the job, overcome decision-making problems, motivate high and low achievers, evaluate work performance, open up lines of communication, reduce conflict, and use the organization climate to influence people in a positive way.

- MGT 364 Supervisory Management** 2(2-0)  
In-depth study of the supervision process for managers at all levels. Includes the planning process, organizational skills, supervision of workers, cost control, and budgeting.
- MGT 365 How to Be An Effective Supervisor** 1(1-0)  
Supervisory techniques and concepts for new supervisors. Overview of the supervisor's role, planning, delegation of work, decision-making, motivation, and communication.
- MGT 366 How To Manage People At Work** 2(2-0)  
Aspects of human behavior that relate to the worker. Includes employee needs and productivity potential, motivation, communication, and the control process. Focus on human needs and the employee-manager relationship.
- MGT 367 Stress Management** 1(1-0)  
Helps students answer the most critical questions about stress: What causes stress inside-outside the organization? How can I recognize stress—and minimize it—in myself and in the people who work for me? What are the consequences of stress if it is left untreated?
- MGT 368 What Managers Do** 2(2-0)  
Clarify the student's perceptions of the manager's job. Particular emphasis will be placed on relationships, contributions, hierarchy structure, superior-subordinate relations, and social interactions.
- MGT 370 Effective Presentation** 2(2-0)  
Principles and techniques for effective oral presentation; foundation to build personal presentation and other communicative skills.
- MGT 371 How To Run Productive Meetings** 2(2-0)  
Training to organize and run policy meetings, creative meetings, sales meetings, information meetings, and problem-solving conferences. Included are twelve questioning techniques to guide and control meetings.
- MGT 372 Getting Results Through MBO** 2(2-0)  
Basic concepts of Management by Objectives in business organization. Organizational goals are then determined, and objectives are established and implemented.
- MGT 373 How To Manage by Objectives** 2(2-0)  
Prerequisite: MGT 372. Principles and procedures of managing by objectives, its benefits, and its various applications. Practical operating guide for those who wish to introduce and develop the concept as a management system in their organization. Alternative techniques to those individuals already practicing MBO.
- MGT 374 Personnel Management** 2(2-0)  
Explores human resource planning, staffing, appraisals, training, development, benefits, wage and salary administration, labor relations, and safety policies.
- MGT 375 Zero-Base Planning and Budgeting** 1(1-0)  
To help managers and top executives lead an entire company toward a results-based system. Covers terms, planning, decision packages, ranking, implementation, administration, problems, and solutions.
- MGT 376 Performing the Operations Analysis** 2(2-0)  
Provides the student with a comprehensive understanding of the various aspects of operations analysis. Special emphasis will be placed on marketing, personnel, manufacturing, purchasing and engineering.
- MGT 377 Finance for Nonfinancial Managers** 2(2-0)  
Provides the manager with an understanding of finance. Reading and interpreting various financial statements and reports.
- MGT 378 Project Management** 2(2-0)  
Introduces the basics. How to define authority, responsibility, accountability, quality assurance, quality control, PERT, line of balance, and input output charts.
- MGT 379 How To Be A Successful Product Manager** 2(2-0)  
For the practicing manager and the future manager. Introduction, marketing, and sales of products; continuous review and analysis of the product or product lines for profitable growth and marketing position.
- MGT 380 Problem Solving for Managers** 1(1-0)  
How to generate innovative ideas, select the most useful solution, translate solution into practical terms and specific strategies, and gain support for your ideas and put them into action.
- MGT 381 How Successful Women Manage** 2(2-0)  
A comprehensive management course geared to the upwardly mobile woman. The course will present a thorough overview of the various functions and processes involved in managing and will discuss possible explanations for women's slow rate of progress in attaining managerial positions.
- MGT 382 Decision Making** 2(2-0)  
Explores the basic differences between the satisfying and optimizing decision model, and various kinds of measurement scales. Topics such as decision processes, recognizing the need for change and predicting the outcomes of alternatives will be covered.
- MGT 383 Training for Productivity** 1(1-0)  
Techniques, strategies, and skills necessary to identify problems that training can solve; create a climate that encourages and supports the self-directed worker; and structure a training or development program.
- MGT 384 Modern Production Management I** 2(2-0)  
Principles and techniques required for making short-term decisions necessary to operations control. Orientation to analytical methods. Includes capital costs and investment criteria, products and process design, plant location, facilities design, production standards, and man-machine systems.
- MGT 385 Modern Production Management II** 2(2-0)  
Overview of advantages and disadvantages of distribution systems, high-volume production-distribution systems, intermittent systems, and large-scale project systems. Includes production-inventory systems, forecasting, "systems concepts," quality control, and machine maintenance.
- MGT 386 Getting Results With Time Management** 2(2-0)  
Emphasis on situational analysis, identification of problem areas, and action steps to be taken. Studies underlying causes of poor time utilization, including insufficient or improper delegation.
- MGT 387 Successful Delegation** 1(1-0)  
Rules of delegating that guarantee task completion; accountability in measurable terms; matches delegated tasks with abilities; encourages subordinates to make decisions on their own; monitor performance to avert employee frustration.
- MGT 389 How to Write a Business Plan** 2(2-0)  
Create a plan that tells the student where the business is now, where it is headed, how to get back on track. This course has been designed for managers with little or no planning background. It is a step-by-step guide that actually helps build a business plan for a business.
- MGT 391 How To Evaluate Performance and Assess Potential** 1(1-0)  
Systems for evaluating an employee's performance and assessing potential. Effective evaluation and assessment increases a manager's ability to judge subordinates accurately, thereby making decisions on promotions, raises, training procedures, morale building, and assignments of tasks easier.
- MGT 392 How To Develop Dynamic Leadership** 2(2-0)  
Focuses on three styles of leadership. Activities for self-analysis to determine one's personal style of leadership. Compare styles and the consequences of each leadership posture. Suggestions for change of style are provided, and the process for moving toward dynamic leadership is presented.
- MGT 393 Labor Relations for Supervisors** 2(2-0)  
Understanding of proper administration of a labor contract. Includes arbitration procedure, preparation, appearing as company witness, effective disciplinary procedures and contract provisions. Step-by-step analysis of grievance procedures with emphasis on why and how grievances should be handled.
- MGT 394 Managing Labor Relations** 2(2-0)  
Understanding of labor/management relationships. Emphasizes labor relations today, negotiations, bargaining power, and advance planning. Aspects of dealing with a union.
- MGT 395 Negotiating Your Way to Success** 1(1-0)  
How to approach bargaining confidently; timing and association techniques; concessions; communicate positions clearly and precisely; and how to identify real but often hidden needs.

**MGT 396 Executive Writing, Speaking, and Listening Skills 1(1-0)**

Tools needed to put ideas across effectively in business situations. Includes interviewing techniques, writing memos and proposals, nonverbal communications, and making presentations.

**MGT 398 Using Mathematics As A Business Tool 2(2-0)**

Increase familiarity with formulas and calculations most frequently used in business. Apply various ratios to test a company's strength, use statistical tools to read results more accurately, forecast more reliably, and assess the viability of a project through breakeven analysis.

**Management (MGT)**

Management Development Center  
Division of Business

**MGT 399 The Executive Guide to Commercial Law 2(2-0)**

Negotiating steps necessary to produce a legally enforceable contract. Understanding of oral promises made to employees or outside contractors, conditions under which a contract can be legally voided, and analyzes liability under employment contracts.

**MGT 903 Train-the-Trainer 3(3-0)**

The new trainer and the seasoned trainer can use this training program to re-think training methods and techniques and to develop some additional ones. The emphasis is on the "how-to's" of training with ample opportunity to practice training-related skills. MDC Seminar.

**MGT 924 Self Motivation 1(1-0)**

This seminar is designed to help participants become more self-aware and develop habits which will aid them in becoming more self confident and therefore more highly motivated toward personal achievement. MDC Seminar.

**MGT 926 Managing Discipline 1(1-0)**

This seminar will cover the process of discipline from the approach that it can be managed in a positive manner, if certain conditions are present in the relationships that exist between managers and employees. MDC Seminar.

**MGT 937 Interviewing Techniques 2(2-0)**

Skills in planning, preparing, establishing rapport, asking effective questions, closing, and acting upon accumulated information. Improve ability to gather information, counsel and coach employees, conduct job interviews, and appraise performance. MDC Seminar.

**MGT 943 Problem Solving 1(1-0)**

Designed for business people who use the steps in problem solving in order to improve their decision making capability. Opportunity is provided to practice the skills used in problem solving and decision making. MDC Seminar.

**MGT 958 Management Team Building 1(1-0)**

Principles and practices to help a work group function more effectively; covering leadership, communication, decision-making, and conflict resolution. MDC Seminar.

**MGT 964 Employee Performance and Appraisal 1(1-0)**

Personal discussions with employees centering on job performance are important opportunities for communication in all aspects of the job relationship, and the key to harnessing skills, attitudes, and motivation. Counseling, goal setting, and feedback are developed. MDC Seminar.

**MGT 972 Job Analysis/Job Description 1(1-0)**

This seminar will review some of the established methods and procedures for obtaining job information. It is also designed to allow class participants to actually design and go through a job analysis procedure so they can develop their own analysis for their particular business. MDC Seminar.

**MGT 973 Self Assessment 1(1-0)**

Personal data spelled out, insights about leadership strengths, areas for minor alterations, basis for decisions about developing one's most productive management style. MDC Seminar.

**MGT 975 Supervising for Motivation 1(1-0)**

"How do we get people to do their best?" Key steps to take in improving employee motivation, affecting productivity as well as improving employee morale. MDC Seminar.

**MGT 977 Communicating for Results 1(1-0)**

The interpersonal communication process is studied in light of the demands

on a manager and supervisor. Effective communication is needed when giving instructions, problem solving, and clarifying information for employees. MDC Seminar.

**MGT 978 Time Management in Business 1(1-0)**

Systematic approach to managing yourself and others through analyzing and correcting time problems. MDC Seminar.

**MGT 982 Developing Your Business Career 1(1-0)**

Personal career planning techniques. Self direction and responsibility for career growth. Becoming successful in one's current position first and then building long-term career goals. MDC Seminar.

**MGT 985 Coaching and Counseling 1(1-0)**

Helps supervisors or managers deal with employee performance and personal problems. Several specific skills are developed in order for the participant to implement a comprehensive program of coaching and counseling. MDC Seminar.

**MGT 986 Pre-Supervisory Training 1(1-0)**

Skill assessment, transitional issues, management techniques, and creative problem-solving techniques. MDC Seminar.

**MGT 988 Stress Management 1(1-0)**

Skills to prevent or alleviate the effects of job tension, stress, and burn-out. MDC Seminar.

**MGT 989 Employee Relations for the Manager 1(1-0)**

Cost efficient and legal approaches to combating turnover, absenteeism, employee grievances, disciplinary problems, and poor performance. MDC Seminar.

**MGT 994 Written Communication Skills for the Manager 1(1-0)**

Will offer professionals the opportunity to look at and practice their writing skills from the stand point of clarity, speed and image. Because professionals often are responsible also for the writing of subordinates, the seminar will offer practice in critiquing and editing another person's writing. MDC Seminar.

**MGT 996 Supervisory Skills Training 3(3-0)**

Seven, half-day sessions. Each is devoted to a specific management skill: Self Assessment, Employee Motivation, Communication Skills, Time Management, Problem Solving, Performance Appraisal, Team Work, and Coaching-Counseling Employee. MDC Seminar.

**Marketing (MKT)**

Management Development Center  
Division of Business

**MKT 151 Effective Retail Selling 1(1-0)**

Opportunity to review, update, and add to their selling skills. MDC Seminar.

**MKT 163 Customer Relations 1(1-0)**

Creating good customer relations and improving the image of the organization. Increase motivation through positive attitude, effective communication with different types of customer personalities, handling complaints, and strategies for meeting needs to satisfy customers. MDC Seminar.

**Small Business Management (SBM)**

Management Development Center  
Division of Business

**SBM 250 Starting a Small Business 1(1-0)**

Facets in starting and operating a small business. Overview of the steps in planning, making decisions, and developing solutions. Accounting system and records required. Assist in making the decision to choose small business management as a possible vocation. MDC Seminar.

**SBM 252 Financial Management for Small Business 1(1-0)**

Alternative sources of financing available. Profit and cash planning skills required to determine the amount of financing. Prepare to meet financial needs effectively. MDC Seminar.

**SBM 254 Record Keeping for Small Business 1(1-0)**

A seminar to introduce and increase your working knowledge of the accounting process and the maintenance of accounting records; including ledgers, income statements, and preparation for income tax time. MDC Seminar.



**SBM 256 Legal Considerations for Small Business 1(1-0)**

Practical topics include formation, premises, franchising, consumer protection and its effect on business, employee relations, relations with other businesses, and benefits with emphasis on taxation and securities. MDC Seminar.

**SBM 258 How to Buy/Sell/Evaluate Existing Small Businesses 1(1-0)**

You can buy/sell your own business now at a fair price with profitable terms. What you will learn—how to determine its worth, how to structure offers/sales, what statistics are needed, how to "read the books," how to evaluate the land or lease, how to finance, what legalities are involved, how to market, how to manage. MDC Seminar.

**SBM 260 Marketing for Profit for Small Businesses 1(1-0)**

The marketing concept and the marketing mix (product, promotion, pricing, and place) related to business will be covered. Also sales strategies, planning and research, customer buying patterns, and pricing strategies necessary to produce profit maximization. MDC Seminar.

**SBM 262 Advertising and Promotion for Small Business 1(1-0)**

Why, where, when, and how to advertise and promote questions will be answered in this seminar. Strategies using various media for an effective advertising and promotional approach will be explored. MDC Seminar.

**SBM 264 Customer Relations for Small Business 1(1-0)**

All employees have the potential for creating good customer relations and for improving the image of the organization. The critical factors included in the program are: positive mental attitude, effective communications with customers, and handling customer complaints. MDC Seminar.

**SBM 270 Computers in Small Business 1(1-0)**

Includes use for accounts payable, accounts receivable, payroll, inventory control, general ledger, and profit and loss statements. How computer application can meet the needs of various businesses explored. Cost effectiveness of ownership vs. buying computer time. MDC Seminar.

**SBM 272 Employment Practices for Small Business 1(1-0)**

The program will focus on areas of concern to every manager and supervisor including: interviewing, evaluating, confrontation, discipline and the legal aspects of employment procedures. MDC Seminar.

**SBM 274 Loss Prevention/Inventory Control 1(1-0)**

Bottom line profit is effected by how successful small business owners are in controlling people-related theft and in using effective cost-control techniques. This seminar combines the necessary people and "paper" control techniques useful in small business assets management. MDC Seminar.

**SBM 276 The Business Plan 1(1-0)**

A seminar to familiarize participants with the concept of business planning including a review of the planning process and how to develop and maintain a business plan—with emphasis on the use of small computers to assist the process. MDC Seminar.

## Management Systems—Division of Business

William P. Holda, Program Director

The Management Systems area is broad and diversified in its course offerings. Courses leading to certificates and/or associate degrees are offered in the following areas: Management, Advanced Management, Personnel/Labor Relations, Marketing, Sales, Banking Management, Real Estate, Assessment Administration, and Transportation and Traffic Management.

The courses are designed to impart knowledge and develop skills and abilities that will prove practical, useful, and marketable. The Management Systems Area continually strives to maintain relevance and a high level of quality throughout the course offerings. Its instructors are experienced in the topic area(s) they teach. With their strong vocational backgrounds, they are able to blend theory and practice in a unique, meaningful way.

Advisory committees have been established for each of the programs offered. These committees, composed of successful practitioners in the various program areas, assist in reviewing course offerings and keeping in touch with the business community and emerging trends in business and industry.

Curricular guides for certificates and associate degrees are available in the Counseling offices or the Program Director's office area. Faculty advisors are available to assist in planning.

### Assessment Administration Programs

Associate Degree Program	
Curriculum Code: 490	Minimum 90 credits
Certificate Program	
Curriculum Code: 491	Minimum 18 credits

These programs are sponsored in cooperation with the Michigan Association of Equalization Directors and the staff of the Michigan State Tax Commission. 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 of the program results in either the issuance of a Certificate of achievement or an Associate Degree in Assessment Administration, depending upon the curriculum completed.

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:

1. to increase the knowledge and ability of the student relative to property appraisal procedures,
2. to provide for a more cooperative working relationship between appraisers in adjacent areas,
3. to acquaint the student with the various sources of information available to appraisal personnel,
4. to provide an effective and organized training vehicle for professional advancement of personnel in property valuation and assessment administration,
5. to serve as a basis for certification of personnel in the appraisal field,
6. to promote standardization of procedures, forms, reports, etc.

### Banking Management Programs

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 in affiliation with the American Institute of Banking (AIB). AIB members also may earn various diplomas through National AIB. The local chapter of the AIB elects members to serve on the advisory committee for the program to assure continued relevancy for each course.

### Management Programs

Associate Degree Program	
Curriculum Code: 470	Minimum 90 credits

This program provides training for management in various fields as determined by the needs of students and the community. Classic management duties of planning, directing, organizing and controlling are presented to meet 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

This, a one-year(45 credit) curriculum in management, is designed primarily for students desiring positions at 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 Systems area is recommended to a student when choosing electives toward his or her desired goals. A Certificate of Achievement is granted to those students successfully completing the curriculum.

### Certificate in Advanced Management

Curriculum Code: 472	Minimum 45 credits
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The completion of this curriculum results in the issuance of a Certificate in Advanced Management. It is designed especially for those who have at least an associate degree and/or extensive employment background. The courses in this curriculum are excellent for those who are seeking a program with up-to-date management courses of high level quality and content. Management advisors are available to tailor an individual program according to relevant background and future goals of the student. The Certificate in Advanced Management can lead to a Bachelor's Degree in Business Administration at Northwood Institute, Midland, and at Detroit College of Business, Flint. Most course work for these Bachelor's degrees is taken at Lansing Community College. There are six majors available for the B.A. degree program.

### Cosmetology Management Program

Associate Degree Program	
Curriculum Code: 470	Minimum 90 credits

An associate degree program is offered to students who have completed

cosmetology certification requirements. Transfer credits into the program are available to those who are certified. Students must complete all core requirements on 470 curriculum.

#### Labor Relations Program

Effective labor relations has become an essential ingredient in successful management activity. The impact of collective bargaining has created a demand for skilled persons to negotiate and administer contractual agreements.

Complex legislation has created additional demands upon administrators who must be capable of achieving and maintaining a healthy balance between the pressures of unionized employees and management decisions and procedures that will ensure the future of their organization and protect the public welfare. As a result of such demands the need for highly trained men and women in labor relations continues.

A departmental Certificate in Labor Relations will be awarded to all students who successfully complete the following Labor Relations Courses: LR 200, LR 201, LR 202 and LR 203.

#### Transportation and Traffic Management Programs

Associate Degree Program

Curriculum Code: 495 Minimum 90 credits

Certificate Program

Curriculum Code: 496 Minimum 18 credits

#### Transportation Management

Certificate Program

Curriculum Code: 497 Minimum 9 credits

#### Transportation Law

A two-year, six-term program in Transportation and Traffic Management is offered in cooperation with the Transportation Club of Lansing. (Associate Degree Program—Curriculum Code 495.)

A Transportation and Traffic Management Certificate Program, in cooperation with the Transportation 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 Management Systems area. 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 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.)

#### Marketing Programs

Associate Degree Program

Curriculum Code: 475 Minimum 90 credits

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

Certificate Program

Curriculum Code: 476 Minimum 45 credits

This is a condensed one-year (45 credit) curriculum in marketing for qualified students. The courses are designed to meet the needs of both students and employers. The curriculum has special value to those already employed who desire upgrading or promotion. A Certificate of Achievement in Marketing is granted to those students who successfully complete this curriculum.

Electives may be chosen from the courses listed on the curricular guide. Staff advisors in Management Systems will recommend electives to students in accordance with the students' needs and goals.

#### Sales Programs

Associate Degree Program

Curriculum Code: 479 Minimum 90 credits

This program offers educational training to develop behavioral science and selling skills necessary for students entering the dynamic 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 field of Sales. The object of this two-year program is to train individuals to participate 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 of the curriculum, and the credits earned are transferable toward the requirements of the two-year associate degree program in sales.

#### Real Estate Program

Associate Degree Program

Curriculum Code: 473 Minimum 90 credits

Certificate Program

Curriculum Code: 474 Minimum 20 credits

The real estate program can provide the background for persons of all ages to engage in the many activities within the real estate industry.

Through a series of courses leading to a Certificate or Associate Degree, it is possible to specialize in a number of vocations involving real estate that need experienced and knowledgeable personnel.

Some of the specialties dealing with real estate include selling residential, commercial and industrial properties; appraising all types of property; real estate investment counseling; property management; urban planning; industrial planning; a housing specialist, mortgage specialist, or advertising specialist; or serving as a closing officer in a real estate brokerage office.

Since the real estate community is involved with this program, the student can benefit from close association with those already in the field who are knowledgeable and willing to give their time in sharing their knowledge.

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 Program

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 such as accounting, finance, management, marketing, business education, and other related business professions. Each college or university has its own curricular guide for students to follow to allow a smooth, efficient transfer.

#### International Business Program

Associate Degree Program

Curriculum Code: 482 Minimum 90 credits

The associate degree program in International Business is designed to increase international understanding of students through the study of peoples of the world, their cultures, and their languages. The future economic welfare of the the United States will depend on increasing international skills in the business community and creating a public awareness of the internationalization of our economy. The courses and experiences provided through this curriculum address this important need.

Courses Offered by the American Institute of Banking (AIB) and Management Systems—by Course Number, Title, Credits Allowed, and Description.

#### AIB 101 Principles of Banking 3(3-0)

Fundamentals of bank functions from a descriptive (and operational) perspective.

#### AIB 102 Effective English 3(3-0)

Covers fundamental principles for using the English language and points out the ways in which communication may be improved.

#### AIB 106 Math for Bankers 3(3-0)

Fundamental arithmetic tools, fractions, decimals, business documents, pay-rolls, statistical data and graphs, depreciation, and simple interest.

<b>AIB 131 Fundamentals of Bank Data Processing</b>	<b>3(3-0)</b>	<b>AIB 240 Management of Commercial Bank Funds</b>	<b>3(3-0)</b>
Introduces the principles and purposes, language, and the application of data processing in a bank environment.		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.	
<b>AIB 203 Trust Service</b>	<b>3(3-0)</b>	<b>AIB 241 Bank Investments</b>	<b>3(3-0)</b>
Services rendered by institutions engaged in trust business. Primarily for the personnel of trust departments of commercial banks and trust companies.		Principles of bank investments, the relationship of investment management to other functional areas of the bank, and the factors that affect investment strategies and decisions. Also, the nature of risk, liquidity, and yield, how each is measured, and how they are related.	
<b>AIB 204 Credit Administration</b>	<b>3(3-0)</b>	<b>AIB 242 Business Financial Management</b>	<b>3(3-0)</b>
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.		Acquaints the student with principles of finance as applied to the operations of a profit-seeking firm. Overview of the business financial manager's functions. Measuring needs for, acquiring, and using business funds are points emphasized.	
<b>AIB 205 Real Estate Financing</b>	<b>3(3-0)</b>	Courses Offered in Business (BUS) by Management Systems—by Course Number, Title, Credits Allowed, and Description.	
Covers mortgage markets, financing residential and special purpose property, administrative tasks, analysis of mortgage credit, policies related to collection, administration of a bank's mortgage portfolio, and analysis of real estate investment yields.		<b>BUS 118 Introduction to Business</b>	<b>4(4-0)</b>
<b>AIB 206 Money and Banking</b>	<b>3(3-0)</b>	Principles, problems and practices related to our economic framework. Includes organization, production, marketing, personnel administration, finance, and economics.	
Prerequisite: AIB 101. Practical aspects of money and banking, basic monetary theory, 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 affecting yield curves and the structuring of portfolios.		<b>BUS 191 Independent Study-Management</b>	<b>1(0-1)</b>
<b>AIB 207 Installment Lending</b>	<b>3(3-0)</b>	Prerequisite: Program Area approval.	
Techniques of installment lending, establishing credit, obtaining and checking information, servicing the loan and collecting, inventory financing, special loan programs, business development, advertising, and public relations.		<b>BUS 192 Independent Study-Management</b>	<b>2(0-2)</b>
<b>AIB 208 Commercial Lending</b>	<b>3(3-0)</b>	Prerequisite: Program Area approval.	
Commercial loan processing, procedures and servicing, small business loans, real estate loans, dealership loans and related areas that qualify for commercial loan status.		<b>BUS 193 Independent Study-Management</b>	<b>3(0-3)</b>
<b>AIB 209 Bank Cards</b>	<b>3(3-0)</b>	Prerequisite: Program Area approval.	
Overview of the bank card industry, its role in the economy, and basic operational policies and procedures.		<b>BUS 194 Independent Study-Management</b>	<b>4(0-4)</b>
<b>AIB 212 Analysis of Financial Statements</b>	<b>3(3-0)</b>	Prerequisite: Program Area approval. Special research projects and individual readings to apply past or present aspects of personal and professional experience to academic area of interest. Minimum of ten hours work per credit required.	
Characteristics of financial statements and financial statement analysis; some accounting necessary for profitable study of financial statement analysis.		<b>BUS 213 Teller Training</b>	<b>4(4-0)</b>
<b>AIB 213 Federal Regulation of Banking</b>	<b>3(3-0)</b>	Reviews activities of a bank teller covering identifications, check cashing, money handling, the teller machine, coin dispenser, and use of the adding machine.	
The "why" and "what" of federal bank supervision: agencies regulating banks, bank charters, bank reports and examinations, federal limitations, and regulation of bank expansion.		<b>BUS 214 Advanced Teller Training</b>	<b>3(3-0)</b>
<b>AIB 214 Law and Banking</b>	<b>3(3-0)</b>	Prerequisite: BUS 213 or Program Area approval. Reviews check cashing techniques, endorsements, collection of checks through the Federal Reserve System, identifications, money handling, teller differences, counterfeiting, bank services, effective communications, and customer relations.	
Legal principles and 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 extracts from the Uniform Commercial Code.		<b>BUS 223 Management and Supervisory Development</b>	<b>3(3-0)</b>
<b>AIB 215 Negotiable Instruments</b>	<b>3(3-0)</b>	Management principles for first-line supervisors, managerial functions of planning, organizing, staffing, directing, and controlling, working through policies and procedures, decision making, and the responsibilities of supervisors for overall work performance and employee development and evaluation.	
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; impact of the law and applicable bank regulations.		<b>BUS 224 Personnel Management</b>	<b>3(3-0)</b>
<b>AIB 221 Branch Management</b>	<b>3(3-0)</b>	Principles, problems, and practices of modern business, government, and other organizations involved in the handling of employees from recruiting through post-retirement.	
Overall view of branch management, latest developments in banking, and techniques of management.		<b>BUS 225 Principles of Management</b>	<b>3(3-0)</b>
<b>AIB 222 Bank Management</b>	<b>3(3-0)</b>	Management principles for middle and upper level managers: management relationships, communications, morale, motivation, history of management, theoretical framework, practical applications, qualifications of executives, business ethics, and managerial functions.	
New trends in the philosophy and practice of bank management from the perspective to top management.		<b>BUS 228 Human Relations in Business and Industry</b>	<b>4(4-0)</b>
<b>AIB 230 Marketing for Bankers</b>	<b>3(3-0)</b>	Application of psychological principles and methods to selection, placement, training, supervision, evaluation and motivation of workers' and managers' efficiency. Also, accident prevention, problems of human relations, and psychological illnesses in business and industry.	
Concepts and philosophies of marketing; marketing information, research, and targets; marketing mix (product strategy, distribution strategy, advertising and sales promotion, personal selling, and pricing strategy); and the methods of market planning.		<b>BUS 229 Public Relations</b>	<b>3(3-0)</b>
		Techniques for those in managerial positions, principles of creating and maintaining good public relations, including employee-employer relations, customer-employee relations, and the total public relations effort.	

- BUS 236 Communication Techniques in Business** 3(3-0)  
Oral techniques of public speaking, examining the business speaker, the audience and the text from a business viewpoint. Also studying some issues and potential problems pertaining to listening, persuasion, interpersonal and nonverbal communication.
- BUS 251 Stock Market Essentials** 3(3-0)  
Study of securities market to give framework with which to set investment goals and achieve desired results. Introduced to some of the more prevalent theories, concepts and skills to aid in developing strategies and making sound investment decisions related to the stock market.
- BUS 254 Introduction to Investments** 3(3-0)  
Fundamental principles of investing, developing terminology, types of alternate investments available, and personal financial planning.
- BUS 260-265 Transportation and Traffic Management** each 3(3-0)  
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.
- BUS 269-271 Transportation Law I-III** each 3(3-0)  
Three term sequence of Transportation Law. Study the Interstate Commerce Act, amendatory legislation, decisions of the Interstate Commerce Commission (I.C.C.) and courts, I.C.C. rules of practice, drafting complaints, remedial provisions. Preparation for the I.C.C. Practitioner's License.
- BUS 280 Property Valuation and Assessment Administration I** 3(3-0)  
Introduction to property tax, public relations, property description, tax mapping and aerial photograph interpretation.
- BUS 281 Property Valuation and Assessment Administration II** 3(3-0)  
Property tax law; cost, market, and income approach to value; and land economics.
- BUS 282 Property Valuation and Assessment Administration III** 3(3-0)  
Residential and agricultural appraisals and soil survey.
- BUS 283 Property Valuation and Assessment Administration IV** 3(3-0)  
Prerequisite: BUS 282 or equivalent. Appraisal of commercial and industrial properties.
- BUS 284 Property Valuation and Assessment Administration V** 3(3-0)  
Prerequisite: BUS 283 or equivalent. Local government financing, preparation of tax roll, eminent domain, assessment, equalization and allocation.
- BUS 285 Property Valuation and Assessment Administration VI** 3(3-0)  
Prerequisite: BUS 280 or equivalent. Valuation and auditing of personal property, classification and equalization of appeal procedures, allocation, truth in assessment, taxation, and Headlee rollback computations.
- BUS 290-293 Management Internship** each 3(3-0)  
Prerequisite: Program Area approval. Weekly, on-campus, independent seminars with the coordinator and the student intern. Actual job training and experience by working with owners, proprietors, and managers in organizing and/or operating a business.
- BUS 295 Small Business Management** 3(3-0)  
Small business operations, including business and managerial functions, principles of management, environment of small business, financial, marketing, and production management of the "going concern," and legal and governmental relationships. Development of a small business plan is required.
- BUS 301 International Business** 4(4-0)  
Prerequisite: BUS 118 or equivalent. Overview of international business: organizational, social, cultural, and economic variables that create change in the international market place. Includes exchange rates, resource allocation, import quotas and export controls, balance of payments, and free trade versus protectionism.
- Courses Offered in Labor Relations (LR) by Management Systems—by Course Number, Title, Credits Allowed, and Description.
- LR 200 Introduction to Labor Relations** 4(4-0)  
Survey historical and legal frameworks of labor movement. Major labor laws, causes and purposes of the labor movement and union structure and behavior. Labor-management approaches to solving employment disputes.
- LR 201 Labor Relations/Collective Bargaining** 4(4-0)  
Prerequisite: Program Area approval or LR 200. Study of the collective bargaining process, the administration of a collective bargaining agreement, and wage-benefit issues of employment.
- LR 202 Labor Relations/Grievances and Arbitration** 4(4-0)  
Prerequisite: Program Area approval or LR 200. Grievance procedure, including employee discharge and discipline, is examined in-depth, with a review of pertinent legislation. A "how to" course. Basic knowledge and skill necessary for grievance handling. Fundamentals of contract language.
- LR 203 Labor Law** 4(4-0)  
Prerequisite: Program Area approval or LR 200. In-depth study of major laws, U.S. Supreme Court cases, and National Labor Relations Board decisions. Functional picture of the National Labor Relations Board.
- LR 205 Employee Compensation Administration** 4(4-0)  
Understanding of personal needs fulfilled in the work environment, relationship between work and rewards, components of a reward system, and compensation tools and techniques necessary for competency and equity in the administration of compensation.
- LR 208 Labor Relations in Government** 4(4-0)  
Structure and practice of labor relations in the public sector. Recommended for government employees.
- Courses Offered in Management (MGT) by Management Systems—by Course Number, Title, Credits Allowed, and Description.
- MGT 300 Introduction to Management** 4(4-0)  
An analysis of the basic managerial functions, theories, and techniques in the areas of planning, social-environmental influences, organizational structure, authority and delegation, conflict, change, and leadership.
- MGT 301 Management Analysis and Decision Making** 3(3-0)  
Prerequisite: MGT 300 or equivalent. 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 responsibilities.
- MGT 304 Organizational Development** 4(4-0)  
A pragmatic approach to understanding and effectively dealing with the multitude of people and performance problems faced within an organization. Examines the skills needed to determine the real problem and select an appropriate plan of action.
- MGT 305 Introduction to Purchasing Management** 4(4-0)  
Survey purchasing activities related to the manufacturing and service industries. Includes purchasing organization, principles and practices, and relationship of purchasing department with other departments.
- MGT 323 CAM Internship** 4(4-0)  
Prerequisite: Program Area approval. Advanced internship project representing 60 hours of work, may be selected as part of Certificate in Advanced Management. Project must be outside and beyond the student's regular area of work responsibility and have employer and CAM coordinator approval.
- MGT 324 CAM Independent Study** 4(4-0)  
Prerequisite: Program Area approval. A detailed quality report in the student's area of interest which represents 60 hours of research and writing, applicable toward Certificate in Advanced Management and approved by the CAM coordinator.
- MGT 329 Advanced Business Communication Skills** 4(4-0)  
Designed to help students develop verbal communication skills used when making oral presentations, conducting meetings and interviewing employees. Business report writing skills are developed and practiced.
- MGT 332 Managerial Ethics** 4(4-0)  
Designed to sensitize participants to the impact of ethics on decision making, both personal and organizational. Participants will examine the bases for the behavior of managers, their own behavior, various means of controlling organizational behavior, and the bases for ethical standards.
- MGT 334 Management Career Strategies** 3(3-0)  
Prerequisite: MGT 300 or equivalent. Explore career strategies for middle and upper executive management. Review present "climate" in which man-

agers work and compete. Job search, career advancement, mobility, mid-career change, personal trade-offs, executive stress, and gamesmanship.

**MGT 335 Managerial Statistics 4(4-0)**

Prerequisite: MTH 012 knowledge. Application of statistical tools and techniques to improve decision making process and reduce managerial decision difficulty from less than perfect data. Includes sampling, description of sample data, methods of averaging, standard deviation, probability theory, estimation and hypothesis testing.

**MGT 337 Human Resource Management Skills 4(4-0)**

Skill areas involved in the management of our human resources are developed. Setting objectives with employees, conducting performance appraisals, working with employee problems are practiced. Students plan techniques for managing teams and for leading and motivating employees.

**MGT 338 Current Topics in Management 4(4-0)**

Study of specific topics and issues in today's society which affect managerial decisions. Real life experiences or from current publications. Each student will explore one issue in-depth with the class. Explore the internal and external constraints on actions. External factors considered will be legal, social, educational, and political. Internal factors considered will be the shareholders, the employees, and the customer.

**MGT 339 Management Styles and Corporation Strategies (Japan and the United States) 4(4-0)**

Numerous current materials relating to the management styles and corporation strategies in Japan will acquaint the student with management as practiced in Japan. The Japanese management practices are presented as an alternative managerial style for the United States to explore how Japanese techniques can produce greater productivity, higher employee morale and a successful quality of work life.

**MGT 345 Leadership: Attitudes and Motivation 4(4-0)**

Total personal involvement in group interaction projects. "Whole person" approach to self-discovery, growth, and self-realization. Find new dimensions in assessing personal leadership aptitudes.

**MGT 346 Managerial Finance 4(4-0)**

Prerequisite: ACC 101 or ACC 210. Practical skills to deal with financial matters and communicate with people in finance.

**MGT 349 Time and Stress Management 4(4-0)**

Explores relationship between time and stress management. Stress is the causal factor for many of our physical and psychological problems. Suggests methods for harnessing its energy positively. Techniques and strategies for wise utilization of time and energy. Emphasis on creating action plan and initiating corrective actions.

Courses Offered in Marketing (MKT) by Management Systems—by Course Number, Title, Credits Allowed, and Description.

**MKT 120 Sales 3(3-0)**

Fundamentals and role in the marketing mix. Develop basic skills in behavioral sciences and skills needed to enter the field. Customer buying habits, sales process, product demonstration techniques, and analysis of human relations aspects.

**MKT 121 Advanced Sales 3(3-0)**

Prerequisite: Program Area approval or MKT 120. An analysis of the sales interview. Video taping sessions where each facet of the sale is examined and analyzed individually.

**MKT 122 Field Sales 3(3-0)**

Prerequisite: Program Area approval. Practical field sales experience in consumer and industrial sales. Advanced techniques of selling and refining selling skills.

**MKT 123 Computer Field Sales 3(3-0)**

Prerequisite: Program Area approval. Practical computer field sales experience in consumer and industrial sales. Advanced techniques of selling and refining selling skills. Instructor approval needed.

**MKT 130 Retailing 3(3-0)**

Gain understanding of activities used by retailers in selling goods to ultimate consumers. Develop awareness of problems facing retailers and develop feasible solutions. Examine career opportunities.

**MKT 131 Fashion Merchandising 3(3-0)**

Functions, policies; what, when, where, how much, how to, and from whom to buy. Introduction to fashion history, textile construction, design, color, figure types, and fashion trends. Career opportunities.

**MKT 140 Introduction to Advertising 3(3-0)**

Methods and techniques used in modern advertising. Information on the entire advertising function. Preparation of an advertising campaign will be required to facilitate hands-on understanding of the component parts which include marketing review, marketing plan, creative strategy and media selection.

**MKT 200 Introduction to Marketing 4(4-0)**

Designed to define marketing, develop an understanding of the marketing concept and functions, and generally investigate the field of marketing. Will cover the marketing environment, identifying consumer needs, examining product, price, promotion, and distribution strategies within our society. Provides a basic marketing understanding with practical applications.

**MKT 202 Managerial Marketing 4(4-0)**

Prerequisite: MKT 200. Study of the total enterprise regarding problems, analytical tools, and approaches to decisions. Examines allocation of funds to various means of market cultivation, development of promotional strategy, price policy, and management of field selling effort.

**MKT 204 Marketing Research 4(4-0)**

Prerequisite: MKT 200. Types of data, sampling, data collection, analysis, interpretation, and applications of marketing research. A practical managerial approach—NOT a statistical or mathematical orientation.

**MKT 213 Visual Merchandising 3(3-0)**

Prerequisite: MKT 131 or equivalent. Provide knowledge, skills, and understanding to arrange a functionally effective display area.

**MKT 214 Merchandise Management 4(4-0)**

Prerequisite: MKT 130 or MKT 131. Understand the purchasing process. Build a retail vocabulary. Understand the process of achieving a balanced and well planned inventory. Control the flow of inventory. Control the profit of retail business.

**MKT 220 Sales Management 3(3-0)**

Prerequisite: MKT 120 or equivalent. Explores strategies dealing with managing salespeople. Training, recruiting, motivation, evaluation, planning and organizing are all stressed. The case method of learning is utilized, along with role playing.

**MKT 221 Consumer Behavior 3(3-0)**

Basic perspectives involved in consumer motivation and behavior. Relevant variables that help shape consumer action. Concepts that integrate the study of consumer behavior with the practice of marketing.

**MKT 225 Written Communications for Business 3(3-0)**

How to write clearly, accurately, and quickly. Organize writing for the busy reader's needs. Letters, reports, memos, and procedures—technical or non-technical.

**MKT 230 Independent Study-Marketing 3(3-0)**

Prerequisite: Program Area approval.

**MKT 231 Independent Study-Marketing 3(3-0)**

Prerequisite: Program Area approval.

**MKT 232 Independent Study-Marketing 3(3-0)**

Prerequisite: Program Area approval.

**MKT 233 Independent Study-Marketing 3(3-0)**

Prerequisite: Program Area approval. Advanced marketing students design, implement, and draw conclusions about an area of interest for application in the marketing field. A minimum of 10 hours work per credit is required.

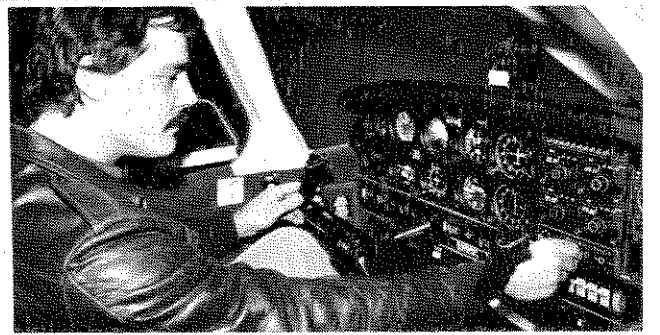
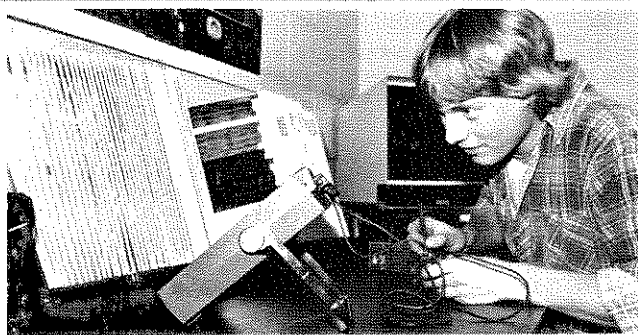
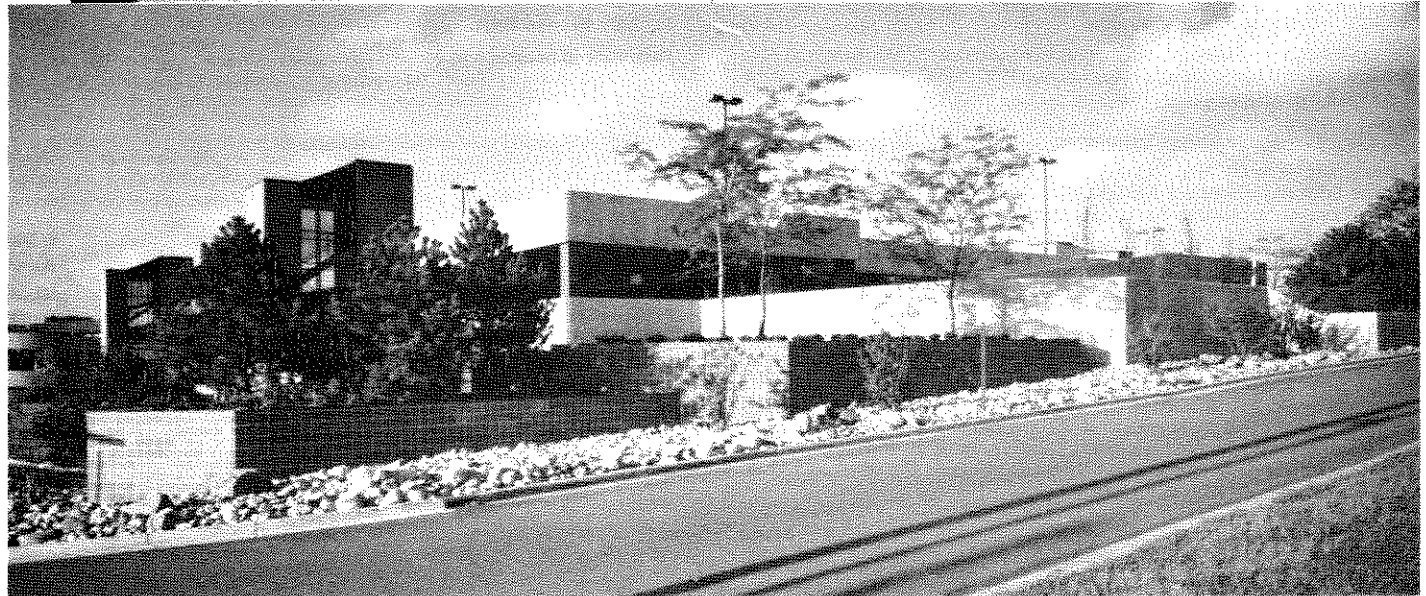
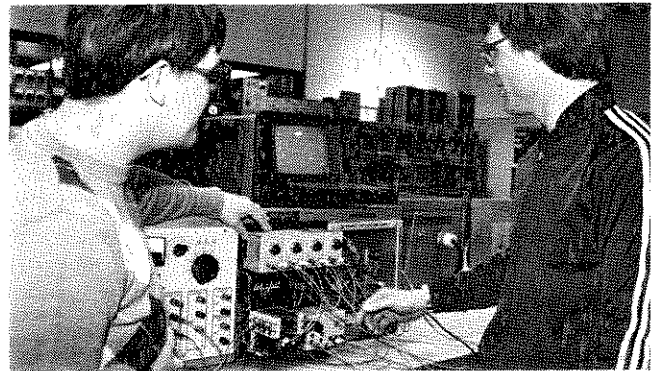
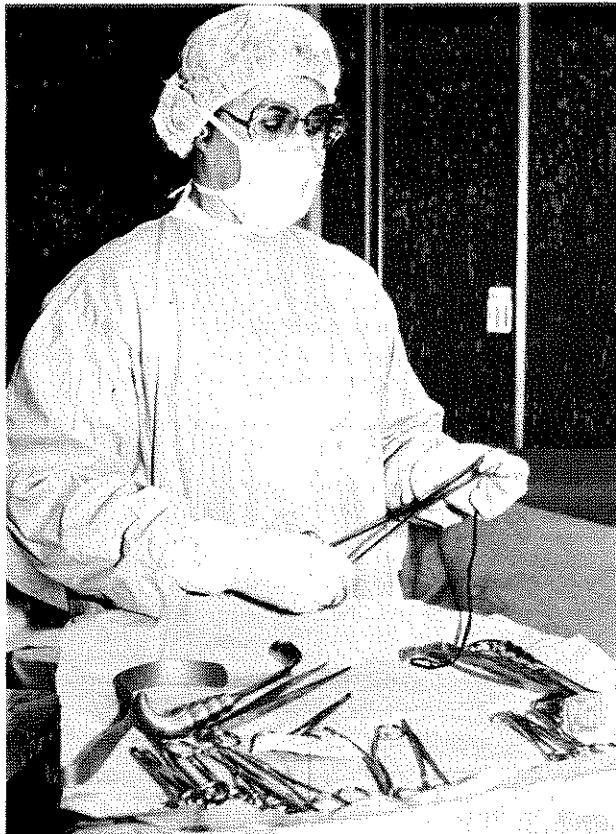
**MKT 235 Marketing Internship 3(3-0)**

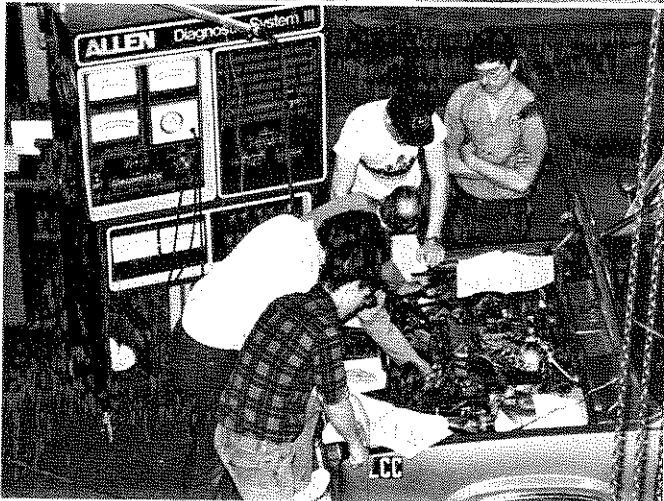
Prerequisite: Program Area approval.

**MKT 236 Marketing Internship 3(3-0)**

Prerequisite: Program Area approval.

<b>MKT 237 Marketing Internship</b>	<b>3(3-0)</b>	<b>SL 127 Personal Investments</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval.		Examines the relationship between risk and return, importance of timing investment purchases and sales, and various investment alternatives. Covers security markets, common stock, bonds, function of investment companies, and types of speculative investments.	
<b>MKT 238 Marketing Internship</b>	<b>3(3-0)</b>	<b>SL 153 Fundamentals of Savings and Loan Data Processing</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval. An approved training station, earn credits for satisfactory work performance related to marketing.		Applying basic data processing concepts to the savings association business.	
Courses Offered in Real Estate (RE) by Management Systems—by Course Number, Title, Credits Allowed, and Description.			
<b>RE 271 Introduction to Real Estate</b>	<b>3(3-0)</b>	<b>SL 160 Introduction to the Savings Association Business</b>	<b>2(2-0)</b>
Overview of the real estate business. Emphasis on points of law and real estate principles useful to the beginning salesperson and/or potential buyer, seller, or investor.		Survey the role of savings associations in business. Historical development, present-day organization, competition, and future direction.	
<b>RE 273 Real Estate Investment and Taxation</b>	<b>3(3-0)</b>	<b>SL 166 Communication Skills for Business</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval or RE 271 or RE 274. Emphasis on investment analysis, financing, depreciation, capital gains, exchanging and federal tax implications of real estate acquisitions, ownership and disposal.		Practice skills of effective two-way communication and analyze strengths and weaknesses to achieve better communication with co-workers and customers.	
<b>RE 274 Real Estate License Examination</b>	<b>4(4-0)</b>	<b>SL 208 Savings Accounts</b>	<b>3(3-0)</b>
Intense study in preparation for the Educational Testing Service (ETS) salesperson examination required for licensing in the State of Michigan.		Nature and types of savings account ownership and problems unique to savings accounts.	
<b>RE 275 Real Estate Finance</b>	<b>3(3-0)</b>	<b>SL 209 Savings Account Administration</b>	<b>3(3-0)</b>
Significance and nature of mortgage lending, mortgage money markets, sources, types of mortgages, instruments, qualifying, the land contract and its use, administration of a mortgage loan and a loan portfolio, and methods of foreclosure.		Extends the general presentation and emphasizes the administration and insurance of savings accounts.	
<b>RE 277 Property Management</b>	<b>3(3-0)</b>	<b>SL 210 Consumer Credit Operations</b>	<b>3(3-0)</b>
Covers management and the market, marketing residential and commercial rental space, creating an organized management plan, tenant and landlord laws, rent collection, leases, tenant screening, fair housing requirements, tenant-owner relations, accounting for investment properties, real estate as an investment, managing apartments, office space, retail stores and special purpose buildings.		Introduces nature of consumer credit, compares credit providers, examines types of loans and loan features, reviews law and regulations, analyzes loan mathematics, and examines how consumer credit operations are organized. In-depth analysis of the activities performed in credit evaluation, operations, and collections.	
<b>RE 279 Buying and Selling a Home</b>	<b>3(3-0)</b>	<b>SL 211 Mortgage Lending</b>	<b>3(3-0)</b>
For potential purchasers or sellers of residential property. Mechanics of buying and selling a home. Covers steps necessary to transfer title, including the "closing."		Residential mortgage lending operations of savings associations. Emphasis on conventional lending procedures. In-depth analysis of mortgage loan programs and the secondary mortgage market included.	
<b>RE 282 Real Estate Broker Preparation</b>	<b>3(3-0)</b>	<b>SL 226 Human Relations</b>	<b>3(3-0)</b>
Prerequisite: Program Area approval or RE 274. Prepares prospective brokers for the Educational Testing Service (ETS) State Broker's license exam. Includes review of brokerage law, closing statement preparation, law of agency, rules and regulations, fair housing, civil rights, financing, and appraisal.		Personalized approach to general psychology. Adapted to a working person's needs and interests. Goals for personal improvement, gain a better understanding of others, and improved interpersonal relationship skills on the job.	
<b>RE 291 Residential Appraisal</b>	<b>4(4-0)</b>	<b>SL 230 Marketing for Financial Institutions</b>	<b>3(3-0)</b>
Principles, methods, and techniques of residential real estate appraising with application.		Examines how to conduct marketing research, plan marketing strategies, monitor change, and use personal selling techniques.	
<b>RE 292 Income Appraisal</b>	<b>4(4-0)</b>	<b>SL 276 Individual Retirement Accounts/Keogh Plans</b>	<b>3(3-0)</b>
Prerequisite: RE 291. Advanced course for real estate brokers and/or sales associates interested in appraisal of income-producing property. Includes the rationale of the income approach, relationship of income to value, net income capitalization, mortgage-equity technique, and the residual and direct market capitalization processes.		For savings counselors, tellers, and savings department supervisors. Background in the legal requirements for establishing and contributing to retirement accounts. Covers IRA's, Spousal IRA's, Rollovers, Simplified Employee Pension Plans (SEPP's), and Keogh's.	
<b>RE 293 Real Estate Law I</b>	<b>3(3-0)</b>		
Prerequisite: RE 271 or RE 274. Introduction to real estate law, land and its elements, land titles and interests in land, abstracts and title insurance, deeds, easements, liens, mortgages, land contracts and foreclosures.			
<b>RE 294 Real Estate Law II</b>	<b>2(2-0)</b>		
Prerequisite: RE 293. Continuation of Real Estate Law I. Topics covered include: landlord-tenant relations; private land use controls including restrictions, condominiums and tax policies pertaining to real estate.			
Courses Offered in Savings and Loan (SL) by Management Systems—by Course Number, Title, Credits Allowed, and Description.			
<b>SL 103 Teller Operations</b>	<b>3(3-0)</b>		
Importance of the teller in creating and maintaining good customer relations. Specific operational procedures necessary for successful performance.			





## Lansing Community College



Dean William Darr

# DIVISION OF TECHNOLOGY & APPLIED SCIENCES

Automotive Programs  
Aviation  
Computer Integrated Manufacturing  
Construction Technology  
Health Careers  
Transportation Training



## DIVISION OF TECHNOLOGY & APPLIED SCIENCES

William Darr, Dean

The Division of Technology and Applied 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, Department Director or the Dean for further information.

### Objectives of Programs

Programs offered by the Division of Technology and Applied Sciences are developed to serve a diversity of needs across the community. In addition to the career training needs of individuals, the programs are designed to meet the particular needs of labor, industry, business and government, and of other groups wishing to participate in seminars, courses, or other educational activities. With the exception of a few continuing education courses offered by 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.

In summary, the programs of the Division of Technology and Applied Sciences have been designed to:

1. meet specific individual needs through single courses, combinations of selected courses, one-year certificate programs, and associate degree career programs,
2. 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,
3. 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, and
4. 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.

### Faculty

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.

### Programs Offered

The programs offered by the Division of Technology and Applied Sciences fall into six categories. The categories include (1) the associate of Applied Science, (2) the associate of applied science, general technology, (3) the certificate of achievement, (4) community service, (5) transfer programs, and (6) apprenticeship.

The Associate Degree Programs. As indicated above, the Division offers the Associate of Applied Science and the Associate of Applied Science, General Technology Degrees. To receive one of the associate degrees, 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 program or the requirements outlined in #830 curriculum guide for the Associate Degree in General Technology
2. Completion of a minimum total of 90 credits
3. A grade point average G.P.A. of 2.0 or better
4. A minimum of 30 credits earned in attendance at Lansing Community College
5. Completion of four credits of American Government or State and Local Government (SS 104 or SS 105)

Currently, an associate degree may be earned with a major emphasis in any one of the following technical and health fields. These fields are listed below as well as in the subsequent sections of this catalog devoted to the offerings of the departments of the Division of Technology and Applied Sciences.

Advanced Emergency Medical Technology (Paramedic)  
Aid for Developmentally Disabled  
Architectural Technology  
Architectural Technology - Solar Option  
Automotive Technology  
Auto Body Repair and Painting  
Aviation Technology  
Avionics Technology  
Central Supply Technician (Medical and Hospital)

Civil Technology  
Computerized Numerical Control Programmer  
Dental Assistant  
Dental Hygiene  
Dental Insurance Billing  
Diesel Engine Technology  
Electro-Mechanical Technology  
Electronics Technology  
Electronics Technology - Biomedical Option  
Electronics Technology - Digital Option  
Fire Sciences Technology  
Flight Training  
General Technology  
Heating, Air Conditioning and Refrigeration  
Home Health Aide  
Hospital Food Service Supervisor and Dietary Assistant  
Industrial Drafting Technology  
Landscape Architectural Technology  
Machine Maintenance Technology  
Medical Assistant  
Nursing (Career Ladder LPN—RN)  
Occupational Safety and Health  
Phlebotomy Technician  
Plumber-Pipefitter (Industrial)  
Psychiatric Technician  
Pharmacy Technician  
Quality Control and Reliability Technology  
Radiation Therapy Technology  
Radiologic Technology  
Respiratory Therapy Technology  
Robotics Technology  
Tool Inspection  
Tool Making  
Tool and Die Making  
Ward (Hospital) Secretary  
Welder

### Certificate Programs

Certificate programs are designed to meet specialized needs of students in certain career fields. Such programs vary in duration from a few days for an intensive workshop to an extensive program requiring additional work beyond the associate degree program. These certificate programs, like the associate degree programs, are described in the departmental sections of this catalog.

The following is a list of certificate programs:

Auto Body Repair & Painting  
Auto Mechanics  
Dental Assistant  
Dental Business Assistant  
Die Maker-Tool and Die Maker  
Diesel Engine Technology  
Emergency Medical Technician  
Heating and Air Conditioning  
Industrial Drafting  
Machine Repair  
Machinist, Toolmaker  
Medical Sonography (Ultrasound) Technology (Start Fall, 1985)  
Millwright  
Nuclear Medicine Technician  
Pipefitter  
Plastics  
Practical Nursing  
Residential Builder  
Respiratory Therapy  
Sheet Metal  
Small Engine Repair  
Truck Driver Training  
Welder

### The Certificate of Achievement Programs

Currently, the Division of Technology and Applied Sciences offer a total of 35 programs leading to a certificate of achievement. Seventeen of these programs are in general technical fields and 18 of these are in the health field (a total of 35 career fields). Like the associate degree programs these certificate of achievement programs are listed in the subsequent sections of this catalog devoted to the offerings of the departments of the Division.

One will note by reading the descriptions of the certificate of achievement programs that programs may vary in length from a few days for an intensive workshop to a period longer than it takes to earn an associate degree program.

### Community Service Programs

The programs are designed individually to satisfy broad segments of the community. These may include educational offerings within industry or in

other locations within the college service area. Recently, these offerings have been in the form of seminars designed for companies or groups of individuals. They have been intended to help upgrade the working effectiveness of individuals by the improvement of old skills and the addition of new skills. Usually consisting of lectures or laboratory experience or a combination of both, these seminars have stressed the importance of human relations as well as technical skills. Credits earned through participation in such seminars can be applied usually toward the credit requirement of an appropriate certificate of achievement or associate degree.

Requests for seminars and other forms of community service in the technical fields should be made to the Dean of the Division of Technology and Applied Science.

#### 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 in order to achieve maximum transferability.

#### Apprenticeship Training

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 or equivalent. School records, test results and personal interviews may be used by employers or skilled 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 in the Division office. Applications for industrial trades apprenticeships are normally secured from firms employing industrial trades apprentices. 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 various Building Trades Apprenticeship Committees.

Applicants approved for building trades apprenticeship training are assigned a day to report for classes by the appropriate Joint Apprenticeship Committee.

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.

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.

#### Building Trades Apprenticeships

Apprenticeships in the field of building trades include the following:

1. Asbestos Worker
2. Bricklaying
3. Carpentry
4. Electrical (Inside)
5. Electrical (Residential)
6. Painting and Decorating
7. Plumbing and Pipefitting

#### Industrial Trades Apprenticeships

Apprenticeships in the industrial trades field include the following:

1. Die Making
2. Die Sinking
3. Draftsman
4. Electrician (Industrial)
5. Machine Repair
6. Machinist

7. Maintenance Machinist
8. Millwright
9. Model Making
10. Numerical Control Programmer
11. Welding Technology

## AUTOMOTIVE TECHNOLOGY PROGRAM

Walter E. Hayward, Program Director

The Automotive Technology Program is designed to develop service technicians who will be able to diagnose, repair and service today's automobiles. This series of courses will provide an individual with the job entry qualifications needed to compete for employment in the automotive service trade. Rapidly changing technology, fuel efficient vehicles, emission considerations and mechanic certification laws all require today's technician be educationally prepared to face these challenges. Students will gain practical experience by doing diagnosis and repair procedures on operable vehicles in the laboratory courses.

The Automotive Program of the Division of Technology and Applied Sciences offers an associate degree program and a series of classes leading to a certificate of achievement.

#### Associate Degree

The Associate Degree in Science for automotive technology is designed to develop technicians who will be able to diagnose, repair and otherwise service all components of today's automobiles. General requirements for an associate's degree are set forth in the section devoted to the Division of Technology and Applied Sciences. Curriculum guides for specialty programs resulting in the associate degree are available in the Office of the Dean of the Division. Students in this program are provided the opportunity to practice diagnostic and repair skills in a specialization area of their choice.

#### Certificate Program

The Automotive-Certificate of Achievement Program is designed to provide a student with job-entry skills for employment in the automotive service trade. The curriculum for this certificate program consists of practical courses providing the skills needed to compete in today's job market. Curriculum guides for this program are also available in the office of the Automotive Department.

Courses completed in Automotive Technology Certificate Programs are transferable toward an Associate Degree of similar nature.

Courses Offered in Automotive Trades (AUT), by the Automotive Department—by Course Number, Title, Credits Allowed, and Description.

#### AUT 100 Auto Service I 4(2-4)

Basic tools and equipment, safety, lubrication, exhaust systems, precision measurement, 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

#### AUT 110 Auto Electrical Theory 4(2-4)

Prerequisite: AUT 100 or concurrent. A theory and application course covering batteries, starters, generators, regulators, ignition systems, and chassis wiring. Lab fee

#### AUT 111 Tune-Up I 4(2-4)

Prerequisite: AUT 210 or department approval. A lecture-laboratory course covering fuel systems, equipment operations, and tune-up procedures. Lab fee

#### AUT 112 Tune-Up II 4(2-4)

Prerequisite: AUT 111. A lecture-laboratory course with emphasis on actually tuning engines, introduction to on-board computers, and emission controls. Lab fee

#### AUT 120 Auto Drive Trains 4(2-4)

Prerequisite: AUT 100 or concurrent. Servicing clutches, manual transmissions, universal joints, differentials, rear axles. Lab fee

#### AUT 121 Automatic Transmission I 4(2-4)

Prerequisite: Department Approval or AUT 120. A basic course for automatic transmission repair. Lab fee

#### AUT 122-123 Automatic Transmission II-III each 4(2-4)

Prerequisite: AUT 120 & AUT 121. Advanced automatic transmission repair. Lab fee

<b>AUT 130 Engines</b>	<b>4(2-4)</b>	<b>AUT 185 Painting I</b>	<b>4(2-4)</b>
Prerequisite: AUT 100 or concurrent. Provides a background in principles, design, operation, and service procedures of gasoline engines, and preparation for practical experience in engine maintenance and service. Lab fee		An auto painting course designed to teach basic refinishing procedures. The student must refinish at least one panel in acrylic enamel and acrylic lacquer by the end of the course. Lab fee	
<b>AUT 133 Small Engines I</b>	<b>3(2-2)</b>	<b>AUT 186 Painting II</b>	<b>4(2-4)</b>
Basic course covering servicing and repair of two-cycle and four-cycle small gas engines. Each student is required to supply a small engine for laboratory work. Lab fee		Prerequisite: AUT 185. Advanced auto painting techniques for spot repair, color matching, and troubleshooting. Lab fee	
<b>AUT 134 Small Engines II</b>	<b>3(2-2)</b>	<b>AUT 187 Painting III</b>	<b>4(2-4)</b>
Prerequisite: Department approval or AUT 133. A continuation of Small Engines I with more emphasis on laboratory work. Each student is required to supply a small engine. Lab fee		Prerequisite: AUT 186. Advanced auto painting techniques for refinishing a complete auto in enamel, and acrylic lacquer. Includes estimating the cost of materials and overhead costs of operating a paint shop. Lab fee	
<b>AUT 135 Chain Saw Repair</b>	<b>3(2-2)</b>	<b>AUT 188 Auto Body Repair and Painting</b>	<b>4(0-8)</b>
Basic course for chain saw owners and mechanics covering basic maintenance, safe operation, tune-up, troubleshooting, major repair, chain oilers, and chain sharpening and repair. Lab fee		Prerequisite: AUT 181 and AUT 185. A combined course of auto body repair and painting. Provides an opportunity to practice the techniques learned in Metal Finishing I and Painting I. Lab fee	
<b>AUT 136 Marine Engine Repair</b>	<b>3(2-2)</b>	<b>AUT 200 Basic Diesel Maintenance</b>	<b>4(2-4)</b>
Covers the basics of outboard engine servicing including carburetion, ignition, and trouble-shooting malfunctions. Lab fee		Covers theory of operation of both two-and four-cycle diesels, maintenance operation, model identification, systems maintenance including fuel system, lubrication system, cooling system, naturally aspirated, supercharged, and turbocharged intake systems, and their repair. Lab fee	
<b>AUT 137 Motorcycle Repair I</b>	<b>3(2-2)</b>	<b>AUT 201 Advanced Diesel Maintenance</b>	<b>4(2-4)</b>
Covers the theory of operation of a motorcycle and basic service procedures, including tune-up, wheel service, brake service, and drive mechanism. Lab fee		Prerequisite: AUT 200 or IA. Theory and practice in 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, systems diagnosis, and trouble shooting. Lab fee	
<b>AUT 140 Auto Brakes</b>	<b>4(2-4)</b>	<b>AUT 202 Diesel Engine Rebuilding</b>	<b>8(4-8)</b>
Prerequisite: AUT 100 or concurrent. Servicing both drum and disc brakes, including adjustment, shoe replacement, drum and disc turning, pad replacement and hydraulic system service. Lab fee		Prerequisite: AUT 201. Covers engine rebuilding, including proper disassembly procedures, inspection, and repair of diesel engine components. Emphasis is on proper engine analysis prior to overhaul and proper run-in upon completion of overhaul. Lab fee	
<b>AUT 150 Auto Suspension</b>	<b>4(2-4)</b>	<b>AUT 203 Diesel Fuel Systems</b>	<b>4(2-4)</b>
Prerequisite: AUT 100 or concurrent. Instruction in wheel alignment, wheel balancing, and front end part replacement procedures. Lab fee		Prerequisite: AUT 201. A complete course on diesel fuel systems covering fuel classification, fuel system functions, pumps and injectors, proper diagnosis, troubleshooting, and rebuilding the complete fuel system. Lab fee	
<b>AUT 160 Auto Air Conditioning</b>	<b>4(2-4)</b>	<b>AUT 206 Automotive Diesel Repair</b>	<b>4(2-4)</b>
Prerequisite: AUT 110 or concurrent. Instruction in the operating principles of auto air conditioning systems and repair procedures. Lab fee		First step in preparing for a career in diesel engine repair. Covers advanced maintenance and introduces diagnostic and repair procedures, including hands-on skill development. Lab fee	
<b>AUT 165 General Auto Mechanics</b>	<b>3(2-2)</b>	<b>AUT 210 Auto Electrical Theory II</b>	<b>4(2-4)</b>
Automobile owners will gain a better understanding of the automobile and be able to make some repairs. Areas covered include preventive maintenance, tune-ups, brakes, engines, electrical systems, drive lines, front end, and steering. Lab fee		Prerequisite: AUT 110. Practical application of related instruction to supplement the student's on-the-job-training. Includes generating and starting systems, batteries, schematic troubleshooting, power assist systems and wiring harnesses. Emphasis is on actual repair of electrical defects and components. Lab fee	
<b>AUT 180 Applied Autobody Welding</b>	<b>4(2-4)</b>	<b>AUT 237 Motorcycle Repair II</b>	<b>4(2-4)</b>
Presents metal welding and plastic joining procedures as they apply to auto body repair. Included in the metal portion are gas, spot, and wire feed welding, soldering, brazing, hammer welding, and heat shrinking. The plastic section covers identification of weldable plastics, selection of appropriate welding procedures, repair of soft fascia, and vinyl repair. Lab fee		Prerequisite: AUT 137. A continuation of Motorcycle Repair I with emphasis placed on engine overhaul, transmission service and repair. Lab fee	
<b>AUT 181 Metal Finishing</b>	<b>4(2-4)</b>	<b>AUT 251 Suspension II</b>	<b>4(2-4)</b>
Prerequisite: AUT 180 or concurrent. Teaches 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. Lab fee		Prerequisite: AUT 150. Includes McPherson Strut front suspension replacement or repair, McPherson Strut suspension alignment procedures, replacement of McPherson Strut type cartridges, manual steering gears, power steering gears, linkage-type power steering, power steering pumps, steering linkage repair or replacement, and alignment of steering system. The student will also gain knowledge of suspension and minor frame repair, for rack and pinion steering on Chrysler, Ford, and General Motors products. Lab fee	
<b>AUT 182 Panel Repair and Replacement</b>	<b>4(2-4)</b>	<b>AUT 271 Engine Laboratory*</b>	<b>6(0-12)</b>
Prerequisite: AUT 181. Instruction in repair of larger damaged panels, with the emphasis on replacing panels. Lab fee		Prerequisite: AUT 100, AUT 130 B/ and IA. A laboratory course to develop trade entry skill. Lab fee	
<b>AUT 183 Major Collision</b>	<b>4(2-4)</b>	<b>AUT 272 Tune-Up and Electrical Laboratory*</b>	<b>6(0-12)</b>
Prerequisite: AUT 182. Emphasizes restoration of a collision-damaged automobile to its original condition, including estimating the total job, glasswork, and painting. Lab fee		Prerequisite: AUT 100, AUT 111 B/each and IA concurrent with AUT 111. A laboratory course to develop trade entry skill. Lab fee	
<b>AUT 184 Frame Straightening</b>	<b>4(2-4)</b>	<b>AUT 273 Brake Laboratory*</b>	<b>6(0-12)</b>
Prerequisite: AUT 183. An introduction to the basics of frame straightening, covering aligning the frame or unitized body to original specifications. Portable frame equipment is used to familiarize the student with frame straightening. Lab fee		Prerequisite: AUT 100, AUT 140 B/ and IA. A laboratory course to develop trade entry skill. Lab fee	

**AUT 274 Suspension Laboratory\*** 6(0-12)

Prerequisite: AUT 100, AUT 150 B/ and IA. A laboratory course to develop trade entry skill. Lab fee

**AUT 276 Automatic Transmission Laboratory\*** 6(0-12)

Prerequisite: AUT 100, AUT 121 B/ and IA. A laboratory course to develop trade entry skill. Lab fee

**AUT 280 Auto Related Service Laboratory\*** 6(0-12)

Prerequisite: AUT 100 B/ and IA. A laboratory course for practicing skills learned in previous courses. Lab fee

\*Approval may be given to take any of these lab courses twice for a maximum of twelve credits each.

**AUT 291 Automotive Internship** 6(15)

Prerequisite: Director Approval. Earn credits while employed as a technician in auto mechanics, auto body, or diesel heavy equipment repair. A pre-enrollment interview between student and Director is required; Director must approve training station and working conditions. Requires one hour per week of related instruction at the College.

**AVIATION TECHNOLOGY PROGRAM**

Gayland Tennis, Director

Professional aviation career training is conducted by Lansing Community College in the areas of Flight Training and Aviation Maintenance Technology. All associated supporting instruction such as preparatory ground schools, and flight simulator and electronics technology is conducted at the Lansing Community College Aviation Center located at Lansing Capital City Airport.

Career counseling in all fields of professional aviation is a continuous process at the Aviation Center. Such counseling is designed to maximize students potential and concurrently maintain an awareness of the needs of the aviation industry as future employers of our graduates.

Graduates of the aviation technology programs at Lansing Community College have achieved excellent reputations in the aviation industry and such graduates can be found working virtually world wide in all facets of this exciting career field.

Graduates are also encouraged to continue their formal education through the medium of articulation agreements with numerous four-year baccalaureate degree-granting institutions. All curricula for the programs at Lansing Community College are fully approved by the Federal Aviation Administration under curriculum codes 531 and 532.

**Programs Offered**

Associate Degree Program in Aviation Maintenance Technology (AFG) (AFM) (AFP). This 24 month (144 credit) program is designed to prepare the student for a professional career in aviation maintenance and it culminates in the issuance of an Associate Degree in Aviation Maintenance Technology. Graduates of this program should have achieved the qualifications required to (a) pass the Federal Aviation Administration Examinations and (b) to acquire formal certification as an Airframe and Powerplant Mechanic.

During the program, in Aviation Maintenance Technology students will cover a wide variety of subjects dealing with airplanes: reciprocating engines, turbine and jet engines, propellers, ignition, electrical systems, and hydraulic systems.

This program requires approximately a total of 1900 hours of classroom instruction, shop work and laboratory experience divided into the following three areas: airframe and powerplant mechanics general - 400 hours, powerplant mechanic - 750 hours, and airframe mechanic - 750 hours. A waiting list is maintained for admission. The Curriculum Code for this program is 532.

**Associate Degree in Flight Training (AFT)**

This program provides training for students who aspire to become professional pilots. It includes the flight training, flight simulator experiences and associated ground school instruction necessary for the preparation of students for passing the written and practical tests for the Private, Commercial and Instrument Pilot Licenses. The program electives also include courses for the preparation of students for certification as a flight instructor, instrument flight instructor and multi-engine certification. Students are encouraged to take additional elective courses in general education and to complete the requirement of 90 credits for an associate degree and to prepare them for possible transfer to a baccalaureate degree-granting institution. The curriculum is approved by the Federal Aviation Administration. The curriculum code for this program is 531.

The courses entitled Flight Training I through IX, are designed to progressively train the students 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. Prerequisites of these courses include Department approval, the possession of a FAA Class II medical certificate, and having reached the minimum age of 17 years by the start of course AFT 202. All new and continuing flight students will be required to meet at the beginning of each term with the Chief Flight Instructor to reserve flight times and to pay the \$50.00 deposit toward their lab fees for the upcoming term.

Courses Offered in Aviation Technology (AFT), by the Division of Technology and Applied Sciences—by Course Number, Title, Credits Allowed, and Description.

**AFT 100 Private Pilot Ground School** 6(6-0)

Develops knowledge, skills, and techniques for successful completion of the FAA Private Pilot written examination. Audio-visual tutorial system available for supplemental study.

**AFT 113 Aircraft Maintenance For Pilots** 2(1-2)

Covers the identification of maintenance problems on a variety of aircraft systems. Cooperation with the certified airframe and powerplant technician will be stressed. Preventive maintenance per FAR 43 will also be emphasized including considerable hands-on experience.

**AFT 114 Aviation Meteorology** 3(3-0)

This course is designed to assist pilots in the interpretation and analysis of meteorology. Topics include general circulation, synoptic systems, the atmosphere, weather services and the practical aspects of applying the knowledge of meteorology to aviation. Explores actual case studies of aviation/meteorology accidents and includes weather statistics as related to aviation.

**AFT 115 Aviation History** 2(2-0)

How aviation has evolved into what it is today is covered in detail. In this relatively new field, progress has been based upon the accomplishments and failures of those who have devoted their careers to aviation. Through a series of films and lectures students will learn about the evolution of aviation from a dream to the science it is today.

**AFT 150 Instrument Pilot Ground School** 6(6-0)

Preparation for the FAA Instrument Rating written examination. Instrument ground school training in instrument flying practices and procedures.

**AFT 169 Physiology of Flight** 1(6-6)

Prerequisite: Coordinator approval. Wright Patterson AFB field trip for aviation physiology topics; hypoxia, oxygen use, sensory illusion, vertigo, spatial disorientation, stress, drugs, scuba effects, physical fitness and survival. Qualifications certificate upon completion of the high altitude chamber flight. Aviation physical exam (third class or better) must not be more than one year old as of the date of the chamber flight in order to make the high altitude chamber ascent.

**AFT 201 Flight Training I** 6(6-0)

Prerequisite: Coordinator approval, AFT 100 and AFT 211 concurrently. Develop the skills and knowledge to fly an aircraft on solo cross-country flights.

**AFT 202 Flight Training II** 6(6-0)

Prerequisite: Coordinator approval, AFT 212 concurrently. Preparation for the Private Pilot license flight test.

**AFT 203 Flight Training III** 6(6-0)

Prerequisite: Coordinator approval and Private Pilot Certificate, AFT 213 and AFT 150 or AFT 220 are taken concurrently during the term. Builds experience required for the Commercial Pilot license. Involves cross-country flying and instrument skills.

**AFT 204 Flight Training IV** 6(6-0)

Prerequisite: Coordinator approval and AFT 203. AFT 214 and AFT 220 or AFT 150 are taken concurrently during the term. Involves cross-country flying and skills in commercial pilot maneuvers.

**AFT 205 Flight Training V** 6(6-0)

Prerequisite: Coordinator approval and AFT 204. Commercial or Instrument written exam passed. Trains the Commercial Pilot applicant in complex aircraft and IFR procedures.

**AFT 206 Flight Training VI** 6(6-0)

Prerequisite: Coordinator approval and AFT 205. Commercial and Instrument written passed. Provides training in preparation for the FAA Commercial Pilot Flight Test and Instrument Rating flight tests.

<b>AFT 207 Instructor Flight Training</b>	<b>6(6-0)</b>	will be emphasized. Heavily stressed will be the safe conduct of instructional flights. This course consists of seven hours of flight training, including two hours reserved for the flight test. Also included are fifteen hours of ground instruction. Prerequisite: Coordinator approval.
Prerequisite: Coordinator approval and Commercial Pilot certificate with Instrument Rating. Prepares the Commercial Pilot with an Instrument Rating for the FAA Flight Instructor Rating. Highly concentrated flight training to provide the confidence, skill, knowledge, precision, and professional attitudes required of a licensed flight instructor.		
<b>AFT 208 Instrument Instructor Flight Training</b>	<b>2(2-0)</b>	<b>AFT 255 Flight Instructor Ground School</b> <b>4(4-0)</b>
Preparation for the FAA Flight Instructor and FAA Flight Instructor Fundamentals written examination. Prepare for the FAA Advanced Ground School instructor's license.		
Prerequisite: Coordinator approval and Flight Instructor Certificate. Prepares the Certified Flight Instructor (CFI) to achieve the Instrument Flight Instructor rating.		
<b>AFT 209 Multiengine Flight Training</b>	<b>2(2-0)</b>	<b>AFT 256 Instrument Flight Instructor Ground School</b> <b>4(4-0)</b>
Preparation for FAA Instrument Ground Instructor written examination and FAA Instrument Flight Instructor written examinations.		
Prerequisite: Coordinator approval. Provides the commercially licensed instrument pilot with the opportunity to obtain a Multi-Engine Pilot Rating. May be tailored to provide pilot refresher or Airline Transport Pilot Rating training.		
<b>AFT 211 Flight Simulator I</b>	<b>2(1-1)</b>	<b>AFT 259 Intern Flight Instructor</b> <b>4(4-0)</b>
This course provides practical flight instruction experience through temporary employment at the Aviation Flight Technology Center. Close supervision and training is given to student/instructor relationships, record keeping and certification processes. Students must have obtained Flight Instructor certification as a student at Lansing Community College. All applications for admission must be made to the Chief Flight Instructor. Openings are limited. Prerequisite: CFII Airplane, Single Engine and Coordinator Approval.		
Dual instruction in the simulator ground trainer and ground instruction. The simulator provides instruction in flight basics of straight, level, turns, climbs and descents, plus basic VOR navigational procedures.		
<b>AFT 212 Flight Simulator II</b>	<b>2(1-1)</b>	
Courses Offered in Aviation Mechanics (AFG), by the Aviation Technology Center—by Course Number, Title, Credits Allowed, and Description.		
Prerequisite: AFT 211. Emphasizes VOR and ADF navigational procedures. Includes review of applicable private pilot maneuvers.		
<b>AFT 213 Flight Simulator III</b>	<b>2(1-1)</b>	<b>AFG 100 Aviation Mathematics and Physics</b> <b>3(3-0)</b>
Prerequisite: Coordinator approval. Fractions, decimals, ratio and proportions and measurements and physics involving fluids, light, heat, and electrical application used in aviation maintenance careers.		
Prerequisite: AFT 212. 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.		
<b>AFT 214 Flight Simulator IV</b>	<b>2(1-1)</b>	<b>AFG 101 Basic Electricity</b> <b>7(5-4)</b>
Prerequisite: Coordinator approval. Basic electrical theory and its application to aircraft and related electrical systems and circuits. Includes A.C. and D.C. currents, magnetism, generators, motors, series, series-parallel, and electrical relay circuits.		
Prerequisite: AFT 213. Includes VOR and ADF orientation; tracking and intercepts; VOR and ADF holding patterns at station and intersection; VOR and ADF approaches.		
<b>AFT 215 Flight Simulator V</b>	<b>2(1-1)</b>	<b>AFG 102 Aircraft Drawings</b> <b>2(2-0)</b>
Prerequisite: Coordinator approval. Basic drawing applications used in aviation maintenance. Read and interpret drawings and schematics used in production of aircraft parts, components, and related systems.		
Prerequisite: AFT 214. Reviews VOR and ADF holding, ILS front and back course approaches, ASR and no gyro approaches, and out communication procedures.		
<b>AFT 216 Flight Simulator VI</b>	<b>2(1-1)</b>	<b>AFG 103 Weight and Balance</b> <b>3(2-2)</b>
Prerequisite: Coordinator approval. Calculations involving aircraft weight changes and distribution occurring by loading, unloading, and equipment installation or modifications. Methods of computing and maintaining required records.		
Prerequisite: AFT 215. In-depth study of all instrument maneuvers and procedures.		
<b>AFT 217 Multi-Engine Flight Simulator</b>	<b>2(1-1)</b>	<b>AFG 104 Materials and Processes I</b> <b>4(2-4)</b>
Prerequisite: Coordinator approval. Practical training in the use of basic and precision hand tools. The identification systems used in production of aircraft hardware and standards used for repair and replacement.		
Prerequisite: Coordinator approval. Ten hours of instruction in the multi-engine simulator and ten hours of related ground instruction. Introductory course limited to Instrument Rated Commercial Pilots (airplane) who desire to obtain the knowledge and skills necessary to pass a six-month instrument proficiency check in multi-engine aircraft.		
<b>AFT 219 Multi-Engine Flight Simulator II</b>	<b>1(1-0)</b>	<b>AFG 105 Materials and Processes II</b> <b>5(4-3)</b>
Prerequisite: Coordinator approval. Aircraft construction and methods of cleaning and preserving aircraft structural materials. The non-destructive inspections are conducted by Zygllo, magnaflux, and dye penetrants.		
Offers 5 hours of instruction in the Flightmatic multi-engine simulator and 5 hours of related ground instruction. A 1 credit course for the Instrument Rated Commercial Pilot (airplane) who desires to obtain the knowledge and skills necessary to take the multi-engine flight test. Prerequisite: Instrument Rating and Commercial Pilot Certificate (airplane)		
<b>AFT 220 Commercial Pilot Ground School</b>	<b>4(4-0)</b>	<b>AFG 106 Ground Operation and Servicing</b> <b>2(1-2)</b>
Prerequisite: Coordinator approval. Introduction to aircraft ground operations and servicing of related aircraft systems. Techniques and safety applications used during aircraft engine run-up and taxi maintenance functions.		
Prerequisite: Private Pilot Certificate or Coordinator Approval. Preparation for completion of the FAA Commercial Pilot written examination. Review of instrument regulations and procedures.		
<b>AFT 224 Tail Wheel Transition</b>	<b>2(2-0)</b>	<b>AFG 107 Maintenance Regulations, Publications, Forms and Privileges</b> <b>3(2-3)</b>
Prerequisite: Coordinator approval. Explores various aircraft maintenance publications, forms and records. Introduces regulations involving mechanic limitations and rights and maintenance-accepted practices.		
Provides 10 hours dual instruction in a conventional landing gear type airplane and 10 hours of associated ground instruction. Prepares the pilot for flying skills associated with crop dusting, pipeline patrol, short takeoff and landings. Minimum prerequisite is a Private Pilot license. Coordinator approval is also required.		
<b>AFT 225 Multi-Engine Instructor</b>	<b>2(2-0)</b>	<b>AFM 208 Aircraft Structures I</b> <b>7(5-5)</b>
Prerequisite: Coordinator approval. Covers structural design and construction of wood- and fabric-covered aircraft and the methods of inspection and repairs required. Also covers the application of primers and paint finishes used in the aircraft industry.		
This course provides instruction in preparation for the Flight Instructor Airplane, Multi-Engine practical test. Subjects covered include a review of lesson planning and the normal and emergency operation of Multi-Engine airplanes, with stress placed on aircraft systems. The effective performance and teaching of Multi-Engine training maneuvers and emergency procedures		

<b>AFM 209 Aircraft Structures II</b>	<b>7(3-8)</b>	<b>AFP 226 Reciprocating Engine I</b>	<b>7(5-5)</b>
Prerequisite: Coordinator approval. Studies maintenance practices used in construction, inspection, and repair of aircraft metal structures.		Prerequisite: Coordinator approval. Presents theory, application and practices used in inspection, tear down, and preventive maintenance of reciprocating engines. Students conduct inspection, disassembly and reassembly of reciprocating engines.	
<b>AFM 210 Aircraft Welding</b>	<b>3(2-3)</b>	<b>AFP 227 Turbine Engine I</b>	<b>4(3-2)</b>
Prerequisite: Coordinator approval. Presents welding applications and methods used in repairs and inspection of aircraft structures in accordance with approved aviation maintenance techniques.		Prerequisite: Coordinator approval. Covers the theory of operation and design of various turbine engine powerplants.	
<b>AFM 211 Assembly and Rigging</b>	<b>6(4-4)</b>	<b>AFP 228 Reciprocating Engine II</b>	<b>3(2-3)</b>
Prerequisite: Coordinator approval. Covers assembly and rigging of aircraft control structures. Provides practical application in removal, installation, and adjustment of aircraft flight controls by balance, tension, and motion to meet flight safety standards.		Prerequisite: Coordinator approval. Covers practical installation, removal, and trouble-shooting reciprocating engines and their related systems.	
<b>AFM 212 Aircraft Fuel Systems</b>	<b>3(2-2)</b>	<b>AFP 229 Turbine Engine II</b>	<b>3(3-2)</b>
Prerequisite: Coordinator approval. Covers the study, analysis, trouble-shooting, and repair of various aircraft fuel systems.		Prerequisite: Coordinator approval. Covers practical test cell installation and trouble-shooting turbine engines and their related systems.	
<b>AFM 213 Aircraft Electrical Systems</b>	<b>9(7-5)</b>	<b>AFP 230 Engine Instrument Systems</b>	<b>3(2-2)</b>
Prerequisite: Coordinator approval. Inspection and repair of aircraft electrical circuits and components.		Prerequisite: Coordinator approval. Covers study, analysis, service and repair of engine temperature, pressure and related system indicators.	
<b>AFM 214 Aircraft Hydraulics and Pneumatics Systems</b>	<b>4(3-2)</b>	<b>AFP 231 Engine Trouble-Shooting and Inspection</b>	<b>4(3-3)</b>
Prerequisite: Coordinator approval. Inspection, service and repair of aircraft hydraulics and pneumatic systems and components.		Prerequisite: Coordinator approval. Covers inspection requirements of aircraft engine to meet established conformity and standards of airworthiness. Engine system operations and adjustments are conducted by use of FAA and maintenance publications.	
<b>AFM 215 Aircraft Landing Gear Systems</b>	<b>4(3-3)</b>	Courses Offered for Test Preparation Courses, by the Aviation Technical Center—by Course Number, Title, Credits Allowed, and Description.	
Prerequisite: Coordinator approval. Study, analysis and trouble-shooting of aircraft landing gear and its various warning systems.		<b>AFG 232 General Test Preparation</b>	<b>2(2-0)</b>
<b>AFM 216 Aircraft Environmental and Protection Systems</b>	<b>4(3-2)</b>	Prerequisite: Coordinator approval. Reviews all general subjects to assist the student in preparation for the FAA written and practical examination.	
Prerequisite: Coordinator approval. Aircraft pressurization and heating systems; methods and systems used to prevent icing of aircraft structures and systems; protection systems used in fire detection and extinguishing systems.		<b>AFM 233 Airframe Test Preparation</b>	<b>3(3-0)</b>
<b>AFM 217 Aircraft Instruments and Communications</b>	<b>4(3-2)</b>	Prerequisite: Coordinator approval. Reviews all airframe subjects to assist the student in preparation for the FAA written and practical examination.	
Prerequisite: Coordinator approval. Application of various instrument systems used in pressure, heat, flow, and navigation. Identifies types and location of communication, navigation equipment, and antenna systems.		<b>AFP 234 Powerplant Test Preparation</b>	<b>3(3-0)</b>
<b>AFM 218 Airframe Inspection</b>	<b>3(2-2)</b>	Prerequisite: Coordinator approval. Reviews all powerplant subjects to assist the student in preparation for the FAA written and practical examination.	
Prerequisite: Coordinator approval. Inspection systems used to meet conformity certification of aircraft and system components.		<b>COMPUTER INTEGRATED MANUFACTURING PROGRAM</b>	
Courses Offered in Powerplant Maintenance (AFP), by the Aviation Technology Center—by Course Number, Title, Credits Allowed, and Description.			
<b>AFP 219 Engine Electrical Systems</b>	<b>3(2-3)</b>	Ronald Garthe, Director	
Prerequisite: Coordinator approval. Study, analysis, service and repair of engine electrical systems and components.		<b>Purpose of Programs</b>	
<b>AFP 220 Ignition Systems</b>	<b>7(5-5)</b>	Technological developments and achievements in electronics, automated devices, numerical controlled machines, computer graphics, integrated manufacturing, and other computer applications have progressively changed the content and objectives of courses in the area of Computer Integrated Manufacturing. These new and revised courses are meeting the challenge of what is being called the robotics era or the "computer revolution."	
Prerequisite: Coordinator approval. Study, analysis, service, and repair of aircraft engine ignition systems and components.		The computer graphics "CADAM" Laboratory, equipped with integrated manufacturing capabilities, the digital program in electronics and the computer-aided instructional laboratory are a few examples of meeting "high technology" needs.	
<b>AFP 221 Propeller Systems and Controls</b>	<b>6(4-4)</b>	The Computer Integrated Manufacturing Programs offer curricula or courses supporting the new integrated manufacturing technologies such as robotics, numerical machine control, programmable controllers, pneumatic logic control, electrical discharge machining and hydraulics/pneumatics courses. These specialized courses are designed to aid technical personnel in working more effectively within their manufacturing environments. The systems approach to troubleshooting, maintenance and repair is the focus of these courses.	
Prerequisite: Coordinator approval. Covers study, analysis, service and repair of aircraft engine propellers, systems and controls.		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.	
<b>AFP 222 Lubrication Systems</b>	<b>4(3-2)</b>	<b>Certificate programs</b>	
Prerequisite: Coordinator approval. Studies aircraft engine lubrication systems and components.		The one-year Certificate Programs offered by the Computer Integrated Manufacturing area are designed to prepare students for initial job placement. Also, they are designed to help many students enter apprenticeship training	
<b>AFP 223 Engine Fuel Systems I</b>	<b>1(1-1)</b>		
Prerequisite: Coordinator approval. Studies and analyzes aircraft engine fuel systems and components.			
<b>AFP 224 Engine Fuel Systems II</b>	<b>4(3-3)</b>		
Prerequisite: Coordinator approval. Covers aircraft engine carburetion requirements including the application, service, and repair of carburetors.			
<b>AFP 225 Induction and Exhaust Systems</b>	<b>3(2-2)</b>		
Prerequisite: Coordinator approval. Study of aircraft engine induction and exhaust systems; the maintenance, repair, and inspection of these systems and components.			

programs and receive partial or full pre-credit for the courses taken. Usually the courses of these programs may be taken on a part-time basis.

Some may wish to enroll in a certificate program for the purpose of job advancement or for obtaining placement in a new field of employment. Others may wish to transfer to a related associate degree program after completion of a certificate program.

A minimum of 45 credit-hours with a Grade Point Average of 2.00 or above is required for any certificate of achievement and such a certificate is awarded for the satisfactory completion of such credit.

Students should bear in mind that the courses of the certificate programs, while being informational and instructive in nature, are not necessarily equivalent in content and on-the-job experience to the courses of the programs prescribed by the various Lansing Joint Apprenticeship Committees. By themselves, such courses will not lead to journeyman status for the student.

Students seeking journeyman status should consult with an apprenticeship and training committee of an appropriate joint apprenticeship board, as registered with the Bureau of Apprenticeship and Training, Lansing Office of the U.S. Department of Labor, or with the Computer Integrated Manufacturing program.

#### Associate degree programs

Courses completed in Computer Integrated Manufacturing certificate programs are usually transferable toward an associate degree of similar nature within the area. The requirements for an associate degree are set forth near the beginning of the section of this catalogue devoted to programs of the Division of Technology and Applied Science. Students should contact the Office of the Director of the Computer Integrated Manufacturing or the Office of the Dean of the Division.

Courses Offered in Metal Machine Trades (ATR), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

- ATR 100 Machine Tool Survey** 5(2-6)  
Lecture covers machine tools used by the machinist. Laboratory offers a variety of hands-on experiences. For maintenance people, supervisors, mechanical engineers, and students of Engineering Technology. Lab fee
- ATR 101 Machine Shop I** 5(2-6)  
Theory and practice in the operation and setup of machine tools with emphasis on lathe, drill press, bench work, and measuring instruments. Lab fee
- ATR 102 Machine Shop II** 5(2-6)  
Prerequisite: ATR 101. Continuation of ATR 101 with emphasis on milling machine practice. Some reference to shapers and planers and an introduction to heat treating of steels. Lab fee
- ATR 103 Machine Shop III** 5(2-6)  
Prerequisite: ATR 102. Continuation of ATR 102 with emphasis on grinding machine practice, metallurgy, and cutting fluids with an introduction to numerically controlled machines (N/C). Lab fee
- ATR 104 Tool and Cutter Grinding** 4(2-4)  
Operations and setup in tool and cutter grinding of 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
- ATR 105 Project Laboratory (Machine Shop)** 4(0-6)  
Prerequisite: ATR 101 & ATR 102 ("B" or higher) & Department Approval. Advanced course for students wishing to do in-depth work in the machine shop area or to develop trade entry skills. Students select projects compatible with their individual fields of work. Lab fee (Approval may be given to take this course twice for a maximum of eight credits.)
- ATR 107 Insert Tools - Selection and Use** 3(2-2)  
Prerequisite: ATR 102 or program approval. Examines comparative advantages of high speed steel vs. carbides, ceramics, cubic boron nitride and diamond cutting tool materials. Enables economic selection of carbide and ceramic grades and appropriate tool holders and milling cutter bodies. Study of speeds, feeds and depths of cuts for insert tooling. Analyzes causes and remedies for insert failure, poor tool life and/or finish quality. Includes coverage of setup for insert milling cutters and tool holders.
- ATR 112 Template Making and Model Checking** 3(2-2)  
Prerequisite: DT 100 or DT 110 or program approval. Functions of models, templates, use of the sine bar, height gauge, and aids. Applications of models are described; interpretations and sectioning of drawings are used. Lab fee.
- ATR 113 Die Construction I** 3(2-2)  
Prerequisite: DT 100 or DT 110 or program approval. Emphasis on layout and

processing, types and uses of aids applying to die construction, selection of steels, limitations on accuracy, and finishing parts used in die construction. Covers various types of die construction used in industry and presses related to die construction.

- ATR 114 Die Construction II** 3(2-2)  
Prerequisite: Program approval or ATR 113. Continuation of ATR 113. Covers theory of heat treat, repair and maintenance, welding, types of steels, and types of aids used in die construction; also auxiliary equipment to dies such as lifters, loaders, kickers, stackers, hoppers, and dial feeds. Shows how dies should be built for long life and maintenance.
- ATR 118 Principles of E.D.M.** 3(2-2)  
Involves theory, fundamentals, and practice of Electric Discharge Machining; programming the control console, machining of electrodes, practical applications, and estimating time of operation. Lab fee
- ATR 120 Plastics I (Introduction)** 4(4-0)  
An introduction to the classification of plastics, plastic structure, and how plastics are made. Includes the thermoplastic family: acrylic, fluorocarbon, polyamide, P.V.C., A.B.S., styrene, and polypropylene; the thermoset family: urea and melamine, casein, epoxy, phenolic, polyester, silicone, and urethane.
- ATR 121 Plastics II (Processing)** 3(2-2)  
Prerequisite: ATR 120. Includes molding processes such as compression, transfer, injection, extrusions; also, casting processes and thermoforming processes. Foaming, heat sealing, and fabrication are discussed. Lab fee
- ATR 122 Plastics III (Fabrication and Design)** 3(1-3)  
Prerequisite: ATR 121. Plastic fabrication such as cutting, joining, fastening, and heat sealing. Also, processing plastic by injection molding, extrusion molding, blow molding, vacuum forming, and compression molding. Lab fee
- ATR 127 Machinery Handbook I** 4(4-0)  
Prerequisite: ATR 151. Familiarizes the student with the effective utilization of information contained in the Machinery Handbook.
- ATR 130 Blueprint Reading for Die Sinks** 4(4-0)  
Prerequisite: DT 100 or equivalent. Blueprint reading for the die sinking trades. Covers different types of dies, their purposes, and terminology used in the forging industry. Also, transferring information on part prints to forging and trimmer dies.
- ATR 137 Industrial Presses I** 4(4-0)  
Covers different types of mechanical presses, terminology, purposes, and functions in industry. Includes movies and slides of mechanical action, maintenance systems, and safety, supplemented by visits to plants using presses and press repairs. For mechanical trades apprentices, press repair and maintenance people, stamping plant foremen, press operators, die setup employees.
- ATR 138 Industrial Presses II** 4(4-0)  
Prerequisite: ATR 137. Continuation of ATR 137 with emphasis on maintenance, in-depth coverage of the various clutches, slides, and bearings, supplemented by slides, movies, and field trips. Press tonnage capacities and various applications to dies utilized provides a broader knowledge for individuals from many different trades and occupations. Lab fee
- ATR 139 Rigging** 3(2-2)  
Covers 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, safe working strength of slings, hooks, sheaves, ropes and chains, and the use of personal safety equipment. Lab fee
- ATR 142 Applied Metallurgy** 3(2-2)  
Explains physical and mechanical properties of metals, identification, selection, atomic structure, crystal structure, phases in metal systems, phase diagrams, and metallography. Lab fee
- ATR 143 Industrial Heat Treat** 3(2-2)  
Prerequisite: ATR 142. Covers hardening, normalizing, annealing, case hardening, carburizing, cyaniding, nitriding, flame hardening, induction hardening, marquenching, austempering, martempering, and production of metals. Lab fee
- ATR 144 Hydraulics and Pneumatics** 3(2-2)  
Introduces 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

**ATR 145 Industrial Hydraulics 3(2-2)**

Prerequisite: ATR 144. Continuation of ATR 144. Emphasis on applications of hydraulic circuitry to industrial machinery. Lab fee

**ATR 146 Pneumatic Machine Control Design (Air Logic) 3(2-2)**

Prerequisite: ATR 144. Introduces concept of controlling industrial machinery with air-operated relays and air-logic circuits, emphasizing 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. Lab fee

**ATR 147 Pneumatic Machine Control Maintenance (Air Logic) 3(2-2)**

Prerequisite: ATR 144. Introduces basic design of valves and relays used in air-logic circuits and symbols used. A "sample circuit" is used for troubleshooting a mock machine setup. Lab fee

**ATR 160 Precision Inspection I 3(2-2)**

Techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, hardness testing. Lab fee

**ATR 161 Precision Inspection II 3(2-2)**

Prerequisite: ATR 160. Precision layout work related to gauges and inspection problems. Lab fee

**ATR 218 Machine Maintenance I 4(2-4)**

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. Lab fee

**ATR 219 Machine Maintenance II 4(2-4)**

Prerequisite: ATR 218. Continuation of ATR 218, rebuilding and replacing worn parts, alignment of slides and ways, and use of proper tools and service manuals. Lab fee

**ATR 220 Machine Maintenance III 4(2-4)**

Prerequisite: ATR 218, ATR 219, or department approval. Completion of rebuilding tool room machine. Machining and scraping a 6" x 6" surface plate. Lab fee

**ATR 224 Industrial Pump Repair 4(2-4)**

Shows the fundamentals and operating principles of pumps and pump controls, applications of pump equipment in industry, along with installation, operation, and maintenance procedures.

**ATR 225 Sequencing Industrial Equipment 4(4-0)**

Prerequisite: ATR 144. Covers chronological order of sequences of operation, analyzing circuit malfunction from sequence prints, and the relationship of electrical controls and fluid power systems.

**ATR 230 Pneumatic Tool Repair 3 (1-3)**

Covers maintenance and repair of industrial and automotive pneumatic tools. Lubrication, gears, motors, hoists, spray gun seals, and bearings will be covered. Lab fee

Courses Offered in Numerical Controls and Computer Numerical Controls, by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

Numerical Control and Computer Numerical Control (NC and CNC) machines are the "cutting edge" of modern machining processes. Efficiency in operating these sophisticated machines, linked with the new CADAM (Computer graphics Augmented Design And Manufacturing) opens a very bright future for qualified individuals. Courses involving these machines are closely associated with Robotics and Integrated Manufacturing Techniques.

To qualify, the student must first acquire a solid machining background and necessary mathematical skills for computing precision movements. A programmer must also become expert at reading blueprints. Machine programming in some companies is performed in their engineering departments.

This curriculum provides job entry skills and enough related knowledge to communicate with all personnel in this exciting and changing field.

**ATR 206 Numerical Control I - Fundamentals of Numerical Control 4(3-1)**

Prerequisite: ATR 151. Introduction to modern concepts of numerical control of machine tools. Emphasizes controlling media, introductory programming, and limited machine operation. Lab fee

**ATR 207 Numerical Control II - Manual Programming for Numerical Control 4(3-1)**

Prerequisite: ATR 206 and ATR 153 or equivalent. Continuation of ATR 206 with emphasis on developing skill in manual programming of two- and three-axis, point-to-point positioning, numerically controlled machine tools. Operation of vertical milling machine provides an important part of this course. Lab fee

**ATR 208 COMPACT 2 - Introduction to Computer Assisted Programming 4(3-1)**

Prerequisite: ATR 207 or equivalent. Study types of parts which can be programmed to advantage using a computer and actual experience in programming. Equipment used includes computer terminal, plotter and three-axis N/C milling machine. Lab fee

**ATR 209 COMPACT 2 MILL 3(2-2)**

Prerequisite: ATR 208. A continuation of ATR 208 featuring the advanced features of COMPACT II to create sophisticated NC programs for the Cincinnati 750 VMC machining center. Lab fee

**ATR 210 CNC HURCO 3(3-1)**

Prerequisite: ATR 152. The HURCO milling machine has a special CNC control for its operation that is easily learned because of its use of standard english words and menu type programming. Hands-on operation. Lab fee

**ATR 211 Project Laboratory (Numerical Control) 3(0-4)**

Prerequisite: ATR 206, ATR 207, & ATR 208. Advanced course for those 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

**ATR 212 CNC MILL I 3(2-2)**

Prerequisite: ATR 207. Introduction to manual CNC programming including: milling, drilling, tapping routines, program editing, etc. with hands-on operation of Cincinnati 750 VMC machining center. Lab fee

**ATR 213 CNC MILL II 3(2-2)**

Prerequisite: ATR 212. A continuation of CNC MILL I with advanced programming with emphasis on cutter diameter compensation (CDC), work surface programming (WSP), thread boring, and other features of the Cincinnati machining center. Lab fee

**ATR 214 COMPACT 2 LATHE 3(2-2)**

Prerequisite: ATR 208. Introductory course to computer assisted CNC lathe programming featuring COMPACT II language and Cincinnati 10" turning center. Lab fee

**ATR 215 Advanced COMPACT 2 LATHE 3(2-2)**

Prerequisite: ATR 214. A continuation of ATR 214 with emphasis on contouring, threading and special features of COMPACT II programming language. Lab fee

**ATR 216 CNC LATHE I 3(2-2)**

Prerequisite: ATR 207. Introduction to manual programming of Cincinnati 10" turning center with hands-on operation. Lab fee

**ATR 217 CNC LATHE II 3(2-2)**

Prerequisite: ATR 216. A continuation of ATR 216 with emphasis on contouring, threading, tail stock usage, x and z axis tool compensation. Lab fee

**ATS 132-134 Heating and Air Conditioning Seminar variable**

Covers cooling, heating, humidifying, filtering, servicing and/or ventilating, etc., for individuals already in the field or interested in any of these areas.

**ATS 162-164-214 Welding Seminar variable**

Includes maintenance welding, production welding, resistance welding, and/or tool and die welding, etc.

**ATS 222-223-224 CNC Seminars variable**

Beginning basics featuring Bridgeport Series II Milling Machine with Manual Tool Change. Advanced NC Programming featuring Cincinnati Milacron Machining Center 5 VC-750 with Automatic Tool Changer.

Beginning basics featuring Compact II for Computer Assisted CNC Programming.

Courses Offered in Computer Integrated Manufacturing (CIM), by the Computer Integrated Manufacturing Department—by Course Number, Title, Credits Allowed, and Description.



**CIM 100 Introduction to Computer Integrated Manufacturing** 3(3-0)

Manufacturing businesses are generally the most complex form of business in existence and the most basic to a nations economy. This course will provide an overview of the concepts of CIM including computer aided design, computer aided manufacturing, robotics, quality control, and manufacturing information systems.

**CIM 250 Personal Computer Applications** 3(1-3)

This class provides students with a basic understanding of the uses of micro computers. A major emphasis will be placed on the IBM-PC. Students are given a basic understanding of what software is available for micros by use of handouts and are given a working knowledge of the major software packages that are available. Half of this course will be hands on in the lab using the IBM-PC. Listed below are the three class times and section numbers. Lab fee

**CIM 255 Volkswriter** 3(1-2)

Prerequisite: ATR 250/Department Approval. This course is designed for people who need a basic course in word processing that is easy to learn and practical. In this course the student will learn basic techniques of word processing using the IBM-PC and the Volkswriter Deluxe software package. During this class, participants will build skills that will enable them to write short memos, reports, letters, proposals, invoices and other documents. Primarily designed for the small business-person, contractor or technical type who does not have access to a dedicated word processing system or secretarial help, but who never the less has writing needs. The Volkswriter course offers an opportunity to learn a valuable new skill. Lab fee

**CIM 260 Spreadsheet Applications** 3(1-2)

This course is primarily designed for contractors and for technical types in industry who need the versatility offered by an integrated software program consisting of a spreadsheet, information management, and graphics. This program is taught using the IBM-PC. Various scenarios involving scheduling, financial spreadsheets, inventory management, and supporting graphics are covered. Lab fee

Courses offered in Computer Graphics (CG), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

Programs offered by the Computer Integrated Manufacturing Program have moved rapidly toward a Factory-of-the-Future concept since the acquisition of the CADAM system. CADAM is the trademark name for the software donation made to Lansing Community College by CADAM, Inc., a subsidiary of Lockheed Corp. CADAM is one of the most sophisticated products among the available CAD/CAM manufacturing systems. Lansing Community College is proud to be among the first community colleges in the nation to provide CADAM training as a regular part of its design program. Thanks to CADAM, designers can trade their drafting boards, T-squares and pencils for a video screen and a light pen. Using the light pen to indicate the location of lines and points, and keyboard to enter descriptive data, designers construct the design geometry on the computer screen, and the system automatically plots a scale drawing.

**CG 110 Introduction to Computer Aided Design** 4(4-0)

General introduction to computer aided design and computer aided manufacturing. The emphasis will be placed on computer hardware, software, computer graphics equipment identification and interaction. The student will learn through lecture, demonstration, hands-on discussion and research. Lab fee

**CG 201 CADAM Training: Basic** 4(4-0)

Prerequisite: Department Approval. Is an informative computer graphics course which will explore the latest in software and hardware used on the IBM CADAM work station. The operator will use functions and menu items to create multi-view mechanical drawings. Dimensions and notes will be created to complete the drawing. Emphasis will be placed on creating and editing drawings. Lab fee

**CG 211 CADAM Training: Architecture I** 4(4-0)

Prerequisite: Department Approval. This class is the first in a two part series which utilizes the CADAM system for the production of architectural graphics. Students will develop the skills learned in basic CADAM and produce architectural schematics, details, pictorial and various types of working drawings. Production of individual works as well as group projects will be available. Lab fee

**CG 212 CADAM Training: Architecture II** 4(4-0)

Prerequisite: Department Approval. This class will enable the advanced CADAM student to expand their knowledge of computer graphics and utilize the functions of the CADAM system to its fullest extent. Emphasis will be

placed on the production of complete sets of drawings which can be included in a portfolio. Lab fee

**CG 241 CADAM Training: Industrial I** 4(4-0)

Prerequisite: Department Approval. This class is designed to apply the skills of basic CADAM. Emphasis will be placed on how the computer may increase productivity by applying the basic functions to industrial drawings of moderate detail. Lab fee

**CG 242 CADAM Training: Industrial II** 4(4-0)

Prerequisite: Department Approval. This class is an in-depth study of most functions and menu items on the CADAM system. The operator will use details from the standard library. Emphasis will be placed on design drawings. Lab fee

**CG 261 CADAM Training: NC I** 4(4-0)

Prerequisite: CG 201 and ATR 208. Introductory course in adding Numerical Control data to the CADAM model geometry. Cutter diameter, path, feed-rates, spindle speeds, etc. will be developed for 3-Axis milling machines and lathes. Procedures for producing the NC control program will be discussed. Lab fee

**CADAM Project Laboratory** variable credit

A project lab gives the architectural or industrial drafting student the opportunity to do an independent study on the IBM CADAM Graphics System. Project assignment will be through a mutual agreement between student and instructor. It will be the responsibility of the student to define and outline the project objectives. A preliminary design concept will be made utilizing conventional drafting practices, e.g. material specifications, standard components and tolerance requirements, etc. Upon approval of this design, a time estimate will be made for the completion of this assignment using the Computer Graphics facility (CADAM). The lab fee will vary depending on time necessary to complete project.

Courses Offered in Industrial Drafting Technology (DT), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The Industrial Drafting Technology Program is composed of various drafting courses which will familiarize an individual with product design, tool design, and die design. The basic concepts of these courses are structured to prepare students for a drafting and design environment, utilizing conventional or computer aided design technologies.

**DT 100 Basic Drafting** 3(2-2)

Focuses on basic concepts in orthographic projection, auxiliary projections, sketching, both orthographic and pictorial. Lettering techniques will be stressed; a brief approach to industrial dimensioning practices is presented. Lab fee

**DT 101 Industrial Drafting I** 4(2-4)

Prerequisite: DT 100 or Departmental test. Emphasis is placed on orthographic projection, sections, auxiliary views and dimensioning technique. Each student will work on a set of drawings using the above and be introduced to computer aided design. Lab fee

**DT 102 Industrial Drafting II** 4(2-4)

Prerequisite: DT 101. Emphasis is on advanced techniques. Beginning layout will be stressed along with preparation of welding or fabrication type drawings. Lab fee

**DT 103 Descriptive Geometry** 4(2-4)

Prerequisite: DT 101. Covers graphic representation and solution of space problems through the practice of fundamental principles of advanced orthographic projection. Includes points, lines and planes, primary and successive auxiliary views, parallelism, perpendicularity, developments and intersections; civil and mechanical engineering problems. Lab fee

**DT 104 Jigs and Fixtures I (Detailing)** 4(2-4)

Prerequisite: DT 101. Detailing techniques and dimensioning will be emphasized through the development of working drawings. These drawings will be extracted from a design concept or assembly type drawing. Familiarization with standard components will also be stressed. Lab fee

**DT 105 Jigs and Fixtures II (Design)** 4(2-4)

Prerequisite: DT 104. Design concepts and a problem solving type approach will be utilized in designing tools for various product drawings.

- DT 106 Industrial Drafting III** 4(2-4)  
Prerequisite: DT 102. Stresses layout and design concepts, and practical design projects in problem solving and creativity. Assignments prepare the student for DT 294 and DT 296. Lab fee
- DT 110 Industrial Blueprint Reading I** 4(4-0)  
Prerequisite: DT 100. Covers basic concepts in orthographic projection, with emphasis on interpretation of engineering drawings. Lab fee
- DT 111 Industrial Blueprint Reading II** 4(4-0)  
Prerequisite: DT 110. A continuation of DT 110 with emphasis on more complex engineering drawings. Machine shop processes will also be covered.
- DT 135 Technical Illustration I** 4(2-4)  
Prerequisite: DT 101 or Equivalent. Introduces methods of illustration currently used in industry: use of sketches, photographs, axonometric construction, and introduction to the perspective grid. Use of line weights is stressed to achieve desired finished drawing effects. Lab fee
- DT 136 Technical Illustration II** 4(2-4)  
Prerequisite: DT 135. Covers applying practical concepts used in industrial pictorial communications, preparation of layouts from layout and part prints and photographs, design considerations in layout preparation, acetate overlays, paste-up, keylining techniques, and graphic reproductive processes. Lab fee
- DT 160 Lettering I** 1(0-2)  
Introduction to lettering techniques with emphasis on letter formation, proportion, uniformity, and composition. A variety of lettering instruments and methods of applying letters using mechanical techniques will be explored.
- DT 202 Die Design I (Detailing)** 4(2-4)  
Prerequisite: DT 101. 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.
- DT 203 Die Design II (Layout)** 4(2-4)  
Prerequisite: DT 202. Includes the design of blanking and piercing dies, forming dies, and trim dies; metals as applied to the type of die; related study in electro-discharge machines, processes, and estimating.
- DT 208 Plant layout** 4(2-4)  
Prerequisite: DT 101 and MT 108 or equivalent. Focuses on drafting procedures as related to plant layout, including building construction and manufacturing processes.
- DT 209 Industrial Drafting Lab** 2(0-4)  
Prerequisite: Coordinator approval. Gives additional lab time to advanced students. Students who are taking DT 101 or advanced courses are eligible.
- DT 210 Industrial Dimensioning Practices** 3(3-0)  
Prerequisite: DT 102 or equivalent. Establishing rules, principles and methods of dimensioning and tolerancing for specific design requirements on engineering drawings, and uniform practices for stating and interpreting these requirements. Includes geometric tolerances and introducing the symbolic method of specification.
- DT 294 Project Laboratory (Industrial)** 4(0-8)  
Prerequisite: Coordinator approval. Further drafting skills in beginning layout and advanced detailing. Advanced problems and research in design application.
- DT 296 Project Laboratory (Industrial)** 6(0-12)  
Prerequisite: Coordinator Approval and DT 294. A minimum of 12 hours per week on layout procedures. Includes the design of a mechanical device and making a complete design drawing.
- Courses Offered in Electro-Mechanical Technology (EM), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.
- Electro-Mechanical technicians may perform such duties as setting up preventive electrical maintenance programs, maintaining electrical apparatus, troubleshooting malfunctioning equipment including programmable automated machinery, installing replacement equipment and proto-typing state of the art machinery. These technicians are also able to advise on the selection of equipment.
- Several courses in the Electro-Mechanical Technology Program are offered on an open-lab, open-entry basis. These courses are:
- SAF 200 Electrical Safety Standards**  
**EM 101 Basic Electricity**  
**EM 121 Math for Electricians**  
**EM 122 Math for Electricians II**  
**EM 123 Math for Electricians III**  
**EM 131 Electric Circuits for Machine Control**  
**EM 135 Electrical Prints for Residential and Commercial Buildings**  
**EM 136 Electrical Prints for Industrial Buildings**  
**EM 161 Introduction to Programmable Controllers**  
**EM 211 DC Generators and Motors**  
**EM 212 Three-Phase Alternators and Single Phase Motors**  
**EM 213 Three-Phase Motors and Transformers**
- Students may register for open-lab courses during regular registration or at any time during the regular terms. Students are expected to complete the courses in a normal term length, normally eleven weeks. Within this constraint, students are allowed to work at their own pace. Open-lab hours are scheduled morning, afternoon and evening for the convenience of the students.
- 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.
- EM 101 Basic Electricity** 4(3-2)  
Prerequisite: High school algebra recommended, SAF 200 concurrently. Survey of modern electrical technology. Covers basic electrical terminology and calculations. Special emphasis on the correct use of electrical meters. Basic housewiring circuits are used to introduce students to wiring techniques, use of hand tools, and circuit design. Includes a brief introduction to the National Electrical Code. Lab fee. Fall, winter and spring terms.
- EM 102 Basic Wiring Installation** 3(2-2)  
Prerequisite: EM 101. Electric wiring systems maintenance and installing wiring systems in wood-frame and masonry construction. Practice in the installation of non-metallic sheathed cable, flexible metal clad cable, electrical metallic tubing and rigid conduit. Lab fee.
- EM 103 Electric Motor Maintenance** 3(2-2)  
Prerequisite: EM 101 or EM 131. Diagnose and test single and three phase motors and some dc motors; identify electrical and mechanical problems using various meters, test equipment and testing procedures; conduct minor electrical and mechanical repairs; learn rewinding process and metal working procedures that are used for extensive motor repair. Lab fee
- EM 121 Math for Electricians I** 4(4-0)  
Basic mathematic review beginning with arithmetic operations, fractions, decimals, scientific notation, ratio and proportion. Course also introduces elementary algebra. Majority of problems deal with practical electrical situations. Fall, winter and spring terms.
- EM 122 Math for Electricians II** 4(4-0)  
Prerequisite: EM 121. More skill is developed in algebra; learn basic trigonometric functions and the manipulation of phasors in order to solve problems in alternating current circuits. Fall, winter and spring terms.
- EM 123 Math for Electricians III** 4(4-0)  
Prerequisite: EM 122. Applies phasor skills to the solution of three-phase circuits. Time is also available for special selected topics. Fall, winter and spring terms.
- EM 131 Electric Circuits for Machine Control** 4(3-2)  
Prerequisite: SAF 200 concurrently. A course in relay controls using J.I.C. standards. Construct and understand the operation of 3 phase motor control circuits. Learn the symbols for and understand the operation of machine control components including limit switches, pneumatic timers, latch relays, etc. Use wiring and ladder diagrams to connect circuits. Develop circuits to control simple manufacturing machines.
- EM 132 Electric Circuits for Automated Machinery** 4(3-2)  
Prerequisite: SAF 200 and EM 131. Continuation of EM 131. Proximity switches and optical devices. Automation interlocking. Automatic/continuous cycling of machinery. More ladder diagram development as well as electronic controls.
- EM 135 Electrical Prints for Residential and Commercial Buildings** 3(2-2)  
Prerequisite: EM 101 or some wiring experience is helpful. Covers construction prints with emphasis on standard symbols, interpretation of non-standard symbols, and interpretation of prints. Emphasis on use of the National Electrical Code to calculate branch circuit and feeder sizes in residential and commercial buildings. Brief introduction to fire alarm systems. Lab fee Fall, winter and spring terms.

- EM 136 Electrical Prints for Industrial Buildings** 3(2-2)  
Prerequisite: EM 135. Emphasis on industrial applications, primarily motor and other electrical circuits. Other topics include lighting calculations, high voltage distribution, signalling and safety systems, uninterruptible power supplies, energy management. Continuing use of the National Electrical Code. Lab fee Fall, winter and spring terms.
- EM 151 Industrial Static Control Systems** 3(2-2)  
Prerequisite: EM 132 concurrently. Introduces static control systems used in industry to operate machines and other equipment. Shows how electronic switching circuits can be used to sequence operations, count parts and operations, etc. Lab work consists of building and operating static circuits that duplicate relay circuits, and using TTL devices to duplicate the popular static systems.
- EM 161 Introduction to Programmable Controllers** 4(3-2)  
Prerequisite: SAF 200 and EM 131. Covers major components of a programmable controller and how these components are connected to create an operating programmable controller; the capabilities, similarities and differences among controllers and their component parts; programming relay equivalent circuits both Allen Bradley and modicon programmable controllers. Lab fee Fall and winter terms.
- EM 163 Allen Bradley Programmable Controllers I** 3(2-2)  
Prerequisite: EM 161 or dept. approval. Programming and system connections for Allen Bradley programmable controllers. Beginning with timers, counters and math through file moves (word to file, file to file, etc.) and bit manipulation.
- EM 164 Modicon Programmable Controllers I** 3(2-2)  
Prerequisite: EM 161 or dept. approval. Programming and system connections for modicon programmable controllers. Beginning with timers, counters and math through data transfers (table to register, register to table, etc.) and sequencers.
- EM 211 DC Motors and Generators** 4(3-2)  
Prerequisite: SAF 200, ET 112 and EM 123. Covers basic principles of dc motors and generators including induced voltage, development of torque, and mechanical output power; operating characteristics, modern dc motor control. Emphasis on mathematical problem solving. Lab fee Fall, winter and spring terms.
- EM 212 Alternators and Single Phase Motors** 4(3-2)  
Prerequisite: EM 211. Begins with review of three-phase theory and calculations. Covers construction and operating characteristics of three-phase alternators. Brief introduction to three-phase motor theory. Common single-phase motor construction and operating characteristics emphasized. Lab fee Fall, winter and spring terms.
- EM 213 Transformers and Three Phase Motors** 4(3-2)  
Prerequisite: EM 212. This is a continuation of EM 212. Covers three-phase induction and synchronous motors, single-phase and three-phase transformers. Common transformer hook-ups are discussed and investigated in lab. Lab fee Fall, winter and spring terms.
- EM 240 Electrical Estimating** 3(2-2)  
Prerequisite: EM 135. Covers basics of preparing accurate, competitive, electrical estimates for the building trades; fundamental take-off procedure using electrical, mechanical and architectural prints; labor and materials cost, evaluation techniques, and proper use of specifications. 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. Lab fee Spring term.
- EM 264 Modicon Programmable Controllers II** 3(2-2)  
Prerequisite: EM 164. Continuation of EM 164. More data transfer and programming development.
- EM 266 Allen Bradley Programmable Controllers II** 3(2-2)  
Prerequisite: EM 163. Continuation of EM 163. More file moves and programming development.
- EM 291, 292, 293 Project Labs** 1(0-2) 2(0-4) 3(0-6)  
Prerequisite: Coordinator Approval. Use of the electro-mechanical laboratory and other resources to pursue an individual project. Submit a written proposal outlining the project and secure approval from the supervising instructor before enrolling. It is recommended that the student be at least half way through the Electro-Mechanical curriculum before attempting a project lab.

Courses Offered in Electronics Technology (ET), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The field of electronics continues to expand rapidly as technology in computers, communications, navigation, industrial automation, medical life support systems and numerous other "High Technology" applications are developed. Lansing Community College offers a two-year program leading to an Associate Degree. LCC's electronics technology staff is kept up-to-date by constant contact with industries to update, as necessary, their skill and knowledge.

Job opportunities in electronics technology are many and varied. Placement in any given segment of the electronics field will depend upon circumstance and opportunity at the time the graduate seeks employment. Students may follow one of several "tracks" developed to emphasize specialty areas of electronics. These specialties are:

Digital electronics (Computer Electronics) is one of the most dynamic and challenging areas in the electronics field. Recent developments in this technology promise to make computers as common in everyday life as radio and television. Digital electronics is devoted to the circuits and devices used in modern business and industrial computers and other digital devices of modern technology. LCC's Digital Electronics Program will prepare the student to maintain, troubleshoot, repair and often build and install computers, computer peripheral devices and similar digital equipment.

The Biomedical Equipment Technician (BMET) is expected to maintain, calibrate, repair and test a wide variety of highly sophisticated electronic and electro-mechanical systems used in the modern hospital, medical or dental clinic. Such equipment includes life sustaining and monitoring equipment found in critical care units, as well as many other devices and systems found throughout the hospital or clinic. LCC's BMET Program helps the graduate qualify for BMET Certification.

The Communications Service Technician installs and maintains radio and television transmitting and receiving equipment. Most such occupations require knowledge that is contained in the Federal Communications Commission General Radiotelephone Examination. Lansing Community College offers preparation courses for the examination as well as courses focusing on the troubleshooting of communications equipment. The radio-television service sequence prepares a student to gain an entry level position in the electronic service industry by offering the opportunity to repair radio and television equipment during the courses.

The Avionics Technician maintains, installs, diagnoses and repairs two-way communication systems, radar, navigational aides, instrument landing systems and related systems on private and commercial aircraft and airport installations. The Avionics Program at LCC offers an in-depth series of specialized courses using live equipment and operational simulators to prepare the student for entry into this growing and challenging field.

**ET 100 Basic Electronics** 4(2-4)

Prerequisite: High school algebra. Covers the fundamental concepts of electricity to electronic amplification, using transistors. Emphasis on laboratory work. Lab fee

**ET 111 Electrical Circuits I** 6(4-4)

Prerequisite: TEC 151 concurrently, high school algebra or equivalent. Introduces basic electrical circuits with emphasis on direct current. Covers electrical units, resistor color code, Ohm's law, Kirchhoff's laws, network theorems, inductance, capacitance and R.C. time constants. Laboratory work includes measurement of voltage, current and resistance in D.C. circuits using the VOM and VTVM, constructing and testing simple meters, and using the oscilloscope to measure the period and amplitude of an A.C. signal. Basic troubleshooting concepts are also introduced. Lab fee

**ET 112 Electrical Circuits II (AC Circuits and Diodes)** 6(4-4)

Prerequisite: ET 111. The second of a series of three courses in electrical and electronic fundamentals. ET 112 deals with the sine wave, inductive and capacitive reactance, impedance of series and parallel circuits, series and parallel resonance and filters. Solid state diodes are introduced, and circuits using these devices are discussed, including rectifiers and zener regulators. Small Signal characteristics of diodes are examined. Lab fee

**ET 113 Electrical Circuits III (Transistors)** 6(4-4)

Prerequisite: ET 112. The last of a series of three courses in electrical and electronic fundamentals. ET 113 deals with bipolar and field effect transistors. Biasing methods, small signal and large signal characteristics of typical transistor amplifiers are discussed, both from an analysis and from a design standpoint. Interstage coupling and bypassing are examined. Solid state troubleshooting is introduced. Lab fee.

**ET 120 Digital Programming Concepts** 3(2-2)

Prerequisite: ET 111/TEC 151/Approval. This course is designed specifically for electronic students and will include a basic introduction to several of the most common programming languages. Emphasis will be on the specific requirements of the language as it relates to the job of a computer field engi-

ner. In this course a link is established between the higher level languages, assembler and the machine language training that the students will receive the following term, while actually programming the microprocessors in the electronics lab. Lab fee

**ET 121 Machine Language Programming 3(2-2)**

Prerequisite: ET 112. For electronics majors planning to study digital electronics. Covers fundamentals of machine language programming; emphasis on number systems, addressing modes, machine instructions, branching and interrupts Lab work in writing and debugging programs in machine language. Lab fee

**ET 131 Digital Basics 3(2-2)**

Prerequisite: ET 112. Introduces digital electronics and associated circuitry, binary number systems, basic logic gates, flip flops, counters, Boolean algebra, the basics of TTL integrated circuits, and fundamentals of computer operation. Laboratory work in construction and analysis of digital circuitry using TTL integrated circuits. Lab fee

**ET 206, 207, 208 Project Laboratory 1(0-2), 2(0-4), 3(0-6)**

Prerequisite: ET 113 and department approval. Pursue a topic of interest within the area of electronics, using the Project Lab to construct an electronic device, or develop a research paper on a particular aspect of electronics.

**ET 211 Electronic Applications I 4(3-2)**

Prerequisite: ET 113. Covers specific applications of electronics. Includes rectifiers, filter, shunt and series regulators, junction and MOS field effect transistors, and applications.

**ET 212 Electronic Applications II 4(3-2)**

Prerequisite: ET 113 or instructor approval. Covers linear integrated circuits, operational amplifiers and optoelectric devices. Lab fee

**ET 213 Electronic Applications III 4(3-2)**

Prerequisite: ET 113 or instructor approval. Explores thyristors, thyristor triggering devices and circuits, DC and AC motors and generators.

**ET 231 Digital Electronics I 5(4-2)**

Prerequisite: ET 113, ET 121, ET 131. Covers logic gates, combinational logic, pulsed logic, flip flops, digital counters, electronic displays, multivibrators, timers, TTL, CMOS, and ECL circuitry. Lab work in breadboarding and measuring digital circuits.

**ET 232 Digital Electronics II 5(4-2)**

Prerequisite: ET 231. Covers electronic memories, magnetic memories, analog interface devices and an introduction to microprocessors and microcomputers, including the 6800, 8085, and 8080 processors. Lab work in breadboarding electronic circuits, and using a microcomputer. Lab fee

**ET 233 Digital Electronics III 5(4-2)**

Prerequisite: ET 232. Covers microprocessors including the Z80, 6802, 6800, 8085, 8048, 8086, 68000. Also discussed are bit slice processors, 16 bit microprocessors, peripheral adapters and a general purpose microcomputer system. Lab work designing a microprocessor based system.

**ET 241 Test Equipment I 4(3-2)**

Prerequisite: ET 113, ET 131. Covers use, circuitry and adjustment of various pieces of test equipment including power supplies, meters, oscilloscopes, frequency counters and digital multimeters. Lab work in measurements and adjustments on test equipment.

**ET 242 Test Equipment II 3(2-2)**

Prerequisite: ET 241. Covers operation and circuitry of a logic pulser, current probe, data analyzer, storage oscilloscope, and other pieces of test equipment. Lab fee

**ET 243 Peripheral Devices 3(2-2)**

Prerequisite: ET 232, ET 233 concurrently. Covers adapting microprocessors and microcomputers to devices such as printers, floppy disk drives, video monitors and other peripheral devices.

**ET 251 Digital Troubleshooting I 3(2-2)**

Prerequisite: ET 131, ET 231 concurrently. Introduces basic techniques of troubleshooting; lab experience in troubleshooting basic digital circuits including clocked circuits, counter circuits, multiplexed displays, and other digital circuitry.

**ET 252 Digital Trouble Shooting II 3(2-2)**

Prerequisite: ET 232, ET 243/concurrent, ET 251. Covers use of test equipment and troubleshooting procedures for troubleshooting microprocessor based microcomputer systems. Lab work in writing troubleshooting procedures for microcomputer equipment.

**ET 261 Radio Servicing 5(3-4)**

Prerequisite: ET 113 or instructor approval. Includes theoretical and practical troubleshooting techniques; AM, FM-MPX radio operation; radio concepts using a block diagram of a superheterodyne receiver; vacuum tube and transistor radios. Students provide own handtools and televisions for repair.

**ET 262 Television Servicing 5(3-4)**

Prerequisite: ET 261 or instructor approval. Explores principles of operation of black and white television receivers; troubleshooting techniques. Students provide own handtools and radios for repair. Lab fee

**ET 263 Advanced Television Servicing 5(3-4)**

Prerequisite: Coordinator approval or ET 262. Troubleshooting and alignment of color circuits. Students provide own handtools.

**ET 271 Communications I 4(3-2)**

Prerequisite: ET 113 or instructor approval. First of a three-term sequence of courses dealing with electronic communication theory and preparation for the FCC General Radiotelephone License examination. Topics include active and passive filter networks, rf power amplifiers, and oscillator circuits.

**ET 272 Communications II 4(3-2)**

Prerequisite: ET 113, ET 271 or instructor approval. Phase locked loops, amplitude modulation, single sideband, frequency modulation, and receiving systems are covered. Lab fee

**ET 273 Communications III 4(3-2)**

Prerequisite: ET 272 or instructor approval. Investigates antennas, transmission lines, microwave devices, and transmitting systems.

**ET 283 Biomedical Instrumentation 5(4-2)**

Prerequisite: ET 242, PGY 212. Transduction of physiological variables to electrical signals and the measurement of these signals with emphasis on instruments used in a hospital.

**ET 290 Aircraft Electrical-Electronics Systems 6(3-7)**

Prerequisite: ET 113, ET 131 or equivalent. A study of the electrical and electronic systems aboard modern aircraft focusing on the purpose and operation of systems such as ADF, VOR, LOC, radar, radio altimeters, autopilot and all other equipment serviced by the avionics technician. Included is the study of the aircraft electrical system, including aircraft batteries, filtering, DC and AC power systems, inverters and other integral components. Laboratory activities cover thorough familiarization with the aircraft and includes system installation techniques, wire and cable routing, antenna location and mounting and working with aircraft hardware and structure. FAA and manufacturer specifications will be stressed.

**ET 291 Avionics Navigation and Communication Systems 6(3-7)**

Prerequisite: ET 290. A study of communications and navigation systems including communication receivers and transmitters, audio systems, VOR/LOC, Glideslope receivers, Marker-Beacons, ADF, RMI, HSI, antennas, and other types of communication and navigation equipment. The student will operate, make performance checks, troubleshoot various types of avionics navigation and communication equipment, and learn the proper use of different types of test equipment found in the aviation industry. Lab fee

**ET 293 Avionics Pulse Systems 6(3-7)**

Prerequisite: ET 291. The study of distance measuring equipment (DME) transponders (TXP), weather radar, radar altimeters, radio altimeters and other pulse equipment in aviation. Laboratory activities include troubleshooting and repair of the equipment studied. Students will service five equipment using modern test equipment and tools common to the industry.

**ET 294 Avionics Flight Control Systems 2(1-2)**

Prerequisite: ET 291, ET 293 concurrently. A study of aircraft flight control systems common to general aviation type aircraft including the operation and function of single, dual, and three axis autopilot systems. The study of interconnection to other flight systems in the aircraft will acquaint the student with complete autopilot operation and the function of individual components including aircraft yaw damper systems. Additional topics include installation requirements, troubleshooting, FAA regulations and other information concerning use and operation of flight directors and flight controls on general aviation aircraft.

Courses Offered in Heating and Air Conditioning (HAC), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The courses of the Heating and Air Conditioning Program are 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 an enclosed space, such as a home or business.

Students receive necessary background to calculate heat gains and heat losses, and learn layout, planning and design of cooling and heating systems.

In the heating sections, the installation and servicing of oil burners, gas-fired systems and the controls needed for these systems are thoroughly covered. Much time is spent in the cooling sections, building a background knowledge of the combination of motors, compressors, valves, coils, piping, ducts, electrical wiring and automatic controls that make up air conditioning systems.

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. Specialized advanced courses such as pneumatic controls for H.V.A.C. are also offered, as well as updating seminars for experienced field technicians to help prepare them for changes in new technology.

**HAC 100 Applied Electricity I 4(3-1)**

Symbols, wiring diagrams, circuits, meters, and motors are discussed and worked on. A review for the experienced; also for the beginner. Lab fee

**HAC 101 Heating and Cooling Fundamentals 4(4-0)**

An introduction to the mechanical refrigeration cycle as it applies to residential and light commercial refrigeration and air conditioning equipment.

The refrigeration system operation as well as the function of its individual components, such as compressor, evaporator, condenser and metering device are covered in detail. Also covered is a brief overview of residential central air conditioning, exercises in psychometrics, and an introduction to system design and sizing. Lab fee

**HAC 105 Heating and Cooling Schematics 4(4-0)**

Prerequisite: HAC 100 and HAC 101. Read and draw electrical diagrams and develop troubleshooting procedures from schematics. Also covers various controls used in the H.A.C. industry. Lab fee

**HAC 106 Systems Design and Code 4(4-0)**

Prerequisite: HAC 232, HAC 240, BTR 135. Advance heating and air conditioning, stressing design and sizing of heating, air conditioning, and refrigeration systems, residential heating and air conditioning, with some emphasis on duct design. Basics of mechanical code also are covered. Lab fee

**HAC 110 Refrigeration Servicing I 4(2-4)**

Prerequisite: HAC 101. Covers common types of domestic refrigerators, with particular attention to principles of construction and operation of complete refrigeration systems. Includes theory and principles underlying repairing and practical shop work, including jobs such as tube bending, flaring and soldering, and charging and testing refrigeration equipment. Lab fee

**HAC 190 Appliance Servicing I 4(2-4)**

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 major household appliances. Lab fee

**HAC 200 Applied Electricity II 4(3-1)**

Prerequisite: HAC 100. Emphasis is on heating and cooling controls, operation and repair of electric motors and control wiring. Lab fee

**HAC 210 Refrigeration Servicing II 4(2-4)**

Prerequisite: HAC 231 or coordinator approval. Beginning course in light commercial refrigeration servicing. Commercial 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 troubleshooting defrost systems and pressure controls. Lab fee

**HAC 211 Refrigeration III 4(2-4)**

Prerequisite: HAC 210. Thorough knowledge of Refrigeration II will make the student ready for the move into the servicing of commercial units such as reach-ins, walk-ins, display cases and ice makers. Piping, EPR valves, head pressure control devices are examples of the topics covered in detail. In ad-

dition, emphasis in this course will be placed on maintenance and repair of semi-hermetic compressors. Lab fee

**HAC 220 Gas Heating 4(2-4)**

Prerequisite: HAC 100 and HAC 101. Knowledge of electrical schematics recommended. Basic components and functions of a gas furnace, with detail on application, theory, troubleshooting, and service of domestic gas heating systems. Lab fee

**HAC 221 Oil Heating 4(2-4)**

Prerequisite: HAC 100 and HAC 101. Knowledge of electrical schematics recommended. Construction and operation of various types of oil-fired heating equipment. Emphasis on high-pressure oil burners; other types will be discussed. Covers systematic burner service and proper combustion testing procedures; techniques of troubleshooting in residential oil heating equipment. Lab fee

**HAC 222 Hydronics 4(2-4)**

Prerequisite: HAC 220 and HAC 221. Covers gas, oil, electrical hot water, and steam heating systems; also, boiler, chiller (with hot water), piping system, and all accessories necessary for a residential system. Students perform planned service, testing, adjusting for system and components, in the lab and field. Lab fee

**HAC 224 Pneumatic Control 4(2-4)**

Basic concepts of pneumatic controls for HVAC equipment in commercial structures; adjustment and calibration of pneumatic thermostats; checking spring ranges of valves and damper operators. Familiarization with equipment, fittings and devices in common use. Lab fee

**HAC 231 Air Conditioning I 5(4-2)**

Prerequisite: HAC 100 & 101. Fundamentals and principles of air conditioning systems, repair, maintenance and servicing residential units. Lab fee

**HAC 232 Air Conditioning II 4(2-4)**

Prerequisite: HAC 231. The fundamentals of air conditioning servicing: the testing, repairing and troubleshooting of a variety of residential and commercial systems. Also, the proper air distribution and control devices in residential climate control systems. Lab fee

**HAC 233 Air Conditioning III 4(2-4)**

Prerequisite: HAC 231 and HAC 232. Installation and maintenance of heat pumps; reviews proper applications and shows improperly designed systems. Field and lab work in more complicated heat pump components and in the troubleshooting and use of wiring schematics. Lab fee

**HAC 235 Solar Heating and Cooling Technician I 4(2-4)**

Prerequisite: HAC 231 & coordinator approval. Introduction to solar technology fundamentals and their application to the heating and cooling industry; for trades people who will be installing solar equipment in conjunction with standard heating and cooling systems. Lab fee

**HAC 240 HAC Sheet Metal 4(2-4)**

Prerequisite: HAC 101. Designed to aid the installer in the skills and techniques for installation of residential and light commercial heating and cooling systems. Covered will be sheet metal layout, identification of sheet metal fittings, various types of venting, fiberglass and insulated duct, and general furnace installation procedures. Lab fee

Courses Offered in Production and Inventory Control (PIC), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The tremendous increase in the power of the computer over the last twenty years has given systems designers, managers and engineering staffs of manufacturing companies tools that could not have been previously imagined. One of the new concepts brought about by computer technology is the ability for all facets of an organization to share information on an almost immediate basis. The integration of manufacturing information by a computerized communication system will allow most manufacturing companies the ability to more closely monitor and control their scheduling, material management and other production oriented functions.

The study of PIC concepts that will take place in these courses will be approached in a practical manner based on knowledge gained from actual manufacturing situations that will be simulated in the lab and in the class room.

**PIC 200 Introduction to Manufacturing Systems 3(3-0)**

This course is designed to represent an overview of production and inventory systems. It will introduce such topics as bill of material inventory control, master scheduling, material requirements planning and capacity planning.

**PIC 210 Bill of Material 3(3-0)**

An indepth view of bills of material and how they are used or may be used in the manufacturing environment. The purpose of this course is to help the participant understand the concepts and benefits of properly structured bills of material.

**PIC 215 Master Production Schedule 3(3-0)**

The first and main purpose of this course is to define master production scheduling and all those activities that take place within this function. The second objective is to provide an overview of the MPS function and its relationship to other manufacturing information system components.

**PIC 220 Material Requirements Planning 3(3-0)**

This overview of the material requirements planning system will include discussions on the purpose and objectives of MRP and the role it plays in the manufacturing control system. Order point and other traditional inventory control methods will be discussed and compared to MRP.

**PIC 225 Capacity Control 3(3-0)**

The capacity requirements planning course was designed to follow the MRP course and stresses the important role played by capacity planning in a manufacturing environment.

**PIC 230 Plant Maintenance 3(3-0)**

This course will include instruction in preventive maintenance scheduling online reporting of maintenance activities and the study of how these activities interface with the main production plan to insure that the required resources are available.

**PIC 235 Shop Floor Control 3(3-0)**

Shop floor control introduces the concepts of day-to-day scheduling functions that refine schedules into individual machine or work center orders. Using ordering techniques like material requirement planning, the student will learn how the finished product schedules are broken down and given to the plant in advance. Other facets of manufacturing systems that effect shop floor control will also be discussed.

Courses Offered in Quality Control and Reliability Technology (QC), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

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 has become a professional discipline. Process Control concepts and techniques have been devised and proven effective.

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 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.

**QC 100 Introduction to Quality Control 3(3-0)**

A basic overview for those exploring the quality control field. Lab fee

**QC 101 Control Methods 3(3-0)**

Prerequisite: QC 100 or Departmental Approval. Basics of chart control and sampling plans for variables and attributes. Lab fee

**QC 102 Total Quality Assurance 3(3-0)**

Basic managerial techniques and functions of running a quality control department. Lab fee

**QC 103 Probability and Statistics for Statistical Process Control 3(3-0)**

Prerequisite: TEC 152. Basic probability and statistics and an introduction to the normal poisson and binomial distribution as related to statistical process control (SPC) Lab fee

**QC 200 Control Charts 4(4-0)**

Prerequisite: QC 101 or Departmental Approval. Application, design and selection of control charts. Lab fee

**QC 201 Sample Procedures 4(4-0)**

Prerequisite: QC 200 or Departmental Approval. Acquaint students with design and selection of sampling for variables and attributes. Lab fee

**QC 202 Basic Reliability 4(4-0)**

Prerequisite: QC 201 or Departmental Approval. Basic introduction to reliability. Lab fee

**QC 208 Design of Experiment-I (Applied Stats) 3(3-0)**

Prerequisite: QC 201 or Departmental Approval. Introduction to various tests to analyze data-hypothesis testing, chi-squae, student-t, etc. Lab fee

**QC 209 Design of Experiment-II (ANOVA) 3(3-0)**

Prerequisite: QC 208 or Departmental Approval. Exploring the use of anova and regression anaylsis as a tool for problem solving. Lab fee

**QC 210 Design of Experiment-III (Experiments) 3(3-0)**

Prerequisite: QC 209 or Departmental Approval. Exploring the different methods of performing a design of experiment: nested, block, etc. Lab fee

Courses Offered in Robotics (RB), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The robotics curriculum is an application course of study that deals with generic robotics and computer integrated manufacturing (CIM) through the use of industrial robots. These courses are designed to give the student hands-on instruction in programming, repair, and design of industrial, mobile systems, and special purpose robots.

**RB 101 Introduction to Robotics 4(4-0)**

A modular approach to computer integrated manufacturing (CIM) that gives an overview of job related fields in the robotics industry to develop students' interest in a particular specialized catagory. Application of a project or projects is accomplished by the student writing programs, designing and building the fixtures, grippers and tooling for each project.

**RB 102 Applied Robotics I 4(2-4)**

Prerequisite: Departmental Approval. A concentrated introduction to the application and history of robotics. A variety of industrial robot designs are studied and applied. Additional topics include a hands-on approach to programming, design and maintenance of robotic devices. This course is open to robotic majors and other CIM program students. Lab fee

**RB 103 Applied Robotics II 4(2-4)**

Prerequisite: RB 102. An introduction to the design, construction and application of a robotic device. Students will engage in the creation of a "system" component, such as grippers, arms, fixtures or mobile material handlers. Also, a robotic work cell or system is built and various applications are studied. Each student will engage in an application project based on the students major. Sensors and interfaces are employed in an introduction to artificial intelligence is presented. Lab fee

**RB 201 Robotic Systems I 4(2-4)**

Prerequisite: RB 103. Vision, speech and machine AI are stressed in this independent study course. Students are assigned individual or group responsibilities subject to review and evaluation by department. Instructors serve as project managers of this feasibility study based course, directed towards applied computer integrated manufacturing. Lab fee

**RB 204 Robotic Project I 4(0-5)**

This course is the last required application class for Robotic Curriculum Students who are completing the Robotics/CIM Program. Projects include close-loop off-line programming of a Servo-Controlled Hydraulic Robotic System. A disassembly and documentation of an AGVS (Automated Guided Vehicle System), and the design of a hazardous environment robotic system and end-effector design and application. Working closely with local industries, student projects are inter-related to potential employers upon completion of required core courses as stated in the Robotics Technician Curriculum. Lab Fee

Courses Offered in Welding (WLD), by Computer Integrated Manufacturing—by Course Number, Title, Credits Allowed, and Description.

The field of welding has become one of the most important skilled trades in our present technical society. Welding Technology enters almost every area of manufacturing, maintenance, construction and agriculture and is considered a tool of many trades.

**WLD 100 Combination Welding 4(2-4)**

Introduces 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

**WLD 101 Arc Welding I 4(2-4)**

Prerequisite: WLD 100. Develops skills and confidence, 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. Lab fee

**WLD 102 Gas Welding and Brazing 4(2-2)**

Prerequisite: WLD 100. 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. Lab fee

**WLD 103 Gas Metal Arc Welding (MIG) 4(2-4)**

Prerequisite: WLD 101. This course provides technical understanding of welding safety, MIG fundamentals, equipment, adjustments, metal transfer and shielding gases. Also develops manual skills in all position welding and fixture design. Some facets of destructive and non-destructive testing are also covered in this course. Lab fee

**WLD 105 Blueprint Reading for Welders 3(3-0)**

This course is designed for individuals who want to know and apply the fundamentals of welding symbols. The language of welding is the welding symbol and with advancements in metallurgy, welding processes, consumables and strict code enforcement through non-destructive testing. It is critical that welding symbols be correctly interpreted and drawn. Lab fee

**WLD 111 Equipment Fabrication & Repair 3(1-4)**

Prerequisite: WLD 100 or IA. Covers safety in welding, use and operation of equipment, fabrication and repair fundamentals. Lab fee

**WLD 115 Structural Fabrication 4(2-4)**

Prerequisite: WLD 100, 101, 201 or IA. Introduction to the American Welding Society Structural Welding D1.1 and its application to steel fabrication. Satisfactory completion of this course can assist the student in passing a State of Michigan Structural Welding certification test. Lab fee

**WLD 201 Arc Welding II 4(2-4)**

Prerequisite: WLD 101. Develops skills in vertical and overhead positions. Multiple pass fillet and groove welds are demonstrated in preparation for performance tests. Covers the use and interpretation of welding symbols related to arc welding applications. Lab fee

**WLD 202 TIG Welding 4(2-4)**

Study of the principles and fundamentals of Tungsten Inert Gas (TIG or Helium arc), Plasma Arc, and Submerged Arc, welding in different positions on a variety of metals. Refresh 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

**WLD 205 Tool and Die Welding 4(2-4)**

Prerequisite: WLD 100, 101, 201, 202, and ATR 142 or IA. Practice methods involved in welding various alloyed metals: 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. Lab fee

**WLD 212 Automated Welding with Robots 4(2-4)**

This course familiarizes people with the GMF welding robot. Time will be devoted to practical hands-on experience in programming, set-up and adjustment of automated and semi-automated equipment, weldment, design and fixture building. Lab fee

**WLD 214 Aircraft Welding 4(2-4)**

(Same as APA 214). Welding applications and practice on aircraft structures, load bearing members and surfaces. Lab fee

## CONSTRUCTION TECHNOLOGY

Edwin C. Bergmann, Chairperson

The Construction Technology Programs offer educational and career programs for students in architectural technology, landscape technology, solar/energy technology, civil technology, fire science and the building trades. A program of instruction can be a single course to upgrade students in their

present position or to begin the selection of a new career. Or a program may consist of 90 credit hours, leading to the issuance of an associate degree and preparing the individual to enter a specialized technical position without the need for more than a minimum of additional training after entering such position.

Administrators and faculty are available to assist students (1) in the planning of programs to meet their individual needs, (2) in transferring credit for formal courses to be taken at other schools, including military schools, and (3) in their placement in work experiences that are pertinent to their occupational programs.

Curricular guides are available for all associate degree programs.

### Architectural Studies Center Facility

The Architectural Studies Center at Lansing Community College constitutes one of the most sophisticated facilities of its type in the nation. The center offers a series of two-year associate of science degrees and other degree options designed to prepare students as technicians in the fields of architecture, landscape architecture, and solar technology. Additional degree options are also offered to provide the necessary preparatory skills needed for successful advanced study to the student who is interested in working toward a Bachelors or Masters Degree.

Students enrolled in the various degree programs or those students wishing to take individual specialty classes may choose from a wide variety of courses offered through the Architectural Studies Center. These classes are supplemented by additional college courses in civil technology, art, interior design, math, science, English and computer design technology. All courses are structured and taught by field trained professionals using the latest equipment and teaching techniques. Courses in Computer Aided Design (CAD) will be offered to students using the largest computer graphics system available at any community college in the nation.

### Architectural Technology Associate Degree (AT) Program

The two-year Associate of Science Degree in Architecture is a program directed to the total development of a paraprofessional—the architectural drafting technician. Required classes for the Associate Degree in Architecture are assembled from the areas of architectural drafting, graphics, structural design, materials of construction, landscaping, solar, architectural history and building codes. Additional classes are selected from the areas of math, English, technical and general electives. Please see Curriculum Code 540.

Courses Offered in Architectural Technology (AT), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**AT 100 Beginning Architectural Drawing 3(2-2)**

No drafting experience required. Use of drafting equipment, lettering, line convention, orthographic projection, basic pictorial drawing, and dimensioning techniques. Produce a basic floor plan at conclusion of class.

**AT 131 Residential Planning 3(3-0)**

Basic information for buying, building or remodeling a house: construction details, architectural styles, and planning concepts; some reading of blueprints and use of working drawings.

**AT 135 Architectural Pictorial Illustration 4(2-4)**

Prerequisite: AT 100 or equivalent. Basics of shade and shadows, and one and two point perspective is covered. Pencils and pens are the primary rendering media. For students with little or no experience in perspective drawing.

**AT 136 Advanced Pictorial Illustration 4(2-4)**

Prerequisite: AT 135 or equivalent. Pencil and pen rendering techniques will be explored. The concept of developing a total composition by means of en-tourage is used.

**AT 137 Architectural Presentation 4(1-3)**

Prerequisite: AT 135. Explores and develops new techniques in rendering. The use of a variety of color media is included.

**AT 150 City Planning I 3(3-0)**

Prerequisite: AT 100 or drafting skills. Covers the architecture of the city: the buildings, streets, squares and natural topography as built and modified by men and women for collective and private use. The physical city as a transmitter of history, a most visible and permanent record of human acts. Students will search for clues and values as they relate to the environment and ecology of the world today and tomorrow.

- AT 152 Visual Communications I** 3(1-4)  
Develops basic skills in the use of techniques for architectural drafting and sketching. Includes two-dimensional graphics, perspective, shades and shadows, model construction and basic delineation.
- AT 153 Visual Communications II** 3(1-4)  
Prerequisite: AT 152. Introduces freehand drawing with charcoal, pencil, pen and ink media emphasizing and developing abilities for perspective sketching and rendering.
- AT 154 Visual Communication III** 3(1-4)  
Representational composition exploring and refining the use of free-hand drawing with felt tip markers, prismacolor pencil, pen and ink with a special emphasis on color. Prerequisite: AT 153.
- AT 230 Architectural Drawing I (Residential Details)** 4(2-4)  
Prerequisite: AT 100 or drafting background. Identify component parts and correctly draw various building details. The use of reference material in preparing detail drawings will be emphasized.
- AT 231 Architectural Drawing II (Residential Development)** 4(2-4)  
Prerequisite: AT 230. Offers essentials of designing and drawing floor plans. Begins a two-part series in residential development. Preliminary elevations and sections will be developed.
- AT 232 Architectural Drawing III (Residential Development)** 4(2-4)  
Prerequisite: AT 231. Floor plans and preliminary plans from AT 231 will be used to continue the development of residential working drawings. Working elevations and sections will be completed.
- AT 233 Architectural Drawing IV** 4(2-4)  
Prerequisite: AT 232. Stresses the design and construction of commercial buildings. Students will produce a preliminary set of commercial working drawings.
- AT 234 Architectural Drawings V** 4(2-4)  
Prerequisite: AT 233 or equivalent. A continuation of AT 233, this course will emphasize the production of a complete set of commercial working drawings. Various examples of existing commercial structures and site inspections will be used to illustrate design theories and construction detailing.
- AT 235 Underground Shelter** 4(3-1)  
Design and construction of underground structures. Residential and commercial applications will be studied. Slide presentations and field trips will be used to illustrate site layouts.
- AT 236 Underground Shelter** 4(3-1)  
Prerequisite: AT 235. Designed as a continuation of basic theories studied in AT 235. Students will have an opportunity to design and prepare drawings to complete an individual underground project.
- AT 240 Architecture Model Building** 3(2-2)  
Introduces the use of models in architectural design and presentation. Each student will construct several examples of various types of models.
- AT 241 Office Practices and Procedures** 4(4-0)  
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.
- AT 242 Building Utility Systems** 4(4-0)  
Investigates components and arrangement of residential and commercial plumbing and electrical systems. Heating and cooling systems introduced. Emphasizes code and specification requirements.
- AT 246 Heating and Air Conditioning** 3(3-0)  
Explores components and arrangement of residential and commercial heating and air conditioning systems. A calculations course emphasizing environmental factors, specification requirements, and code provisions.
- AT 247 Architectural History I** 3(3-0)  
Explores the earliest forms of ancient architecture with emphasis on specific civilizations and their contributions to the development of various styles of architecture. Highlights of the Egyptian, Minoan, Greek, Roman, Romanesque, and Gothic periods will be presented, using a variety of visual media.
- AT 248 Architectural History II** 3(3-0)  
Examines the greatest examples of architecture as built during the Gothic, Italian, French, English Renaissance period, and follows with a look at the history of architecture.
- AT 249 Preservation and Adaptive Reuse** 3(3-0)  
The theory and practice of historic restoration, preservation, and new uses for old buildings (adaptive reuse). Visual media and field trips are used to illustrate actual projects.
- AT 251 BOCA/Uniform Building Code I** 3(3-0)  
Emphasizes use, interpretation and application of the Uniform Building Code. Includes occupancy requirements based on types of construction, engineering regulations, fire standards, excavation and material requirements.
- AT 252 BOCA/Uniform Building Code II** 3(3-0)  
Prerequisite: AT 251. 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.
- AT 253 Mechanical Building Code** 3(3-0)  
Covers alterations, repair and renovation of buildings, applications to and within buildings of different types and occupancies. Provides knowledge of mechanical designing required to penetrate a structure throughout and still maintain the building's integrity.
- AT 256 Barrier Free Design** 3(3-0)  
Introduction 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.
- AT 258 Plumbing Code (BOCA)** 3(3-0) Presents minimum plumbing standards that protect the public against hazards of inadequate, defective, or unsanitary installations. Includes administration and enforcement, definitions, general regulations, materials, vents and venting, and disposal systems.
- AT 260 Interior Architecture I** 4(2-4)  
This course is designed to be the architectural students preliminary introduction into the various aspects of residential and commercial interiors. Examples of existing structures will be used to illustrate design theory and the basics of buildings support systems. Students will have the opportunity to develop basic interior architectural design problems.
- AT 271 Structural Design** 4(4-0)  
Prerequisite: AT 231 or equivalent and MTH 012. 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 for building materials and their effect upon architectural design.
- AT 275 Interior Environment H.V.AC. Light and Acoustics** 4(4-0)  
Designed for architecture and interior design students interested in the interior environment of buildings. Emphasis will be on the application of acoustics, HVAC and lighting systems. Information will be presented in a series of lectures and slide presentations.
- AT 281 Materials of Construction** 4(4-0)  
Study of 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.
- AT 285 Residential Cost Estimating** 4(4-0)  
Prerequisite: AT 230 or equivalent. 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.
- AT 286 Advanced Construction Cost Estimating** 4(4-0)  
Prerequisite: AT 285. 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.
- AT 287 Arch. Reg. Exam** 4(4-0)  
Prepare the graduate student to take the Registered Architects Exam for the State of Michigan.



**AT 293, 294, 296 Project Laboratory (Architectural) 3(0-6) 6(0-12)**

Prerequisite: Instructor approval. Research, design and construct a project with the guidance of an instructor. For students who have completed basic architectural courses and desire in-depth projects in a particular area of architectural technology. Solar/Energy Technician Program

A solar/energy technician is a highly skilled paraprofessional who works directly with architects, engineers, builders, HVAC specialists or as an independent design consultant. Course work centers on the design of structures and their supplementary utility and human systems which are compatible with the natural environment. Emphasis is placed on making use of available solar radiation and other renewable resources and integrating these with efficient fossil fuel back-up systems. Superinsulation techniques, solar collection, storage and distribution systems, thermal shuttering, natural ventilation, site planning and orientation all play a major role in the design of energy efficient buildings. Curriculum code 542.

Courses Offered in Solar/Energy, by the Architectural Technology Construction Program (AT)—by Course Number, Title, Credits Allowed, and Description.

**AT 200 Solar Housing 3(3-0)**

Covers fundamentals of solar energy conversion for domestic water and space heating systems. Passive, hybrid, and active systems will be surveyed for use in both new construction and retrofit applications. An introduction to solar and energy terminology and calculations.

**AT 201 Principals of Solar Energy Collection 4(4-0)**

Prerequisite: AT 200 or AT 210 and working knowledge of trigonometry. Covers solar radiation calculations and flatplate collector theory, design, and performance; effect of thermal losses and heat removal from the collector.

**AT 202 Energy Efficient Design 4(4-0)**

Survey of modern methods and materials used to improve the energy efficiency of all buildings: superinsulation techniques, solar energy input, energy storage systems, and other concepts are presented along with the Michigan Energy Code.

**AT 203 Residential Solar Heating Design 4(4-0)**

Prerequisite: AT 201. Design and predict the performance of solar hot water and space heating systems. Use the F-Chart and G-Chart methods to determine the optimum collector area. An economic analysis will be performed.

**AT 205 Solar System Installation and Operation 4(4-0)**

Prerequisite: AT 203. Covers installation, maintenance and operation of solar heating systems; characteristics of system components, basic fluid mechanics, piping, pump, duct and blower sizing.

**AT 207 Energy Engineering Economics 3(3-0)**

Prerequisite: AT 200 or AT 210. The application of sound economic and accounting principles to the practice of energy conservation techniques, with emphasis on a realistic cost benefit analysis considering initial and operating costs, payback periods, and life-cycle costing.

**AT 208 Solar Site Seminar 4(4-0)**

Field studies of contractor and owner-built solar energy systems. Sites include both residential and commercial applications of water heating, space heating and cooling, photovoltaic electric conversion, and swimming pool heating.

**AT 209 Retrofitting Housing for Energy Conservation 3(3-1)**

A study of the modifications needed to increase the energy efficiency of existing housing. Topics include home appliance and furnace efficiency, weatherproofing techniques, solar potential and personal energy management.

**AT 210 Solar Housing Applications 4(3-2)**

Introduction to the factors that determine the building energy demand, solar contribution, and effectiveness of thermal energy storage. Surveys past and present solar architecture, efficient solar collection, heat transfer and storage options. Basic mathematical relationships trace energy flow from the sun to its useful application in the home.

**AT 211 Passive Solar Design I 4(3-2)**

Prerequisite: AT 200 or AT 210. Emphasis on the natural process of heating and cooling buildings using site planning, earth sheltering, internal massing, and hybrid assists. Mazria's design patterns and the P-chart method will be presented.

**AT 212 Solar Assisted Heat Pump Design 4(3-2)**

Prerequisite: AT 203. Highlights the techniques for assisting heat pumps with solar collection and storage systems: air-to-air, water-to-air, water-to-water, and refrigerant charged systems. Special attention will be directed toward calculations for determining the solar contribution to electrically driven reverse cycle heat pumps.

**AT 213 Solar Project Laboratory I 3(1-4)**

Prerequisite: AT 202, AT 203, AT 210, AT 211. Supervised, independent project development. Scale models of final project may be built along with blueprints, specifications, cost estimates, economics analysis, and system description.

**AT 214 Commercial Solar Applications 4(3-2)**

Prerequisite: AT 202, AT 203, AT 210, AT 211. Directed toward the advanced student and practicing architect or engineer who is interested in applying solar energy for conditioning commercial and industrial buildings. Internal energy generation, envelope design, building use patterns, energy analysis and computer aided design and management are related to both new commercial buildings and retrofit applications.

**AT 215 Passive Solar Design II 4(3-2)**

Prerequisite: AT 211. Balcomb's L.A.L. solar load ratio method is used to predict the performance of direct gain, water wall and trombe wall systems with and without movable insulation. Calculations include solar savings fraction, estimating temperature swings, and analyzing long term performance.

**AT 217 Energy Policy and Planning 3(3-1)**

Developing energy policy, introducing state and local legislation, subdivision and community energy planning, land-use patterns, codes and zoning, supply-demand, implementing appropriate technology programs.

**AT 218 Solar Greenhouse 3(3-0)**

Design and construction of walk-in solar collectors. Greenhouse horticulture, movable insulation techniques and design calculations are presented to assist in planning a heat and food producing greenhouse.

**AT 219 Computer Assisted Solar Design 4(3-2)**

Prerequisite: AT 203 or AT 211 or instructor approval. Development of simplified procedures for the design and analysis of solar energy systems. Covers electronic analysis and computer simulation, programmable calculators, microprocessors, printers information storage systems, and available software.

**AT 220 Residential Energy Auditing - Conservation 4(3-2)**

Prerequisite: High school algebra. Covers conducting audits for energy conservation measures in homes. Includes residential construction, heating and cooling systems, insulation materials, installation practices, interviewing techniques, audit report writing, and field audits. Preparation for the Energy Auditor Certification Examination.

**AT 221 Residential Energy Auditing - Solar 3(2-2)**

Prerequisite: High school algebra. Covers conducting audits which analyze the solar and wind energy potential of existing homes. Includes calculation procedures for estimating solar and wind energy availability at a given site; size and cost of equipment, economic return on investment, and field audits. Supplements AT 220 course in preparing for Energy Auditors Certification Examination.

**AT 222 National Solar Water Heater Workshop 1(.5 - 1.5)**

Construction of solar collectors and plumbing assemblies for a domestic water heating system. Includes system design, operation and installation, basic plumbing, freeze protection, and cost-benefit analysis. Students have the option of purchasing a kit for installation in their own homes.

**AT 223 Solar Interior Design 3(3-0)**

Interior design techniques that promote energy efficiency and conservation, emphasizing window treatments and use of color, texture, pattern, lighting, plants, and fabrics as contributors to thermal comfort.

**AT 224 Photovoltaic Electric Systems 4(3-2)**

Prerequisite: AT 200 or AT 210. The direct conversion of solar radiation to electrical energy. Battery and other storage systems will be surveyed along with inverters, monitoring devices and back-up systems. State-of-the-art developments will be presented and students will perform an economic comparison between photovoltaics, wind power, unit generators, and the local electric utility.

**AT 225 Alternative Energy Systems 3(3-0)**

Investigates wind power, methane, geothermal, biomass, alcohol fuels, wood burning, and active solar along with ocean tides, saline ponds, and nuclear fusion and fission.

**AT 226 Wind Energy System Design 3(2-2)**

History of wind machines, taxonomy, types, sizes and future potential. Discusses wind resources, methods of wind measurement, wind energy estimation and applications for generating electricity and pumping water. Topics include siting problems, performance characteristics, system design, components, commercially available wind electric machines, DIY systems, wind machine fundamentals, wind machines design, selecting a system and figuring the cost of wind power. No prerequisite.

**AT 227 Biomass Energy Systems 3(2-2)**

The use of natural resources in the form of wood, crop waste, vegetative tissue, animal manures, garbage and other organic materials to produce energy, utilize waste heat and recycle materials will be investigated. The design, construction, operation and management of biomass energy systems and methane gas generators for agricultural, industrial, electric power generation and residential use will be covered. Visits will be made to local sites and installations in agriculture and in industry utilizing these techniques.

**Landscape Architectural Technology (LAT)  
Associate Degree Program**

Students receiving an Associate Degree in Science in Landscape Architecture are highly skilled paraprofessionals who work directly with professional landscape 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. Please see curriculum code 541 for courses and other requirements.

Courses Offered in Landscape Architectural Technology (LAT), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**LAT 130 Interior Landscaping 4(3-2)**

Integrates landscape architectural design principles with indoor landscaping. Covers basic identification, culture, placement, use of foliage and flowering plants in the interior environment. Basic physiological plant requirements are stressed.

**LAT 132 Residential Landscaping 3(2-2)**

Highlights a basic planning approach for improving residential landscaping, solving elementary landscape problems based on proven design, implementation, and maintenance techniques.

**LAT 133 Residential Landscape Maintenance 3(2-2)**

Focuses on basic residential landscape maintenance techniques. Lawn, groundcover, shrub and tree maintenance methods are highlighted, including basic fertilizing, pruning and weed control. A general course for the homeowner.

**LAT 140 Landscape Plant Materials I 4(3-2)**

Explores a select group of hardy ornamental plant materials, emphasizing evergreen and deciduous focal, intermediate and overstory trees. Positive landscape characteristics of individual plants will be stressed as they relate to landscape design values. Basic tree identification is developed.

**LAT 141 Landscape Plant Materials II 4(3-2)**

Continues the exploration of hardy plant materials into the realm of a select group of evergreen and deciduous shrubs, groundcovers and vines. Basic plant identification is developed and positive design characteristics of individual plants are stressed.

**LAT 142 Landscape Plant Materials III 4(2-4)**

This class will discuss identification and basic culture of approximately 150 perennial and annual flowering and bedding plants. Specific features of each plant will be discussed in relation to their proper landscape use. Herbs, grasses, rock and water garden plants will also be highlighted. Guest speakers will highlight major areas. Lab fee.

**LAT 150 Introduction to Landscape Architecture 4(2-4)**

Previews the broad scale concepts of landscape architecture. Lectures, reading, and practical problem-solving exercises provide a basic overview of the historical, philosophical, and technical aspects of the landscape architecture profession.

**LAT 152 Landscape Graphic Communication I 4(1-6)**

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.

**LAT 153 Landscape Graphic Communication II 4(1-6)**

Prerequisite: LAT 152. Explores the basic principles of perspective layout, acceptable landscape sketching techniques, preparation of graphic presentations. Primarily stresses black and white value drawing techniques.

**LAT 160 Planting Design I 4(2-4)**

Prerequisite: LAT 140 or LAT 141. 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.

**LAT 161 Planting Design II 4(2-4)**

Prerequisite: LAT 140, 141, and 160. 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.

**LAT 164 Landscape Design I 4(1-6)**

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.

**LAT 165 Landscape Design II 4(1-6)**

Prerequisite: LAT 164. Focuses on advanced landscape design problem solving. Comprehensive design and analysis techniques are explored. Graphic problem solutions include the use of auxiliary elevations and detail plan views. Specialized design problems emphasize environmental design factors.

**LAT 170 Site Grading I 4(2-4)**

Prerequisite: MTH 012. 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.

**LAT 171 Site Grading II 4(2-4)**

Prerequisite: LAT 170 and MTH 012. 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.

**LAT 250 Landscape Construction Methods 4(4-0)**

Analyzes the comparative uses and methods of installing masonry, asphalt, wood, concrete, and other landscape materials. Physical properties of landscape materials are studied.

**LAT 260 Planting Design III 4(2-4)**

Prerequisite: LAT 161. 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.

**LAT 261 Planting Design IV 4(2-4)**

Prerequisite: LAT 161. Outlines the 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.

**LAT 264 Landscape Design III 4(1-6)**

Prerequisite: LAT 165. Emphasizes specialized design problem solving. Environmental impact considerations are examined and alternative design solutions are explored. Previews large scale regional design techniques.

**LAT 265 Landscape Construction Details I 4(3-2)**

Prerequisite: LAT 250. Focuses on the acceptable graphic approach for drawing landscape construction details. Includes various landscape features, pedestrian and vehicular circulation systems, utilities, light construction elements, and recreation facilities. Stresses detail coordination with site plan layout.

- LAT 266 Landscape Construction Details II** 4(1-6)  
Prerequisite: LAT 265. Emphasizes the design and build aspects of detail landscape planning. Coordinates project design with detail development, material tabulation, and cost estimating factors. Includes detail considerations of irrigation systems, general site appurtenances, and additional light construction features.
- LAT 276 Landscape Documents and Specifications** 4(3-2)  
Prerequisite: LAT 250. Elaborates the principles and relationships between specifications and working drawings. Stresses familiarization with bidding procedures and general contract conditions. Involves practical landscape specification writing.
- LAT 277 Landscape Office Practice** 4(3-2)  
Prerequisite: LAT 276. Introduces the elements of office business practice and organization, recordkeeping, on-the-job inspection and close out, and initial proposal writing and contract formulation.
- LAT 280 Financial Management** 4(4-0)  
This class will provide a basic outline of forms and management techniques for the design professional as well as the nursery owner or general contractor. Form used and recommended by various organizations and businesses will be discussed. The proper management format for a successful small or large business will be outlined. All horticultural related businesses will be highlighted.
- LAT 282 Microcomputers in Landscape Architecture** 4(2-4)  
No prerequisite. To introduce students to the use of microcomputers in the landscape field. Exposure to the use of computers for business purposes, preparing forms, data, etc. Course will feature a "hands-on" utilization for plant selection, material inventory, site construction data and design assistance. Lab fee.
- LAT 287 Site Layout I** 4(2-4)  
Prerequisite: LAT 171. Covers 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 are highlighted.
- LAT 288 Site Layout II** 4(2-4)  
Prerequisite: LAT 287. 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.
- LAT 292, 293, 294 Project Labs (Landscape Architectural)** 2(0-4) 4(0-8)  
Prerequisite: Department approval. Research, design and construct a project with the guidance of an instructor. For students who have completed basic landscape architectural courses and desire in-depth projects in a particular area of landscape architectural technology.
- Courses Offered in the Building Trades (BTA) (Open to Apprentices Only), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.
- BTA 100 Apprentice Bricklaying** 4(1½-1¾)  
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.
- BTA 105 Apprentice Asbestos Workers** 4(2-2)  
Open to apprentice asbestos workers indentured to the Asbestos Workers Joint Apprenticeship Training Committee. Covers blueprints, applied science, related mathematics, estimating and manipulative practices.
- BTA 110 Apprentice-Carpentry** 4(1¾-1¾)  
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.
- BTA 120 Apprentice-Electrical (inside)** 4(1¾-1¾)  
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.
- BTA 125 Apprentice Electrical-Residential** 4(2-2)  
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.
- BTA 140 Apprentice Painting and Decorating** 4(2-2)  
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.
- BTA 150 Apprentice Plumbing or Pipefitting** 4(1¾-1¾)  
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.
- Courses Offered in Building Trades (BTJ) (Open to Journeymen and Apprentices only), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.
- BTJ 128 Journeyman Electricians Welding I** 4(2-4)  
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.
- BTJ 129 Journeyman Electricians Welding II** 4(2-4)  
Prerequisite: BTJ 128 or Instructor Approval. 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.
- BTJ 160 Journeyman Pipefitters Welding I** 4(2-4)  
Students who enter this class should be Journeymen 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.
- BTJ 161 Journeyman Pipefitters Welding II** 4(2-4)  
Prerequisite: BTJ 160. Continuation of BTJ 160.
- BTJ 162 Journeyman Pipefitters Welding III** 4(2-4)  
Prerequisite: BTJ 161. Continuation of BTJ 161.
- Courses Offered in the Building Trades (BTR) (Open to Anyone) by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.
- BTR 100 Introduction to Construction** 3(0-3)  
Covers basic concepts of construction, including city and regional planning, managing, contracting, designing, engineering, estimating, bidding, and inspecting, as well as the production work normally associated with construction.
- BTR 101 Masonry Home Projects** 3(2-2)  
Instruction in building home masonry projects such as barbecue pits, patching and repairing masonry walls. Not designed for preparation as a bricklayer. Individuals wishing to prepare for a career in bricklaying should apply to enter the Bricklaying Apprenticeship Program. Lab fee.
- BTR 105 General Home Maintenance I** 3(2-1)  
An introductory course in general home maintenance. Topics are furnace maintenance, humidifiers, painting, hot water heaters, basic plumbing, and electrical repairs. Lab fee.
- BTR 114 Residential Framing** 3(2-1)  
Various types of frame construction includes methods of framing floor openings or stairs, joist sizing, and layout. Wall construction, from layout to assembly: determining stud length, layout of door and window openings, bracing, and sheathing. Lab fee.
- BTR 115 Framing Square** 3(2-1)  
Covers selection, care, and use of the framing square. Class will lay out common, valley, hip and jack rafters, determine the lengths of braces, and

use the framing square with a level to determine a polygon. The use of the Essex board measure table is also presented. Lab fee.

**BTR 116 Residential Framing II 3(2-1)**

A continuation of BTR 114. Hands-on experience with ceiling joists, gable end studs, cornice construction, door and window installation, and roof sheathing. Lab fee.

**BTR 117 Practical A.C. Job Theory 3(2-2)**

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.

**BTR 125 Residential Foundations 2(2-0)**

Information on concrete blocks, poured concrete, and treated wooden timbers; relative advantages and disadvantages with respect to one another. Also, the layout of footings, excavations, setting of forms and the erection of residential foundations.

**BTR 126 Remodeling 3(2-2)**

Prerequisite: BTR 114. A course on building of additions, restoring and renovations. Lecture and lab work will show how to measure up work, planning and drawing, figure how to tear into building, roof and foundations. Lab fee.

**BTR 135 Structural Blueprint Reading I 4(4-0)**

Shows how to visualize and interpret illustrations and sections from blueprints, and translate them into practical solutions. Also shows the purpose of and the relationship between specifications and blueprints as applied to various trades.

**BTR 136 Structural Blueprint Reading II 4(4-0)**

Prerequisite: BTR 135. Covers 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.

**BTR 138 Residential Estimating 4(4-0)**

Prerequisite: BTR 114 and BTR 135. 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 materials.

**BTR 139 Construction Estimating 4(4-0)**

Prerequisite: BTR 138. Provides experience in construction estimating: blueprint reading, specification reading, math calculations, use of labor, time tables, current material costs, and weather factors. Emphasis on estimating costs of light commercial buildings.

**BTR 140 Cabinet Layout and Interior Trim 3(2-2)**

Prerequisite: BTR 114. For the individual who wishes to build or remodel a home. Topics covered will be an introduction to interior trim and basic tool use. Lab fee.

**BTR 141 Stair Building 3(1-2)**

Prerequisite: BTR 114. To learn how to assemble the component parts of a flight of stairs. To understand the layout of the rise and run of the stair stringers and stair well opening. To learn about cutting of the stringers, treads, riser, and handrail to newel post.

**BTR 142 Build Your Own Home 3(3-0)**

For 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. Features guest speakers who are experts in their various fields.

**BTR 144 Shingling and Siding 3(1-2)**

Prerequisite: BTR 114 or Instructor Approval. Covers tools, materials, estimating and techniques of application. Materials covered will include asphalt shingles, wood shingles and shakes, as well as siding options and introductions to aluminum trim products. Lab fee.

**BTR 146 Build Your Own Cabinets 2(1-3)**

Prerequisite: BTR 140 or ATG 130. A hands-on experience in building vanities, base cabinets, and wall cabinets. Covers use of tools and machines, cabinet construction, drawer construction, door style options, and formica work. Students supply their own lumber.

**BTR 147 Paper Hanging I 3(2-2)**

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.

**BTR 148 Paper Hanging II 3(2-2)**

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.

**BTR 155 Blueprint Reading for Plumbers I 4(4-0)**

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.

**BTR 156 Blueprint Reading for Plumbers II 4(4-0)**

Prerequisite: BTR 155 or Instructor Approval. Continuation of Building Trades 155 with emphasis on more complex prints. Actual construction prints are used whenever possible.

**BTR 175 Sheet Metal I 3(2-2)**

Includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line, and triangulation pattern development, and current techniques of fabrication. Lab fee.

**BTR 176 Sheet Metal II 3(2-2)**

Prerequisite: BTR 175 or Instructor Approval. Continuation of Sheet Metal I with more advanced problems. Lab fee.

**BTR 177 Sheet Metal III 3(2-2)**

Prerequisite: BTR 176. Continuation of Sheet Metal II with specialty work. Lab fee.

**BTR 178 Sheet Metal Fabrication 3(2-2)**

Prerequisite: BTR 175. 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. Lab fee.

**BTR 180 Sheet Metal Welding I 4(2-4)**

Arc welding as applied to sheet metal. Introduction to and use of heliarc. Lab fee.

**BTR 181 Sheet Metal Welding II 4(2-4)**

Prerequisite: BTR 180. Continuation of Building Trades 180 with additional emphasis on heliarc. Lab fee.

**BTR 223 National Electrical Code I 4(4-0)**

Students will review the entire code book, locating and interpreting the National Electrical Code. Designed for individuals with little or no knowledge of the electrical code.

**BTR 224 National Electrical Code II 4(4-0)**

Prerequisite: BTR 223. 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.

**BTR 225 National Electrical Code III 4(4-0)**

Prerequisite: BTR 224. 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.

**BTR 240 Interior Trim II 3(2-2)**

Prerequisite: BTR 140. A continuation of BTR 140. Hands-on experience with chair rails, ceiling trim, specialty doors, stairs, railings and related aspects of custom trim work. Lab fee.

**BTR 290 Building Trades Internship 6(1-20)**

Prerequisite: Coordinator approval. Practice of 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.

**Civil Technology (CT) Program**

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. It also deals with the control of the flow and uses of water.

On the job, the technician works with engineers to find practical uses for scientific discoveries and he or she serves as the informational 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; and prepare maps, inspect jobs, and supervise construction. Please see Curriculum Code 515 for course requirements.

Courses Offered in Civil Technology (CT), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

- CT 101 Construction Materials I** 4(2-4)  
Prerequisite: Math Placement Test. 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. Fall term.
- CT 102 Construction Materials II** 4(2-4)  
Prerequisite: CT 101 and TEC 151. Covers determination of properties of bituminous materials. Teaches methods of designing bituminous mixes for different uses and methods of sampling and testing. Spring term.
- CT 103 Construction Methods** 4(4-0)  
Prerequisite: Math Placement Test. Studies techniques and equipment used in constructing bridges, buildings, highways and pipelines. Comparison of building codes and construction specifications. Winter term.
- CT 107 Civil Drafting** 4(2-4)  
Prerequisite: DT 100 or equivalent. Helps students prepare a clear, readable, graphic representation of data from survey notes. Emphasizes traverse, profile and topographical drawing problems. Fall term.
- CT 108 Civil Construction Plans I** 4(2-4)  
Prerequisite: CT 107. Construction plans for buildings, bridges, highways, sewerage, water supply and wastewater systems will be investigated. Representative construction drawings will be prepared. Winter term.
- CT 109 Civil Construction Plans II** 4(2-4)  
Prerequisite: CT 108. Continuation of CT 108, with further emphasis on construction plans for various types of Civil Engineering Projects with applications in Computer Graphics. Spring term.
- CT 111 Soil Testing and Classification** 4(2-4)  
Prerequisite: Math Placement Test. Teaches testing and classification of soils. Includes discussion of basic geologic principles related to soils. Fall term.
- CT 112 Hydraulics** 4(3-2)  
Prerequisite: TEC 151. 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.
- CT 113 Hydrology** 4(3-2)  
Prerequisite: TEC 151. Covers the analysis of storm water runoff and the design of control devices. Includes discussion of drainage, culverts, stream flow, open channel flow, Bernoulli's theorem, storm water, ground water and water tables.
- CT 121 Structural Concepts** 4(4-0)  
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 buildings will be discussed.
- CT 122 Statics** 4(4-0)  
Prerequisite: CT 121, TEC 151. Studies loads and forces due to loads; conditions of stability and equilibrium in structural frames; and free body analysis for reactions and member forces. Winter term.
- CT 123 Strength of Materials** 4(4-0)  
Prerequisite: CT 122, TEC 152. Covers stress, strain, creep, fatigue, yield, tension, compression, shear, bending, torsion, combined stresses and deflections.
- CT 131 Basic Surveying I** 4(2-4)  
Prerequisite: Math Placement Test. Covers surveying, study of terminology, use of tape, level and transit for measuring distances, elevations and angles. The emphasis is on developing fieldwork skill in the handling of the equipment, analysis and use of verniers. Fall, spring, summer terms.
- CT 132 Basic Surveying II** 4(3-2)  
Prerequisite: CT 131, TEC 151. Reduction of field notes for office use. Taping, leveling, and transit problems including error analysis. Traverse, horizontal curve, vertical curve and earthwork calculations. Winter term.
- CT 133 Basic Surveying III** 4(2-4)  
Prerequisite: CT 132. Stresses field work for bench mark circuits, profiles, cross-sections, traverses, topography and mapping. Spring term.
- CT 201 Construction Costs** 4(4-0)  
Prerequisite: CT 103. 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.
- CT 202 Construction Contracts** 4(4-0)  
Prerequisite: CT 201. Explores fundamentals of contract law liability and Worker's Compensation with various contract documents.
- CT 211 Highway Technology I** 4(2-4)  
Prerequisite: CT 132, TEC 152. Covers plan and profile drawing, highway planning, financing, organization, geometrical design, traffic studies, pavements, mass diagrams, earthwork and costs.
- CT 212 Highway Technology II** 4(2-4)  
Prerequisite: CT 211. Continuation of CT 211 with discussion on trends in mass transportation systems.
- CT 213 Project Lab** 4 (arranged)  
Gives the student the opportunity to undertake and complete an independent study or project in highway technology. Prerequisite: Graduation Term.
- CT 221 Structural Technology I** 4(3-2)  
Prerequisite: CT 123. Deals with basic analysis and design techniques related to structural steel bridges and buildings. Emphasizes standard detailing practices.
- CT 222 Structural Technology II** 4(3-2)  
Prerequisite: CT 221. Stresses basic analysis, design and detailing methods related to reinforced concrete structures.
- CT 223 Project Lab** 4 (arranged)  
Gives the opportunity to undertake and complete an independent study of project in Structural Technology. Prerequisite: Graduation Term.
- CT 227 Structural Drafting I** 4(2-4)  
Prerequisite: DT 100. Covers standard detailing practice in the preparation of structural drawings and shop drawings for structural steel buildings and bridges.
- CT 228 Structural Drafting II** 4(2-4)  
Prerequisite: CT 227. Covers standard detailing practice in the preparation of structural drawings for reinforced concrete structures.
- CT 229 Project Lab** 4 (arranged)  
Gives the opportunity to undertake and complete an independent study of project in Structural Drafting. Prerequisite: Graduation Term.
- CT 231 Advanced Surveying I** 4(2-4)  
Prerequisite: CT 133. Covers stake-out of various construction projects, for horizontal and vertical control. Inaccessible distance problems.
- Registration Exam Review Courses (CT)**  
**Construction Technology**  
**Division of Technology and Applied Sciences**
- CT 144 Professional Engineering Exam Engineering Mechanics** 2(2-0)  
Provides a background in statics, kinematics and dynamics as a review for the Registered Professional Engineer Examination. Fall term.
- CT 145 Professional Engineer Exam - Hydraulics** 2(2-0)  
Offers a background in hydraulics as a review for the Registered Professional Engineer Examination.
- CT 146 Professional Engineer Exam - Strength of Materials** 2(2-0)  
Provides background in strength of materials as a review for the Registered Professional Engineer Examination.

**CT 147 Professional Engineer Exam - Thermodynamics 2(2-0)**

Reviews a background in thermodynamics to prepare for the Registered Professional Engineer Examination.

**CT 148 Professional Engineer Exam - Electricity and Electronics 2(2-0)**

Offers background in electricity and electronics as a review to prepare individuals for the Registered Professional Engineer Examination.

**CT 149 Professional Engineer Exam - Engineering Economics 2(2-0)**

Provides a background in engineering economics as a review to prepare individuals for the Registered Professional Engineer Examination.

**CT 271 Wastewater Analysis I 3(2-2)**

Prerequisite: CEM 110 or Departmental Approval. Covers basic wastewater analyses, including chlorine residuals, solids determination, biochemical oxygen demand, coliforms, and phosphorus analyses. All analyses included meet the requirements of NPDES permits.

**CT 272 Wastewater Analysis II 4(3-2)**

Prerequisite: CT 271. Continues wastewater analysis covering more sophisticated wastewater analyses which require digestion, concentration, and/or separation techniques, and instrumental analysis. Sampling techniques are also covered.

**CT 273 Wastewater Treatment I 3(3-0)**

Covers wastewater treatment from collection systems through primary and secondary treatment, giving students knowledge of the step by step treatment process that occurs in a wastewater plant.

**CT 274 Wastewater Treatment II 3(3-0)**

Continuation of CT 273, and will complete the student's view of the treatment plant as presented in Wastewater Treatment I.

**CT 275 Spill Prevention and Clean-up 3(3-0)**

Provides the apprentice or experienced wastewater treatment plant operator and the supervisor with knowledge concerning the prevention of loss of hazardous or polluting materials and the best methods of containment and clean-up of such materials.

**CT 276 Industrial Wastewater Treatment 3(3-0)**

Industrial design and construction of sewerage and wastewater treatment facilities. Includes sedimentation, coagulation, filtration, aeration, digestion, sludge processing and sterilization.

**Fire Science Technology (FST) Program**

Fire Science is a relatively new science which deals with methods of prevention and control of fires. Prompted by the annual loss of 3,000 lives and billions of dollars of property destruction, the Federal Government has established the U.S. Fire Administration as part of the Federal Emergency Management Agency. This agency supports the U.S. Fire Academy. Current information emanating from the Academy is adopted into the Fire Science Program at Lansing Community College.

Constant changes in the environment and the growing complexities of modern living create demands for new materials and methods to be used in fire prevention and control. The Fire Science Technology Program prepares the student to accept these and other challenges from the world of business and industry.

Completion of the program will assist students in their search for employment in the Fire Science area and aids persons already employed in the field to earn formal credentials. Please see Curriculum Code 590 for details of course requirements.

Courses Offered in Fire Science Technology (FST), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**FST 125 Arson Investigation 4(4-0)**

Arson Investigation offers specialized training for insurance investigators and building operators, as well as firefighters and Fire Marshall officers. Topics covered include duties of the firefighters, investigators, police officers and prosecutors; electrical fires, scientific evidence, forensic laboratory services and vehicle fires. General areas will cover psychodynamics of criminal behavior, court decisions affecting fire investigation, insurance company operation, and any new items as current events require. No prerequisite.

**FST 130 Fire Protection Historical Overview 3(3-0)**

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; an overview of the nation's fire problems; job opportunities and necessary qualifications.

**FST 160 Fire Fighting Strategy and Tactics I 3(3-0)**

Fire fighting strategy and tactics, planning methods of attack, and preplanning fire problems.

**FST 161 Basic Fire Protection 3(3-0)**

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.

**FST 164 Fire Protection Systems and Equipment I 3(3-0)**

Covers fire detection and alarm systems, special hazard protection systems, sprinkler systems and fire extinguishing equipment.

**FST 165 Hazardous Materials I 3(3-0)**

Prerequisite: TEC 202. Explores fire fighting methods related to hazardous materials; includes solids, liquids and gases, and their storage. Consideration also given to the laws, standards and handling techniques of hazardous materials.

**FST 166 Fire Apparatus Operation 6(6-0)**

Prerequisite: Active firefighter. Phase I of the Michigan Fire Fighters Association Training Program (66 hours).

**FST 167 Fire Hydraulics 3(3-0)**

Prerequisite: FST 170. Outlines fundamentals of fire hydraulics. Includes water supply problems, standards on pump requirements, formulas, test criteria and physical laws relating to hydraulics, and practical application of fire fighting problems.

**FST 168 Math for Firefighters 4(4-0)**

Focuses on basic arithmetic operations and algebraic equations as they relate to fire science of operations and equipment.

**FST 170 Physics for Firefighters 3(3-0)**

Highlights several basic principals of physics: solids and their characteristics, liquids in motion, gas laws and applications.

**FST 176 Fire Training Phase II 6(6-0)**

Prerequisite: FST 166. In Phase II, the student will handle and properly use the tools of the fire service. Emphasis is placed on the self-contained mask and the fire fighting protective clothing worn on the fire-ground.

**FST 177 Fire Hydraulics II 3(3-0)**

Prerequisite: FST 167. Emphasizes applications of hydraulic circuitry in pumping operations of fire fighting equipment.

**FST 180 Fire Fighting Strategy and Tactics II 3(3-0)**

Prerequisite: FST 160. Studies manpower assignments for stations and apparatus in communities of various sizes, to assist officers in making proper decisions in organizing and operating fire fighting forces.

**FST 186 Fire Training Phase III 6(6-0)**

Prerequisite: FST 176. In Phase III, a refinement of all the techniques used in Phase I and II. Fire-ground hydraulics and drivers-training exercises are studied and practiced.

**FST 196 Fire Training Phase IV 6(6-0)**

Prerequisite: FST 186. Phase IV deals with the strategy and tactics used on the fire ground. Fire ground evolutions are conducted and critiqued. In most instances, this involves a structural burn. This phase is the culmination of many hours of training and testing. Students must exhibit proper physical coordination during the hands-on portion of equipment handling and apparatus operation.

**FST 200 Fire Science Seminar 3(3-0)**

A three credit seminar that will be offered at various times to cover special programs available to Lansing Community College students in Fire Science Technology. A large selection of topics may be available such as; arson investigation, training with special equipment, demonstrations of fire fighting under unusual circumstances, and subjects relating to specialized fields currently being developed. No prerequisite.

**FST 204 Fire Protection Systems and Equipment II 3(3-0)**

Prerequisite: FST 164. Covers the proper installation and need for standpipe systems, pressure tank installations, hydraulic calculations and water supplies, and study of actual installation shop drawings.

<b>FST 263 Building Construction for Fire Security I</b>	<b>3(3-0)</b>	<b>SAF 203 Industrial Safety Standards</b>	<b>4(4-0)</b>
Involves essentials of building design and construction; special features and considerations relating to fire security.		Develops safety attitudes, focusing on physical environment and its proper administration. Primarily directed at first line supervisors, operators, and safety personnel of all levels.	
<b>FST 264 Fire Investigation I</b>	<b>3(3-0)</b>	<b>SAF 204 Industrial Hygiene</b>	<b>4(4-0)</b>
Investigate 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.		Prerequisite: Department Approval or TEC 202. Introduces the fundamentals of industrial hygiene, a science devoted to the recognition, evaluation and control of environmental factors or stresses in the work place that may cause sickness, impaired health, or significant discomfort to employees or community residents.	
<b>FST 266 Fire Investigation II</b>	<b>3(3-0)</b>	<b>SAF 205 Safe Practices and First Aid</b>	<b>3(3-0)</b>
Prerequisite: FST 264. Preservation of evidence and photographic coverage of fire, methods of interrogation related to fire investigation, and conduct for investigators; libel, slander and court procedures related to evidence and statements, and the importance of cooperation between investigative agencies; records, reports, and case histories.		Covers 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; safety devices of machines, and how to identify and use them.	
<b>FST 268 Hazardous Materials II</b>	<b>3(3-0)</b>	<b>SAF 206 Handling Hazardous Materials</b>	<b>3(3-0)</b>
Prerequisite: FST 165. 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: Department approval or TEC 202. 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.	
<b>FST 269 Responding to Emergencies in Hostile Situations</b>	<b>4(4-0)</b>	<b>SAF 211 Material Handling Safety</b>	<b>3(3-0)</b>
Prerequisite: Must be a member of an emergency service unit. The purpose of this course is to acquaint personnel in emergency services occupations with a multi-disciplinary focus in dealing with the hazardous environment. Although the course is academic in nature, emphasis will be placed on developing diverse skills which enhance the safety of the practitioner is rarely exposed but where the likelihood of morbidity is great, and should be prepared to guard against danger to himself/herself and others on the scene.		Examines the problems and safe handling techniques involved in the manual and mechanical handling of materials.	
<b>FST 283 Building Construction for Fire Security II</b>	<b>3(3-0)</b>	<b>SAF 213 Construction Safety Standards</b>	<b>3(3-0)</b>
Prerequisite: FST 263. 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.		Covers Occupational Safety and Health Act Requirements, recognizing, avoiding, and preventing environmental hazards, and developing overall safety awareness to prevent accident in the construction industry.	
<b>FST 290 Fire Administration</b>	<b>3(3-0)</b>	<b>SAF 251 Machine Guarding</b>	<b>3(3-0)</b>
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.		Covers the basic fundamentals in the construction of guards for all types of machinery. OSHA/MIOSHA safety standards are covered in the design and fabrication of guards.	
<b>FST 292 Instructor Training Methods</b>	<b>4(4-0)</b>	<b>SAF 291 OSHA/MIOSHA Safety Seminar (AVT)</b>	<b>1(0-2)</b>
Course is designed for training Fire Service and Emergency Services Personnel to become instructors in the subject area they know best. Will sharpen your teaching skills, or beginning students will find this course in Methodology valuable. Some of the topics covered are: communication skills, classroom arrangement, establishing goals and objectives, building an effective lesson plan, etc. Approved and recognized by the Michigan Fire Fighter's Training Council.		Slide-tape 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.	
<b>FST 293 Project Laboratory</b>	<b>3(0-6)</b>	<b>SAF 292 Safety Seminar</b>	<b>2(0-2)</b>
Undertake and complete an independent study or project under staff supervision. Consult with faculty advisor before enrolling.		Covers methods used in the development of an Occupational Safety Program. Student performs an independent project.	
<b>FST 296 Project Laboratory</b>	<b>6(0-12)</b>	<b>SAF 293 OSHA/MIOSHA Safety Seminar (AVT)</b>	<b>3(0-6)</b>
Undertake and complete an independent study or project under staff supervision. Consult with faculty advisor before enrolling.		Covers methods used in the development of an Occupational Safety Program. Complete twenty-two hours instruction in AVT. Prepare a paper outlining a safety hazard, a proposed solution, and/or a complete solution to the problem.	
<b>Occupational Safety and Health Associate Degree (SAF) Program</b>		<b>SAF 294 Safety Administration</b>	<b>3(3-0)</b>
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, and local government agencies, as well as the National and Michigan Occupational Safety and Health Act need professionally trained people to carry out the enforcement of these standards. Industry also needs trained people to implement safety practices within companies and departments. Please see Curriculum Code 574 for courses required.		For managers who are in charge of directing the safety programs in various types of industrial operations, and business concerns.	
Courses Offered in Occupational Safety and Health (SAF), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.		Courses Offered in Applied Technology General (ATG), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.	
<b>SAF 200 Electrical Safety Standards</b>	<b>1(1-0)</b>	<b>ATG 110 Custodial Maintenance I</b>	<b>3(3-0)</b>
Covers basic electrical safety practices in construction and industry. Prerequisite or co-requisite for all Electro-Mechanical classes that have a lab. All terms.		Gives a workable knowledge of cleaning techniques and a general knowledge of topics applicable to the trade.	
		<b>ATG 121 Glass Blowing I</b>	<b>4(2-4)</b>
		Shows basic properties of glass and procedures of glass blowing. Emphasis on flow control, viscosity, and making objects from glass rods; also torch and furnace stages of annealing. Lab fee.	
		<b>ATG 122 Glass Blowing II</b>	<b>4(2-4)</b>
		Prerequisite: ATG 121. Instruction in control blowing of glass tubes, methodology of controlling, and designing of shapes. Lab fee.	
		<b>ATG 123-124 Glass Blowing III-IV each</b>	<b>4(2-4)</b>
		Prerequisite: ATG 122-ATG 123. Continuation of glass blowing techniques, manipulation of molten glass rods, complex designs, weaving of rods, and joining rods to tubes. Lab fee.	

**ATG 130 Basic Woodworking 3(2-2)**

Wood characteristics, hand and portable power tools, woodworking machinery, joint construction, fastening methods, woodworking techniques and procedures, technical information, and basic wood finishing are applied to student-made projects. Lab fee.

**ATG 133 Furniture Making 3(2-2)**

Prerequisite: ATG 130 or equivalent. Design and construction of simple furniture, with emphasis on selection of materials, options in joint and fastening methods, laminating, steam bending, construction techniques, assembly procedures, finishing, and problem solving. Lab fee.

**ATG 134 Shaker Furniture 3(2-2)**

Introduces the beliefs of the Shaker community, as expressed in their fine craftsmanship. Students will make several Shaker designs including a peg board, mirror, and quilt rack. Lab fee.

**ATG 135 Antiquing and Furniture Refinishing 3(2-2)**

Step-by-step procedures for removal of old finishes, minor repairs, selection of new finish, surface preparation techniques, methods of application of new finish, and antiquing. Fabric work and upholstery are not included. Lab fee.

**ATG 137 Furniture Finishing 3(2-2)**

A course designed to give the average craftsman a basic knowledge in the finishing of his projects. It would include service preparation, sealing, staining, tinting, spray and brush application, french polishing, spot repair and would be a combination of lecture and "hands-on" work on their own projects. Lab fee.

**ATG 138 Wood Projects Laboratory 2(0-4)**

Prerequisite: ATG 130 or ATG 133. Provides additional lab hours and individual instruction for students enrolled in ATG and BTR courses, with requirements for construction of a term project. Lab fee.

**ATG 140 Gunsmithing 3(2-2)**

Repairing and restocking rifles. Topics include installation of sights, scopes, rebarrelling actions, and repairs. Also, building a muzzle loading rifle from a kit or starting with basic components. Lab fee.

**ATG 145 Canoe Building 3(1-3)**

Gives the student participation in building a canoe. Materials and processes use wood and modern adhesives and coatings in a manner suitable for small shop work. Subjects covered include elements of canoe design, alternate construction methods, materials for boatbuilding, laying out the hull and paddle making. Lab fee.

**ATG 146 Bicycle Repair and Maintenance 2(1-1)**

Shows basic reconditioning techniques for ten-speed bicycles, including wheel respoking, truing wheels, and general maintenance. Lab fee.

**ATG 150 Alternate Sources of Energy 4(4-0)**

Class studies problems and solutions encountered 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.

**ATG 151 Building Solar Furnaces 2(1-2)**

A hands-on course for the builder, designer, and do-it-yourselfer. Gives 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.

**ATG 152 Building Solar Water Heaters 2(1-2)**

Intended for the builder, designer, and do-it-yourselfer. Provides an overview of solar energy applications. Novices and advanced students work together in experimental learning. Lab fee.

**ATG 175 Graphics I 3(2-2)**

First of a three-term printing graphics series for those on apprenticeship programs and for those interested in the field of graphics. Explores basic printing processes and operations. Lab fee.

**ATG 176 Graphics II 3(2-2)**

Prerequisite: ATG 175. Covers offset techniques, stripping, layout, and composition processes. Lab fee.

**ATG 177 Graphics III 3(2-2)**

Prerequisite: ATG 175 & ATG 176. Further study of individual interest areas: press operations, process camera, halftones, etc. Lab fee.

Courses Offered in Applied Technology Related (ATR), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**ATR 149 The Metric System 2(2-0)**

Introduction to basic units of the metric system and their use; the reasons for changing from our system to the metric system; the costs and problems which are incurred by such a change, and how these can be minimized by proper preparation. Derived units useful in industrial applications also are covered.

**ATR 150 Basic Mathematics 4(4-0)**

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.

**ATR 151 Applied Algebra 4(4-0)**

Introduces and/or review basic algebraic operations with emphasis on those operations essential in solving practical problems encountered in shop operations.

**ATR 152 Applied Plane Geometry 4(4-0)**

Prerequisite: ATR 151. Application of geometric functions to the solution of practical shop problems. Introduction to trigonometry.

**ATR 153 Applied Plane Trigonometry 4(4-0)**

Prerequisite: ATR 152. Analysis of industrial problems utilizing trigonometric solutions by calculator.

**ATR 154 Advanced Applied Trigonometry 4(4-0)**

Prerequisite: ATR 153. Continuation of ATR 153. Provides broad experience in solution of problems taken directly from industry.

**ATR 155 Compound Angles I 4(4-0)**

Prerequisite: ATR 153 or ATR 154. Combination of solid geometry and advanced (solid) trigonometry enabling students to solve setup problems involving angles and tilted work.

**ATR 156 Compound Angles II 4(4-0)**

Prerequisite: ATR 155. Continuation of ATR 155. Emphasis on application of actual tooling setups for complex machining operations.

Courses Offered in Applied Technology Seminar, by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**ATS 090 - 094 Pre-Apprenticeship Seminar variable**

Designed to assist individuals who need or desire additional background to aid in being considered for apprenticeship training.

**ATS 120 - 123 Building Trades Seminar variable**

These seminars are planned to assist any building trades group or groups to upgrade their skills or to review new and emerging techniques.

**ATS 192 - 196 Technology General variable**

Includes seminars not listed under other headings.

Courses Offered in Technology General (TEC), by the Construction Technology Program—by Course Number, Title, Credits Allowed, and Description.

**TEC 102 Industrial Communications 4(4-0)**

A practical approach to clear written communication, including organizational skills, a review of grammar, skills needed to write effectively on the job. Written assignments include memos and business letters. All terms.

**TEC 150 Technical Math Introduction 5(5-0)**

Covers the prerequisite material to the TEC 151 and 152 math series. Topics include arithmetic, approximate numbers, simple equations, and factoring. All terms.

**TEC 151 Mathematics for Technicians I 5(5-0)**

Prerequisite: Math Placement Test. Applies topics from algebra and trigonometry to architectural technology, civil technology, electronics and mechanical technology. Covers quadratic equations, trigonometry, vectors, and j-operator. Fall, winter, and spring terms.



**TEC 152 Mathematics for Technicians II 5(5-0)**

Prerequisite: TEC 151 or equivalent. Covers the application of logarithms, differential calculus and integral calculus to practical technical problems. Topics include related rates, maximum and minimum problems, and areas under curves. Winter and spring terms.

**TEC 153 Mathematics for Technicians III 5(5-0)**

Prerequisite: TEC 152 or equivalent.

**TEC 155 Programming Scientific Calculators for Technicians 2(2-0)**

Introduces the student to basic programming techniques to make use of the power of the programmable calculator as an aid in solving various technical problems. The course is general in nature so programming methods may be adapted to a variety of scientific calculators and fields of study. Students must have their own programmable calculators.

**TEC 201 Applied Physics 4(4-0)**

Includes basic principles of mechanical technology, electricity and electronics technology, civil technology, hydraulics, metal working, heating and air conditioning. Provides basic training in fundamental physical phenomena and emphasizes practical problems. All terms.

**TEC 202 Industrial Chemistry 4(4-0)**

Focuses on basics in general chemistry for the technician. Topics include atomic and molecular theory, bonding properties or elements, oxidation reduction reactions, kinetic-molecular theory, solutions and electrochemistry. Applications are made to the field of fire protection primarily.

**TEC 203 Technical Report Writing 4(4-0)**

Prerequisite: TEC 102. Covers technical writing style, format and techniques. Emphasis is on organization and purpose. Special unit on developing materials for employment applications. Recommended for second year students. All terms.

**TEC 204, 205, 206, 207, 208, 209, 210 Technical Internship 2 - 8 credits**

After successful completion of basic courses, usually following the freshman year, students may elect an internship. This course allows the student to be placed in an approved training station and earn credits for satisfactory work performance. To participate in this program students must be qualified to receive approval from their department. Their occupational interests are considered along with their background or related classes to determine placement.

## DEPARTMENT OF HEALTH CAREERS AND CENTER FOR HEALTH EDUCATION/ REHABILITATION

Michael Lenkowski, Chairperson

**Programs of Study**

The Department currently offers programs\* leading to the Associate Degree in Applied Science with major emphasis in:

- Nursing (Career Ladder L.P.N.-R.N.)
- Dental Hygiene
- Dental Assistant
- Radiation Therapy Technology
- Radiologic Technology
- Respiratory Therapy Technology
- Advanced Emergency Medical Technology (Paramedic)

And one-year programs leading to the Certificate in:

- Practical Nursing
- Dental Assistant
- Respiratory Therapy Technician
- Nuclear Medicine Technology
- Surgical Technician
- Emergency Medical Technician
- Medical Sonography (Ultrasound) Technology (Starts Fall 1985)

And one or two term programs leading to the Certificate of Achievement:

- Dental Business Assistant
- Ward Secretary
- Psychiatric Technician
- Pharmacy Technician
- Central Supply Technician
- Dental Insurance Billing

- Home Health Aide
- Hospital Food Service Supervisor/Dietary Assistant
- Phlebotomy Technician
- Aide for Developmentally Disabled
- Medical Assistant

\*The length of these programs varies from three 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 achieving eligibility 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. Graduates may not be eligible for licensing examinations unless all requirements are met.

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:

- American Medical Association Committee on Allied Health and Accreditation, and the respective Joint Review Committees on accreditation of programs in Radiologic Technology, Nuclear Medicine Technology, Radiation Therapy, and Medical Diagnostic Sonography
- American Dental Association, Commission on Dental Accreditation
- National League for Nursing, Department of Associate Degree Programs in Nursing
- Association of Surgical Technologists
- Michigan Board of Nursing
- Michigan Board of Dentistry
- Michigan Department of Public Health, Division of Emergency Medical Services

In addition to health occupations programs, the department offers courses and programs in Health Education for healthy living, Health Promotion Services, and Adaptive Rehabilitation Education. Fitness testing, exercise prescription and a variety of opportunities for physical exercise and health education is available to any student who may be interested in improving their physical well-being.

Rehabilitation exercise for persons with cardiac conditions is available to those persons referred by their physicians. Emphasis is placed on a return to optimum levels of physical activity for those with cardiac, neurological or other chronic conditions.

**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 video-tapes. These study units have been developed for the audio-visual laboratory with all faculty participating to assure effectiveness and pertinence to respective curricula.

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 orientation in the use of audio-visual laboratory equipment, and staff assistance.

Other laboratories used in conjunction with A.V. Materials provide hospital, medical, and dental equipment and materials for student practice and skill development.

**New Programs, Curriculums, and Courses**

In addition to the programs and courses offered currently, the Department of Health Careers will continue to review and respond to community needs, developments in computerization, and high technology. As the need is determined, new courses and/or new programs will be developed and offered.

The growing use of computers in relation to x-ray and laboratory procedures, laser beam surgery, miniaturization, and artificial organ replacements will require revisions of current curriculums, or the development of new technical programs. Therefore, prospective students are encouraged to contact the Department in addition to their review of the catalog.

**Dental Hygiene Program**

Program Director, Sally Deck, R.D.H., M.S.

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 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 is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education.

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 curriculum for Dental Hygiene.

#### Dental Assistant Program

Program Director, Sally Deck, R.D.H., M.S.

This is a two-year career ladder program. The first year combines basic dental assistant courses and science courses with minimal clinical experience. Upon completing the first year program, the college grants a Certificate and the student may apply for the second year program.

The second year program includes advanced dental assistant courses, comprehensive clinical experience and expanded dental assistant procedures. Upon completing both years, the graduate earns an Associate Degree from the college and is eligible for the national certifying exam administered by the Dental Assisting National Board and the licensing exam administered by the Michigan Board of Dentistry.

The career ladder program prepares one to function first as a Chairside Dental Assistant and then as a Registered Dental Assistant with the dental health team.

The program in dental assisting (two year) is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education.

The college also provides a three course Dental Business Assistant program for persons interested in performing receptionist and office manager duties for the dental office.

Admission requirements for each of these dental assistant programs may be obtained from the Admissions Counselor for Health Careers, Admission Office. Additional information about each career option/program may be obtained from the Dental Advisor at the Dental Auxiliary Programs Office, 007 A&S Bldg.

#### 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 Committee on Allied Health Education and Accreditation. Graduates are eligible for the Associate Degree in Applied Science and are eligible 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.(R).

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 five affiliate and cooperating institutions: Ingham Medical Hospital, Lansing General Osteopathic Hospital, Edward W. Sparrow Hospital, and St. Lawrence Hospital all of Lansing, Michigan and Memorial Hospital, Owosso, Michigan.

Interested students are urged to contact the Admissions Counselor for Health Careers, Admissions Office, for specific requirements for program admission.

#### Associate Degree Program in Radiation Therapy Technology

Program Director, Ronald Griffith

The Associate Degree Program in Radiation Therapy Technology at Lansing Community College is approved by the American Medical Association's Committee on Allied Health Education and Accreditation. Graduates are eligible for the Associate Degree in Applied Science and are eligible 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.(T).

The program is five terms in length and is open to those persons who are graduates of CAHEA approved programs in Radiologic Technology. Because of the structure of the program, individuals with questions should contact the Department of Health Careers.

#### Respiratory Therapy Technician Program

Program Director, Jerry Rocho

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 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. The respiratory therapy courses involve classroom lectures, campus laboratory practice and extensive scheduled hospital practice.

Upon successful completion of seven terms\* in the curriculum for the associate degree program, the student is awarded an Associate Degree in Applied Science, with a depicted specialty in respiratory therapy. After completing required work experience in respiratory therapy, an Associate Degree graduate becomes eligible to take the written and clinical simulation National Registry Examination administered by the National Board for Respiratory Care.

Upon successful completion of four terms in the curriculum for the Certificate program, the student is awarded a Certificate in Respiratory Therapy. A certificate program graduate is eligible to take the National Certification Examination administered by the National Board for Respiratory Care. Also, 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 two or three additional terms prior to the seven-term clinical Respiratory Therapist sequence.

#### Continuing Health Careers Programs

Program Director, Carol Phelan

The Continuing Health Careers Programs offer courses, workshops and seminars in all health disciplines to graduates of basic programs to update their skills and knowledge obtained in basic programs, and to enable them to acquire the new skills and additional knowledge necessary for expanding their roles, or for assuming new roles. Because these new programs are being developed continuously, please contact the department for periodic updates concerning them.

#### Community Health Services Programs

Programs which meet a need in the community for training technicians in certain vocational areas are also offered. These technicians currently include the ward secretary, nurse health aide, central supply technician, pharmacy technician, aide for developmentally disabled, psychiatric technician, cardiac technician, phlebotomy technician, dietary assistant, medical assistant and medical insurance billing. Also, a series of courses and seminars are offered, in coordination with the Center for Aging Education, for the family in-home care giver.

#### Emergency Medical Services Programs

Program Director, Rexine A. Finn

The Department of Health Careers offers programs for the training of basic emergency medical technicians (EMT), the Specialist EMT, and the advanced Specialist EMT. Also, first aid courses, CPR seminars and other continuing education activities are offered for all EMS personnel.

The Basic EMT program is approved by the EMS Division of Michigan Department of Public Health and its curriculum exceeds the nationally recommended D.O.T. curriculum. Upon successful completion of the program the student is eligible to take the State of Michigan written and practical exam.

The three term Basic EMT Program includes the Basic EMT course and a series of other courses designed to prepare the student in all aspects of basic emergency medicine technology including physical assessment, anatomy, terminology, extrication, communications, ambulance driving, pharmacology, and an introduction to the Emergency Medical Services system. Students may attend on a part time or full time basis. The program is intended to prepare students for the Advanced EMT (Paramedic) Program and its curriculum constitutes that which is recommended for the first year of the program leading to the Associate Degree in Emergency Medical Services.

An intermediate level of EMT called the EMT Specialist is available in a series of 2 courses. It is approved by the EMS Division of Michigan Department of Public Health and prepares the student for the state certification examination.

The Advanced EMT (Paramedic) Program is three terms in length and constitutes the courses of the second year of the Associate Degree Program. It is approved by the EMS Division of Michigan Department of Public Health and requires attendance on a full time basis. Following successful completion of this program the students are eligible to take the state examination for licensure.

All programs consist of classroom and clinical instruction by registered nurses, paramedics, EMT's and physicians in cooperation with local hospitals and EMS agencies. A training ambulance is available for simulations and provides a realistic atmosphere for learning.

#### Surgical Technology Program

Program Director, Donna Price

Upon completion of a ten month (3 terms and 1 special term) program in surgical technology, the student will have earned a certificate and will be eligible for certification by the Association of Surgical Technologists.

The surgical technologist is employed in the hospital as part of the surgical team. Duties include preparing and positioning patients for surgical procedures, operating surgical equipment and directly assisting the surgeon by providing instruments. The surgical technologist must be able to work well under stress and be able to communicate effectively with other members of the surgical team.

Applicants to the program are required to meet not only the admission requirements of the college but those established for the Surgical Technology Program. Information regarding requirements for program admission may be obtained from the Admissions Counselor for Health Careers, Admissions Office.

#### **Practical Nurse-Associate Degree Nursing Program (Career Ladder in Nursing)**

Program Director, Pat Lambert

The Career Ladder Program is a special curriculum which builds on previous learning and experience. All qualified students will be admitted into the first year of the Nursing Program. Upon successful completion of prerequisite and requisite courses students may exit after the first year and take the Practical Nurse National Council Licensing Examination.

Qualified students will be admitted into the second year to complete the Associate Degree Nursing program. After successful completion of requisite and prerequisite courses students will be eligible to take the Registered Nurse National Council Licensing Examinations.

Courses in the behavioral science, biological sciences, and the Humanities provide an academic background of scientific principles and communication skills on which to base client care. Theory content, simulated laboratory experiences, and clinical laboratory experiences are provided at the college and/or in area hospitals and nursing homes.

Student learning experiences are planned to progress from simple to complex client care problems. Emphasis is placed on use of the nursing process, development of nursing skills, and development of communication skills. The concepts of applied pharmacology, applied nutrition, common health problems, health team, cultural diversity, and human sexuality are also integrated throughout the curriculum.

Upon completion of the first year of the program the graduate will have received theory and clinical experience in Nursing Foundations, Medical Surgical Nursing, Maternity Nursing, Nursing of Children, and Practical Nurse Role.

The student who exits out after the first year is required to meet the Department of Health Careers criteria for practical nursing students to be eligible for certification.

Upon completion of the second year of the program the graduate will have received theory and clinical experience in Nursing Foundations, Medical Surgical Nursing, Maternity Nursing, Nursing of Children, Psychiatric Nursing, Beginning Nursing Managerial Skills, and Associate Degree Nursing Role.

The student who completes the Associate Degree Nursing program is required to meet college criteria for the Associate Degree Nursing in Science—Nursing major to be eligible for graduation.

The Associate Degree Nursing program is approved by the Michigan Board of Nursing and is accredited by the National League for Nursing.

Applicants to the Career Ladder Program are required to meet admission requirements established by the College and Nursing Department. Applicants are admitted to the program on a first-qualified, first-served basis which could entail as much as a 9-12 month wait after the completion of the admission requirements.

#### **Adaptive Rehabilitation and Health Education Program**

Program Director, Rosalie Walker

The Department of Health Careers and Center for Health Education/Rehabilitation offers an Adaptive Rehabilitation and Health Education Program. A significant portion of the Program includes continuous aerobic exercise classes which are conducted under the guidance of a physician for students needing health improvement. Adaptive rehabilitation is directed at students (and their spouses) with heart disease, neurological disorders, or chronic diseases.

Anyone wishing to increase fitness and decrease the risk factors which might cause disease is also welcome to participate. As with rehabilitation, preventative health education emphasizes aerobic exercise, proper nutrition, stress reduction, and re-assessment of individual life styles.

Courses Offered in Nursing (NUR), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

#### **NUR 121 Introduction to Nursing 7(4.5-7.5)**

Prerequisite: Admission to the program. Introduces biophysical and psychosocial needs of humans. Use of the nursing process to facilitate client adaptation to basic human need deficits is emphasized.

#### **NUR 122 Introduction to Nursing Role 1(1-0)**

Prerequisite: Admission to the program. Introduces the nursing roles and functions in practice settings; the health care system; and ethical/legal aspects of nursing practice.

#### **NUR 123 Nursing Care Adult I 8(5-9)**

Prerequisite: NUR 121. Completes the basic human needs and begins study of problems in the integumentary, special senses, renal, and reproductive systems. Emphasizes the use of the nursing process to facilitate client adaptation to system problems.

#### **NUR 124 Nursing Care Adult II 10(6-12)**

Prerequisite: NUR 123. Completes study of problems in the hematologic, musculoskeletal, cardiovascular, respiratory, neurological, and endocrine systems. The use of the nursing process to facilitate client adaptation to system problems is emphasized.

#### **NUR 129 Pharmacology 3(3-0)**

Prerequisite: NUR 121 or NUR 123 concurrently. Introduces the student to basic aspects of pharmacology. Various drug categories are discussed as well as nursing responsibilities that are associated with medication administration.

#### **NUR 125 Nursing Care Child I 5(3-6)**

Prerequisite: NUR 124 and PSY 205. Introduces the common health problems of children. Use of nursing process to facilitate the child's adaptation to health problems emphasized.

#### **NUR 126 Maternity Nursing I 4.5(3-4.5)**

Prerequisite: NUR 124 and PSY 205. Introduces the adaptive needs and responses of the maternity client, the neonate, and the family during childbearing. The use of the nursing process to facilitate adaptation of all family members in the maternity and perinatal cycle emphasized.

#### **NUR 127 Practical Nurse Role 0.5(5-0)**

Prerequisite: NUR 124. Examines the role of the practical nurse; ethical and legal dimensions of practice; professional organizations; role transition; job preparation; and history and trends in practical nursing.

#### **NUR 220 Transition Course 2(2-0)**

Prerequisite: Admission to ADN program. Introduces the returning Licensed Practical Nurse (LPN) student to the nursing process, PQR charting, role transition, and curriculum concepts. Assessment and evaluation of nursing skills will also be done.

#### **NUR 221 Psychiatric Nursing 5(3.5-4.5)**

Prerequisite: Admission to ADN program. Introduces psychiatric-mental health concepts. Development of therapeutic nurse-client relationships is emphasized.

#### **NUR 222 Nursing Care Adult II 10(6-12)**

Prerequisite: NUR 221, MIC 203. Introduces the adaptation problems associated with fluid and electrolyte/acid-base imbalance, shock, GAS-LAS imbalance, and chronic illness. Use of the nursing process to facilitate client adaptation to clinical problems emphasized.

#### **NUR 223 Nursing Care Child II 2(2-0)**

Prerequisite: NUR 222. Introduces the special adaptation problems in children. The nursing process will be used in observational experiences to help solve client problems.

#### **NUR 224 Maternity Nursing II 2(2-0)**

Prerequisite: NUR 222. Introduces the high risk maternity and neonate client. The nursing process will be used in observational experiences to help solve client problems.

#### **NUR 225 Beginning Nursing Management Skills 6(1.8-12.6)**

Prerequisite: NUR 222. Using beginning management skills to provide direct nursing care through use of the nursing process, as well as to delegate and supervise ancillary personnel in giving direct nursing care to clients.

#### **NUR 226 Associate Degree Nurse Role 0.5 (5-0)**

Prerequisite: NUR 222, NUR 225 R. Examines the role of the Associate Degree Nurse (ADN); ethical and legal dimensions of practice; professional organizations; history and trends of Nursing; role transition; and job preparation.

Courses Offered in Continuing Health Careers (CHC), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

- CHC 100 R.N. Refresher** 12(7-12)  
Prerequisite: Department approval. For the inactive R.N. and L.P.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. A clinical component is included.
- CHC 101 Suicide Seminar** 0.5(6-0)  
Seminar designed for health care professionals and paraprofessionals; security and custody professionals. Includes techniques necessary to recognize suicide potential, assess suicidal lethality and prevent suicide.
- CHC 102 Pharmacology** 6(6-0)  
Primarily for the Licensed Practical Nurse, but a useful refresher for the inactive Registered Nurse. Includes dosage calculations, drug administration, systemic approach and pharmacological actions, reactions and untoward effects, IV solution preparation, hyperalimentation, body fluid maintenance, and pH homeostasis. Known significant drug-drug, drug-food, and drug-laboratory interactions will be covered. This course in NAPNES approved. A minimum grade of 2.5 is required for a certificate.
- CHC 103 Psychiatric Technician Update** 0.5(6-0)  
Seminar designed for health care professionals and paraprofessionals to provide theories, information and hands on skills concerning individuals with developmental disabilities (mental retardation). The material presented will include: definitions, characteristics, current theories, problem areas, interventions and family involvement.
- CHC 104 R.N. Basic Arrhythmia Interpretation** 3(3-0)  
Introduce the R.N. and other Allied Health Professionals to the basics of cardiac arrhythmia interpretation. Includes electrophysiology, arrhythmias, clinical pharmacology, pacemakers and cardioversion. Learn to recognize life threatening arrhythmias and to institute chemical and/or electrical intervention.
- CHC 112 Dental Auxiliary X-Ray** 2(2-0)  
For dental auxiliary to update their skills and knowledge of making intraoral radiographs. Includes theory and laboratory practice on a radiographic skull model.
- CHC 113 Physical Assessment Update** 1(11-0)  
Short, intensive workshop for nurses who have already completed the pediatric or adult physical assessment classes. Students will use this to update, review and clarify skills and information previously learned, but partially forgotten.
- CHC 114 Physical Assessment** 3(3-0)  
Expand the skills of the RN and LPN in data collection evaluation and decision-making regarding the physical status of patients. Lectures and supervised practice sessions with live models. Useful for nurses in any area of clinical practice. Includes the study of each major body system. Practice in physical exam skills and equipment relative to each system.
- CHC 115 Ostomy Care Allied Health** 1(1-0)  
For nurses and allied health professionals in the care of patients who have an ostomy or abdominal stoma. Includes equipment and suggestions for patient care, rehabilitation, and patient teaching.
- CHC 122 R.N. Respiratory Therapy Seminar** 3(3-0)  
Update the practicing Respiratory Therapy Technician or Therapist in basic science and therapy principles. Stresses fundamental aspects of theory and clinical applications of Respiratory Therapy. Examination question similar to Certification and Registry Examination question will be extensively used for purposes of self and course assessment.
- CHC 125 Medical/Legal Aspects Allied Health** 3(3-0)  
Survey of health laws relating to medical care delivery in Michigan. All aspects of emergency care will be covered. Includes lecture, small group work sessions on selected topics and a field trip to court.
- CHC 126 Advanced Cardiac Nursing Seminar** 3(3-0)  
For practicing RN's with a minimum of one year experience in critical care or cardiovascular nursing. Must also have a good understanding of cardiovascular anatomy and physiology. New developments in the nursing and medical management of cardiac disease or dysfunction are explored in detail, including concepts of stress, advanced cardiovascular assessment, diagnostic advances in cardiovascular disease, nursing management, management of cardiac trauma and surgical treatment.
- CHC 128 Cardiac Nursing Problems** 3(3-0)  
An introductory level course designed for RN's, but also open to LPN's and other health professionals. To equip nurses with knowledge base necessary to provide safe nursing care for the acutely ill and convalescent cardiac patients including concepts applicable to the rehabilitation process. Cardiovascular anatomy and physiology will serve as a basis for analyzing problems of heart disease and determining nursing management. Patient needs, pharmacology of cardiac drugs will be studied, in addition to the concepts and use of CPR, pacemaker, central venous pressure and Swan-Ganz monitoring.
- CHC 132 Competency Based Education** 3(2-2)  
Introduce vocational educational instructors with the concept and various aspects of Competency Based Education as defined by the State Board of Education. Includes participant assignments in the A-V tutorial lab and several workshop sessions, the construction and writing of performance objectives, objective-referenced testing, learning activities, and follow-up.
- CHC 134 RN Neurologic Assessment** 1(1-0)  
Acquaint the practicing nurse with the basic neurologic exam. Primary focus is on the application of specific parts of the exam to patients with a variety of clinical problems. Includes sensory exam, motor and cerebellar exam, testing of reflexes, examination of cranial nerves and selected signs of neuropathology. Supervised practice sessions.
- CHC 181 Hemodynamic Monitoring** 2(2-0)  
For nurses and health professionals working in special care settings where various modes of hemodynamic monitoring are employed. Different pressure monitoring systems are discussed. Detect abnormal wave forms as well as potential problems in the pressure modalities. Practice with pressure tracings and to examine and handle pressure monitoring equipment.
- CHC 182 Acute Trauma Nursing** 2(2-0)  
For nurses, paramedics, emergency service technicians and other health care professionals. Expand knowledge of assessment and management of selected types of acute trauma. Lectures, case study situations, and "hands-on" practice sessions assist the understanding of the evaluation and immediate treatment of acute trauma. Head and neck injuries, chest trauma, major abdominal trauma, and the complicated multiple trauma patient included.
- CHC 184 Medical Surgical Nursing Seminar** 2(2-0)  
First in a series for nurses interested in medical-surgical nursing. Types of patient data and its application to patient care examined. Lectures, demonstrations and practice sessions to develop skills in lab and x-ray interpretation; patient interviewing, and "informed observation."
- CHC 185 Laboratory Tests for Nurses** 0.5(6-0)  
For nurses in any area of clinical practice. Explanations of specific lab tests, collection and handling of specimens, interpretation of laboratory test values, and application of lab data to nursing practice. Mock lab reports and case study situations to assist the student's understanding and application of laboratory data.
- CHC 186 Reyes Syndrome Nurses-Doctors** 0.5(6-0)  
For health professionals interested in updating their knowledge of the incidence, symptomatology and treatment approaches to Reyes Syndrome. Regions in Michigan are compared and seminar participants learn about their resources.
- CHC 188 Neuropathology for Nurses** 1(1-0)  
For nurses interested in learning more about specific types of pathologic conditions frequently encountered. Mechanics of increased intracranial pressure and means of monitoring ICP.
- CHC 189 Pressure Tracings for Nurses** 1(1-0)  
Hemodynamic monitoring. Normal pressure wave forms are discussed and contrasted with abnormal patterns. Specific cardiac pathology which may alter normal wave forms. Each type of abnormal configuration presented in detail. Case studies and many practice tracings to apply classroom information. All students should have a basic understanding of cardiac pathology and monitoring equipment.
- CHC 190 Pharmacology Math** 1(11-0)  
A five week seminar designed for the RN, LPN or student in a nursing curriculum. The course will include a basic math review and will familiarize the student in working with drug dosages, IV calculations and pediatric dosages.
- CHC 191 Current Concepts in Ostomy Management** 0.5(6-0)  
A workshop to provide the Health Professional with information necessary to care for the patient with a stoma. Four concurrent sessions on equipment, patient care suggestions, rehabilitation and patient education are offered.

- CHC 192 Fetal Monitoring 2(2-0)**  
To update and explore fetal-maternal monitoring instrumentation and clinical application in both the antepartum and intrapartum period. Integration of physiological principles and variables affecting fetal heart rate patterns emphasized. Demonstration and practice reading monitor records enable application of pattern identification. Practice application of external and internal transducers is included.
- CHC 193 Introduction to Cardiac Interpretation 3(3-0)**  
For technicians, EMT's, AEMT's and non-critical care nurses. Emphasis on identification and immediate treatment of major and lethal arrhythmias. Signs of cardiac pathology. Cardiac drugs discussed in relation to each arrhythmia. How to monitor patients and to obtain a XII lead EKG.
- CHC 194 Mental Health Nursing Seminar 2(2-0)**  
A seminar for psychiatric and emergency department nurses, paramedics, EMT's, policemen and interested health professionals. Specific means of dealing with people in emotional crisis from "talking down" to physical restraint. Demonstrations and practice sessions included.
- CHC 195 Effective Interactions and Problem Solving Techniques 1(1-0)**  
A seminar for nurses and other health professionals in any work setting, as well as those currently inactive. Stresses the application of assertive communication skills in typical situations encountered in nursing and medical practice. Identify personality and temperament styles and learn skills of empathic listening; conflict resolution; values clarification; and confrontation skills. Real and theoretical work situations to assist in effective problem solving.
- CHC 196 Pediatric Nursing Diabetes 2(2-0)**  
For nurses working with children in any health care setting. Enhance understanding of diabetes, its management and associated problems. Special considerations from infancy to adolescence.
- CHC 197 Pediatric RN Respiratory Care 3(3-0)**  
Primarily for pediatric nurses in any area of clinical practice. Focuses on normal function of the respiratory system, common types of respiratory pathology and treatment approaches—including types of respiratory therapy. Application of class content to nursing practice. Practice sessions for practical "hands on" experiences.
- CHC 198 Geriatric Nursing Seminar 1(1-0)**  
Designed specifically for nurses practicing in the field of geriatrics. Problems relating to administering care to the geriatric patient.
- CHC 200 Managing Aggression Seminar 2(22-0)**  
A course for health professionals who face a real possibility of physical assault or aggression in their work. Course content covers recognition of specific cues to impending aggressive outbursts, and management of a aggressive behavior in a therapeutic way that de-escalates or defuses the situation. Demonstrations, simulations and supervised practice session are used to teach maneuvers, strategies and awareness.
- CHC 201 Assertiveness Workshop for Nurses 2(2-0)**  
Application of assertiveness in typical situations encountered in nursing practice. Identification of personality/temperament styles; empathic listening; conflict resolution; values clarification; and confrontation skills.
- CHC 202 Women's Health Care Seminar 1(1-0)**  
Increase awareness of significant health issues affecting women. The social, economic and political factors influencing health care delivery. Emphasis on the rights and alternatives to health care available to women.
- CHC 203 Psychiatric Nursing Seminar 3(3-0)**  
Designed for nurses interested in mental health care. A series of weekly classes dealing with a wide range of topics and issues currently of interest to nurses in this field.
- CHC 204 Advanced Cardio-Vascular Assessment for Nurses 2(2-0)**  
An advanced level for nurses with a basic knowledge of the heart and great vessels and the peripheral vascular system. Emphasis on distinguishing abnormal heart sounds, physical exam of cardiovascular system, and clinical signs of pathology.
- CHC 205 Management Techniques of Health Professionals 3(3-0)**  
Designed to meet the unique management needs of the professional nurse. The management skills apply to the nurse managing direct patient care or the nurse managing a staff. Theories of management skills discussed as background for a more intense emphasis on the daily application of specific management practices.
- CHC 206 RN IV Therapy 0.5(6-0)**  
Up-to-date information on intravenous technique, solutions, and intravenous medications. Various types of equipment used and hands-on experience included.
- CHC 207 Nursing Interventions in Emotional Crises 0.5(6-0)**  
A seminar for nurses in any area of practice, who may come in contact with emotionally stressed patients. Learn to recognize cues to emotional stress or inappropriate behavior. Techniques for dealing with patients in emotional crises are explored.
- CHC 208 Medical Surgical Nursing Seminar II 3(3-0)**  
Designed for the generalist nurse. Includes understanding laboratory data; history-taking and interviewing skills; assertiveness and problem-solving techniques for more effective nursing practice; nursing interventions in emotional crises; and renal pathology.
- CHC 209 First Aid for Nurses 1(1-0)**  
Designed for any nurse who needs specific instruction and practice in first aid skills to deal effectively with common emergency situations. Demonstration and practice sessions are utilized in learning to deal with typical crisis situations such as management of fractures, bleeding, what to do at the scene of an accident, rapid assessment of the accident victim and more.
- CHC 210 Pharmacology Math for Nurses 0.5(6-0)**  
Designed for all nurses and students in nursing to acquaint them with the mathematics used in pharmacology. Topics covered are drug dosages, IV calculations and pediatric dosages.
- CHC 211 Principles of Oncology Nursing 4(4-0)**  
Introductory course presents important physiological and psychological concepts related to the nursing care of patients with cancer. Course content includes diagnostic processes, pathophysiology of cancer, oncologic complications, oncologic emergencies, principles of treatment, chemotherapy, radiation therapy and bereavement.
- CHC 212 Medical Ethical Nursing Dilemma 0.5(6-0)**  
Seminar for nurses will provide alternate ways to structure and clarify issues surrounding ethical dilemmas in nursing practice. Emphasis will be on breaking the dilemma into elements; defining the situational facts; questions that can arise on the issue; and utilizing ethical theories to resolve the situation.
- CHC 213 Basic Psychiatric Tech 5(4-2.2)**  
Course designed to prepare an individual to function as a member of the mental health care team. Concepts covered are personality development, identification of maladaptive behavior patterns, therapeutic interventions. A clinical component is included. On completion of the course with a 2.5 or better a certificate is awarded.
- CHC 214 Respiratory Pathophysiology for the Respiratory Therapist 3(3-0)**  
Course designed to provide the practicing Respiratory Therapist with an update on pathogenesis, diagnosis, and therapy of commonly encountered pulmonary disorders. Topics covered include: asthma, emphysema, oxygen therapy, ARDS, restrictive lung disease and rehabilitation therapy.
- CHC 215 Pediatric Physical Assessment 3(3-0)**  
Designed for the active RN or LPN. Gathering information about the physical status of infants and children. Stresses the use of the four basic skills of inspection, palpation, percussion and auscultation in the examination of the major body systems and regions. Relevant information about normal growth and development is integrated throughout the course. Improve abilities in the areas of data collection, evaluation, and decision-making.
- CHC 216 Advanced IV Therapy for Nurses 0.5(6-0)**  
Seminar offering advanced intravenous therapy concepts for nurses. Topics include: pediatric IV therapy, TPN, PPN, lipid therapy, Broviac catheters, nursing assessment of advanced IV therapy and nursing implications of IV therapy.
- CHC 217 Advanced Respiratory Care 1(1-0)**  
Course offering an in-depth study of pathophysiology, medical treatment and nursing care of the patient with respiratory failure. Special emphasis is placed on interpretation of arterial blood gasses and specific aspects of care for patients receiving mechanical ventilation.
- CHC 218 Nursing License Update 3(3-0)**  
This course is for graduates of nursing schools. It is designed for new RN graduates to update their knowledge in psychiatric, medical/surgical, pediatrics, obstetrics, pharmacology, nutrition and other pertinent information.

- CHC 219 Pediatric Nursing Respiratory Seminar** 1(1-0)  
For nurses in pediatric practice who require specific information about the normal functioning of the respiratory system; respiratory pathology and nurses responsibilities in using respiratory therapy equipment.
- CHC 220 Nurses Respiratory Workshop** 1(11-0)  
Workshop designed for nurses desiring information about function and dysfunction of the respiratory system. Topics include: concepts of respiratory anatomy and physiology, blood gas interpretation, physical assessment of lungs and thorax, pulmonary pathology, and chest x-ray interpretation.
- CHC 221 12 Lead EKG Workshop** 2(2-0)  
For nurses and allied health professionals to expand skills in reading and interpreting full electrocardiograms. Each student must have a working understanding of basic electrocardiography and arrhythmia interpretation. Emphasis on application to nursing practice.
- CHC 222 Arrhythmia Interpretation Seminar** 1(1-0)  
For registered nurses/health professionals who want to review and update their knowledge of the major arrhythmias. Each student is expected to have a working knowledge of arrhythmias. Emphasis will be placed on identification and proper treatment of the major arrhythmias. Opportunities to practice skills both on rhythm strips and a monitor. Appropriate drug therapy is reviewed. Not designed for individuals who have no prior knowledge or experience with arrhythmia interpretation.
- CHC 223 Pediatric Nursing Seminar** 2(2-0)  
Topics of interest to pediatric nurses. Includes working with the adolescent, pediatric respiratory problems, child abuse, the chronically ill child, and other current topics.
- CHC 224 Renal Nursing Seminar** 1(1-0)  
For any RN, LPN, or health care professional who desires specific information about kidney function and dysfunction. Emphasis on normal renal functions, but some deviations from normal are also included.
- CHC 225 Pharmacology Update** 3(3-0)  
For nurses Basic considerations of new and current drug therapy, and the mechanisms of drug actions, utilizing basic anatomy and physiology. Acquaint the nurse with the increasing complexity of clinical drug therapy and increased risk of error by emphasizing accuracy in dealing with drugs, including simple calculations that are encountered daily.
- CHC 227 New Dimensions of Nursing Practice** 0.5(6-0)  
On-going series of day-long seminars designed to update nurses—both active and inactive—about topics of current interest in the health care field. New advances; new treatment approaches or political topics will be stressed.
- CHC 228 Business of Nursing** 3(3-0)  
Designed to heighten the students' awareness of the relationship of nursing to the "Big Business" of health care. Principles of management and marketing are integrated throughout the course, as well as emphasis on improving style of conflict resolution; effective communication and skills needed to succeed in the business world of health care.
- CHC 229 History Taking and Interviewing for Nurses** 0.5(6-0)  
Seminar exploring the common pitfalls of effective patient interviews and history taking while focusing on the means of improving patient-nurse interactions. In-class demonstrations with student practice sessions serve to reinforce effective communications.
- CHC 230 Advanced Cardiac Life Support Provider Course** 3(2-2)  
For the physician, paramedic, and critical care emergency personnel to develop knowledge and skills in advanced life support. Includes arrhythmia interpretation, airway intubation, central venous and arterial lines. Supervised clinical laboratory practice sessions and specific preliminary course preparation. A Heart Association Advanced Life Support Certificate upon successful completion of the course.
- CHC 231 Advanced Cardiac Arrhythmias** 1(11-0)  
This specialty course is appropriate only for the nurse or health professional with a strong, working knowledge of basic cardiac arrhythmias. Complex arrhythmias are presented with the distinguishing features of each. Students must possess the required cardiac terminology to understand this advanced course content.
- CHC 232 Renal Nursing Seminar II** 1(1-0)  
For any RN, LPN or health care professional. Specific information about kidney dysfunction. Review basic anatomy, physiology, and functions of the kidney prior to attending. Focus on renal pathology and related treatment strategies. Importance of nursing assessment and management stressed.
- CHC 233 RN Monitoring of Pacemakers** 1(1-0)  
For nurses. The normal functioning of permanent pacemakers. Focuses on functions and types of pacemakers; care of patients with permanent pacemakers, etc. Also sensing, indications for pacing, and pre-operative nursing care of patients with pacemakers. Demonstration to acquaint with pacemaker equipment, pacemaker EKG tracings, pacemaker leads and patient transmitter system.
- CHC 234 Advanced Pacemaker II** 1(1-0)  
Prerequisite: CHC 233 or department approval. Advanced level seminar is intended to follow CHC 233. A continuation of specialized information about the functioning of pacemakers and the nursing monitoring and management of patients on pacemakers. Specific problems with pacing, clues to pacemaker malfunction and nursing troubleshooting maneuvers and techniques are explored in detail.
- CHC 235 ACLS Recertification Seminar** 1(1-0)  
Designed to recertify (American Heart Association Standards) those people currently possessing valid ACLS cards. Includes lectures, supervised clinical lab sessions and specific preliminary course preparation.
- CHC 236 Health Issues** 3(3-0)  
This course explores seven important areas of health: health and the mind, the role of drugs; family health; disease; health and you; and health in society. A panel discussion of experts, in their respective fields, will be held to explore alternatives available to the informed health care consumer.
- CHC 237 Pain Management Seminar** 0.5(6-0)  
Course designed for health professionals to learn basic techniques to assess and help the patient with pain. Emphasis is on specific pain relief measures that can be applied in all clinical settings. Effective use of medications and non-invasive methods will be discussed.
- CHC 238 Clinical Evaluation Methods** 2(2-0)  
Course designed to increase the knowledge of supervisors and clinical instructors in the health care system to plan and design clinical evaluation programs; select and develop appropriate evaluation instruments and to increase skills in observation and feedback.
- CHC 239 Geriatric Nursing I** 4(4-0)  
Designed for nurses practicing in acute or long term geriatric nursing care settings. The course work focuses on physical assessment data relevant to the geriatric population. In addition; physical examination information is further utilized by applying it to the development of nursing care plans. Students receive much practice in utilizing the nursing process.
- CHC 241 Dental Assistant Expanded Duties** 3(2-2)  
Primarily for the certified dental assistant and on-the-job trained assistants who are interested in performing new duties. Includes lecture, demonstrations, and individualized laboratory sessions featuring: mouth mirror inspection; topical fluoride application; radiograph mounting; application and removal of rubber dam; placement and removal of intercoronal temporary fillings and crowns.
- CHC 242 Dental Emergency Procedures** 2(2-0)  
Possible office emergencies that are, or might be, life threatening. CPR segment will be eight hours in length to receive Basic Life Support Certification. Also includes cardiac, pulmonary, and medical emergencies; shock and bleeding control. Supervised practice lab sessions.
- CHC 243 Geriatric Dentistry** 0.5(6-0)  
Seminar designed to create awareness within the dental professional of the physiological, sociological and psychological aspects of aging. Discussion includes a basic understanding of oral and facial disorders in the elderly and appropriate treatment.
- CHC 244 Dental Hygiene Occlusion** 1(1-0)  
For the practicing dental hygienist. The anatomy and physiology of the masticatory system. Types of occlusal classification and examinations. Procedures for mounting and analyzing casts discussed.
- CHC 245 Dental Hygiene Soft Tissue Curettage and Root Planing** 1(1-0)  
For dental hygienists only. Explore basic periodontal concepts, and refine clinical root planing skills. Introduce and certify post-graduate dental hygienists in the expanded function of soft tissue curettage. Identify the indications and contraindications of these techniques. Proper instrumentation techniques. Perform demonstrated techniques on patients. Proof of professional liability coverage required.

- CHC 246 Dental Hygiene Myotherapy** 1(1-0)  
This course is open to dental hygienists only. Myofunctional therapy explored. Abnormal swallowing habits, diagnosis and treatment results explored in depth.
- CHC 250 Patient Dental Anxiety** 1(11-0)  
This seminar will aid dental personnel in identifying patients with dental fears and/or phobias by conducting a simple screening procedure, and will demonstrate techniques for teaching patients anxiety reduction. Techniques included are: progressive relaxation, desensitization, guided imagery, bio-feedback and thought control.
- CHC 251 Dental Prevention** 0.5(6-0)  
Seminar will discuss current information on preventive methods including diet and nutritional counseling, fluoride therapy, toothbrushing and flossing techniques, and the use of auxiliary aids, pit and fissure sealants, bacterial plaque, and oral disease etiology and control. The auxiliary will develop skills in planning and presenting a preventive program for individual patients, including the application of patient motivation skills.
- CHC 252 Dental Safety Seminar 0.5** (6-0)  
Seminar will create an awareness of basic factors involved in the conduct of safe dental practice, including individual safety of the dental team members and the dental patient. The topics covered are: nitrous oxide/mercury hygiene practices, radiation protection, clinical asepsis and patient histories/pharmacology.
- CHC 253 Dental Team Utilization** 1(11-0)  
A seminar including the following topics: quality with efficiency, financial planning, staffing and their roles, communications, scheduling, hygiene, and recall. The goal is to build your dental team into a skilled, motivated, professional operation with capabilities far beyond those it currently has.
- CHC 254 Dentogingival Junction** 0.5(6-0)  
Seminar designed especially for clinical dental hygienists and dental hygiene faculty. Dentogingival apparatus, the antecedents of breakdown, the processes of breakdown and loss of attachment, epithelium regeneration, clinical implications for the dental hygienist and implications for the patient are discussed.
- CHC 255 Herpes, Aids and Hepatitis** 0.5(6-0)  
Information on biological characteristics of the infecting agent, its mode of transmission, and its implication in human diseases will be presented. Topics include: what a virus is, specific virus characteristics, transmission modes, office sterilization, disinfection and prevention of cross contamination, hepatitis vaccines, and dental management of infectious patients. Also includes current findings on Acquired Immune Deficiency Syndrome—suspected cause, modes of transmission, incubation periods, signs and symptoms and other pertinent information; plus precautions needed to minimize the risk of transmission to the dental practitioner.
- CHC 257 Oral Cancer Symposium** 1(11-0)  
Designed to meet the needs of dental hygienists, assistants and dentists, to provide knowledge and expertise necessary for early oral cancer detection and team management of patients with oral cancer using a holistic approach. Content includes etiology, epidemiology, observation and detection, staging systems, treatment alternatives and modalities, prosthetic rehabilitation, continued dental health care post surgery, during and after treatment and for terminal management.
- CHC 258 RDA Utilization** 0.5(6-0)  
Seminar designed for the dentist and dental team members to create a thorough understanding of RDA utilization concepts and to create office settings that will utilize Registered Dental Assistants. Topics include: increased efficiency and productivity with RDA utilization, delegating duties to the RDA, State of Michigan Dental Practice Act regarding the RDA, rewards, benefits and appointment scheduling.
- CHC 259 RDA Update** 0.5(6-0)  
Seminar is designed especially for the Registered Dental Assistant who wishes to update themselves on new procedures that they can now legally perform in Michigan. Topics include: periodontal dressings, suture removal and pit and fissure sealants through lectures and laboratory sessions.
- CHC 260 Medical Communication Skills 0.5** (6-0)  
This course is designed for receptionists and medical office personnel with emphasis on telephone communication skills and interpersonal skills as they relate to the medical office setting.
- CHC 261 Respiratory Therapy Update** 2(2-0)  
Selected topics in respiratory care as been developed for the respiratory practitioner who is in the certification entry level process, offering information in respiratory therapy pharmacology, physiology of respiration, oxygen transport and basic acid base balances. Principles of ventilatory care monitoring and adjunctive modes of ventilation will also be covered. Experience in respiratory care is necessary to apply concepts presented.
- CHC 262 Pulmonary Rehabilitation Tech** 1(11-0)  
One day seminar designed to give the health professional a specific plan of action in developing a pulmonary rehabilitation program for the COPD patient, including discussion of nutrition, breathing retraining, bronchial hygiene and patient education.
- CHC 263 Pediatric Respiratory Care** 1(11-0)  
Course for all respiratory therapists and nurses that care for infants and children with respiratory problems, including discussion of anatomy of pediatric airway; working with hospitalized children; asthma—diagnosis, pathology, treatment; laryngeal-tracheal bronchitis—diagnosis, pathology, treatment; cystic fibrosis—diagnosis, pathology, treatment; care of the pediatric ventilator patient; sleep apnea in children—diagnosis, pathology, treatment, prognosis.
- CHC 264 Neonatal Respiratory Care** 2(2-0)  
Course geared to the respiratory therapist and registered nurse, presenting pathophysiology of congenital heart defects, RDA, IDM and other disease states of neonates. Management of the patient on a ventilator will be included.
- CHC 265 Geriatric Assessment** 1.5(17-0)  
Two day seminar is designed for nurses responsible for the physical and psychosocial assessment of geriatric clients and the management of related patient care problems. Includes interaction with several guest speakers who represent expertise in specific topical areas. It is strongly recommended that participants have had an introductory course in physical assessment.
- CHC 270 Computers for Health Care Professionals** 1.5(17-0)  
The focus of this two-day seminar is to orient the health care professional to computer systems related to health care delivery services. Seminar content includes computer history, computer languages, input and output devices, applications of computers in medicine and spreadsheets. Small group sessions and hands-on practice sessions will be provided.
- CHC 271 Computers for Health Care Professionals II** 0.5(7-0)  
The seminar will provide the health professional with knowledge of computer applications in medicine. Topics include: CAI, critical care monitoring, advanced radiology techniques and dental office applications.
- CHC 275 Management of the Handicapped Patient** 0.5(7-0)  
Prerequisite: Health Care Professional. Seminar for health professionals will provide: an increased awareness of the variety of handicaps and how these affect individuals; alternate methods of communicating with individuals who have speech/hearing handicaps; and information to enhance the sensitivity in the delivery of care to a patient with a handicap. Participants will be given an opportunity to deal with individuals with specific handicaps.
- CHC 280 TMJ Dysfunction** 1(1-0)  
Detection and management of the TMJ patient. Includes TMJ anatomy and physiology, symptoms of the TMJ syndrome, muscle patterns, oral and facial examination for patients with mandibular dysfunctions, traumatic occlusion and bruxism. Radiographs and patient demonstrations.
- CHC 283 Intraoral Photography** 1(1-0)  
Types of clinical camera systems; handling and care of camera systems and support equipment; composition of a series of intraoral photographs, with special shots and evaluation criteria. Exploration of future ideas discussed.
- CHC 284 Career Alternatives for the Dental Hygienist** 0.5(6-0)  
Explores the career options open to dental hygienists. Includes burn-out symptoms and relief, and career areas such as sales, marketing, overseas, administration, management, consultants, supply house personnel and public health.
- CHC 285 Nutrition Symposium for Dental Auxiliaries** 1.5(1.5-0)  
A new approach to nutrition, concentrating on specific area of the science of nutrition for in-depth information. Includes biochemistry and immunology reviews; trace elements relating to periodontal disease; vitamins and minerals (including fluoride as an essential nutrient); the influence of nutrition on fetal, teen, and expectant mothers' health; and nutritional considerations

and/or common treatments for special groups such as hyperactive children, diabetics, and low income persons.

**CHC 286 Dental Materials Manipulation for Dental Assistants 1(1-0)**

Physical properties and manipulation of dental materials used in the dental office by auxiliaries. Includes amalgam, impression materials, composites, gold, porcelains, cements, liners, varnishes, waxes and removable prosthodontic appliances.

**CHC 287 New Products and Instruments for the Dental Auxiliary 0.5(6-0)**

Introduces new dental products and instruments to dental hygienists, dental assistants and dentists.

**CHC 288 Dental Hygiene Refresher 2(2-0)**

Comprehensive refresher course for the dental hygienist who wishes to return to active practice. Emphasis on individual instruction.

**CHC 290 Nutrition Issues 2(2-0)**

Current nutrition issues of health concern to health professionals. Includes sugar, fats and their relation to cardiovascular diseases, vitamin and mineral supplements, weight control and fad diets. Also salt and hypertension, fiber, protein foods and vegetarian diets. Food additives, "health" foods, changing nutritional needs throughout life.

**CHC 291 Dental Insurance Billing Update 0.5(6-0)**

How to set up the insurance aspect of the dental office. Major emphasis on how to proceed effectively and efficiently with the processing of dental claims.

**CHC 292 Advanced Procedures for the Dental Hygienist I 1(1-0)**

For the licensed dental hygienist. Refresher in advanced procedures: isolation techniques for pit and fissure sealants; nitrous oxide delivery; polishing amalgams and removing overhangs; mixing, placing and removing of periodontal dressing; the control of hypersensitive teeth; and head and neck examinations. Practice procedures in a clinical setting, with individualized laboratory instruction and supervision.

**CHC 293 Disinfection/Sterilization 0.5(6-0)**

Infectious agents or groups of agents transmissible to the patient and personnel in the dental operator, routes, survival on surfaces at 25° and incubation periods. Viral hepatitis B discussed with conditions and effectiveness for physical methods of sterilization. Sterilization monitoring and verification. Asepsis procedures of dental instruments.

**CHC 294 The Dental Auxiliary in a Specialty Office 0.5(6-0)**

Acquaint the dental auxiliary with the seven dental specialties: periodontics, endodontics, oral maxillofacial surgery, pedodontics, prosthodontics, orthodontics, and general dentistry. Emphasis on defining the duties and responsibilities of the auxiliary in each area.

**CHC 295 Public Health Dentistry 1(1-0)**

Includes visits to various community and public health settings to give experience in working with special population groups. Supplemented by lectures to provide a working knowledge of the interrelationships between the clinical and community aspects of dental health.

**CHC 296 Dental Instrument Sharpening 1(1-0)**

Update dental auxiliaries on the advantages and characteristics of sharp cutting edges on dental instruments and to increase their skill in sharpening instruments. Includes hand cutting instruments, scalers, curets (their working end characteristics and use); methods for sharpening; recognizing and testing for dull instruments; types of sharpening stones and their care.

**CHC 297 Dental Clinical Oral Pathology 1(1-0)**

A basic update of clinical oral pathology for the dental practitioner (DPS, RDH, RDA, CDA). A clinical pathologic conference in which clinical cases will be presented with the aid of kodachromes. Includes case histories, signs, symptoms, laboratory values and radiographic surveys allowing the practitioner to formulate a different diagnosis. The treatment modalities requisite for the amelioration of the disease entity plus possible referral to other health care specialists will be addressed.

**CHC 298 Dental Stress Management 1(11-0)**

Seminar will provide dental hygienists an understanding of what stress is, where it comes from and what it can do to us physically, emotionally, intellectually, socially and spiritually. It will help assess personal sources of stress on the job and current responses to stressful situations. A variety of stress management techniques and guidelines for improving stress management in the dental office will be offered using a holistic living approach.

**CHC 299 ACLS Instructors Course 3(33-0)**

Prerequisite: Current BCLS and ACLS Certification. A course to educate and train Advance Cardiac Life Support instructors. Topics include: introduction to advanced life support, adjuncts for airway breathing, monitoring, defibrillation and cardioversion, intravenous techniques, essential drugs, useful drugs, acid base balance, sudden cardiac death, myocardial infarction and medical legal aspects. Performance stations are included.

Courses Offered for the Dental Assistant (DA), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**DA 110 Dental Assistant Seminar 2(1.5-5)**

Prerequisite: Admission to program. Lectures, worksheet activities and self-instruction are utilized to prepare the student in dental/medical terminology. Information and concepts will be discussed regarding the Dental Team, Michigan Dental Law professional organization, dental specialty practices and dental history.

**DA 120 Introduction to Clinical Dental Assisting 5(3-4)**

Prerequisite: DHA 110, 111, 112. Through lecture and simulated clinical experience the student will be introduced to dental procedures; four-handed chairside assisting, preparation of chairside dental materials, charting, management of clinical records and taking and recording vital signs.

**DA 121 Oral Anatomy II 3(2-2)**

Prerequisite: DHA 111. A basic anatomical study of the head and neck regions including the skeletal, muscular, circulatory, lymphatic and nervous systems. Lectures, small group laboratory and AVT sessions are utilized.

**DA 122 Oral Histology, Embryology and Pathology 2(2-0)**

Prerequisite: DHA 111. This course first presents a study of the microscopic anatomy of human tissue with emphasis on the embryologic development of the face and the hard and soft tissues of the oral cavity. This is followed by a study of diseases affecting the oral region including diseases of teeth and supporting structures, developmental disturbances, oral infection, injuries, and neoplasms.

**DA 130 Clinical Dental Assisting I 6(1-9)**

Prerequisite: DA 120. Practice four-handed chairside dental assisting procedures with emphasis on general restorative procedures (i.e., amalgams, composites). Seminar sessions are planned to correlate clinic practice and procedure information with private practice and field participation.

**DA 131 Ethics and Jurisprudence 2(2-0)**

Prerequisite: DA 110, 120. A discussion of interviewing techniques, employment opportunities, insurance protection, continuing education, law and professional ethics as it relates to dental assisting and dentistry.

**DHA 110 Oral Health Practices 4(2-4)**

Prerequisite: Admission to program. Introduction to dental operator, aseptic techniques, caries and periodontal disease processes and oral hygiene procedures to prevent diseases. Small group laboratory instruction allows the student to learn through investigation, involvement, and application. Each student will become successful in maintaining their own good oral health.

**DHA 111 Oral Anatomy I 4(2-4)**

Prerequisite: Admission to program. Study of dental nomenclature, anatomic form, gross structure and function of human primary and permanent teeth, through lecture, laboratory and AVT sessions. Small group laboratory practice includes identification of natural extracted teeth and the reproduction of tooth forms to emphasize morphology and functional relationships.

**DHA 112 Dental Instruments & Equipment 3(2-2)**

Prerequisite: Admission to program. Through lecture and practical experience the student will be introduced to dental procedures, use and maintenance of dental instruments and equipment, and chairside assisting procedures. Practical learning activities are supervised by instructors in small group settings.

**DHA 131 Dental Radiography 5(3-4)**

Prerequisite: DHA 111 and DA/DH 121. Lectures discuss production and emission of dental x-radiation, indications for exposure, techniques of exposure, processing, evaluation and interpretation of dental radiographs. Individualized laboratory sessions provide students practice in exposing, processing, mounting and evaluating radiographs.



- DA 210 Clinical Dental Assisting II** 7(1.5-11)  
Prerequisite: Admission to DA II. A continuation of DA 130 offering evaluation and practice in dental radiography and four-handed chairside dental assisting, emphasizing general restorative procedures. Seminar sessions are planned to correlate clinic practice and procedure information with private practice and field experience participation.
- DA 211 Dental Materials** 4(2-4)  
Prerequisite: Admission to DA II. Lecture and laboratory sessions will address the selection, manipulation and evaluation of materials used in dentistry. Laboratory activities emphasize materials prepared by the dental assistant.
- DA 212 Dental Office Management** 3(2-2)  
Prerequisite: Admission to program. Lectures and worksheet activities are utilized to prepare the student in office procedures relating to appointment management, recall systems, correspondence, telephone technics, record keeping, pre-paid dental care plans and dental payment plans and inventory control.
- DA 220 Clinical Dental Assisting III** 7(2-10)  
Prerequisite: DA 210 and DA 211. Continuation of chairside dental assisting techniques with emphasis on the duties and responsibilities of the dental assistant in dental specialty functions.
- DA 221 Registered Dental Assistant Procedures** 4(2-4)  
Prerequisite: DA 210 and DA 211. Lecture sessions teach intro-oral functions delegated only to the licensed Registered Dental Assistant in the State of Michigan. Laboratory time is emphasized and field experience assignments arranged to provide clinical application of those techniques that are supportive to the dentist.
- DHA 121 Pharmacology** 2(2-0)  
Prerequisite: Admission to DA II/DH program. A study of the administration, use, action, and effect of commonly used drugs on the human body. Emphasis on practical evaluation of drugs being taken by dental patients and their effect on dental treatment.
- DA 230 Clinical Dental Assisting IV** 11(1-20)  
Prerequisite: DA 220 and DA 221. Continuation of DA 220 offering additional practice in four-handed chairside dental assisting procedures with emphasis on RDA functions. Seminar sessions discuss field experience procedures and student's progress.
- DHA 132 Nutrition and Oral Health** 2(2-0)  
Prerequisite: DHA 110. Series of lectures discuss the identification, function, metabolism and sources of specific nutrients required for normal growth and development. Application of principles to the individual's needs and to the concerns of the dental auxiliary providing nutritional and diet information to patients emphasized.
- Courses Offered for the Dental Business Assistant (DBA), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- DBA 001 Dental Anatomy** 3(2-2)  
Prerequisite: Admission to program. Introduction to the soft and hard tissues of the oral cavity, dental specialties, and oral health practices. Laboratory sessions assist the student in identifying dental anatomy structures and learning procedures effective in promoting good oral hygiene.
- DBA 002 General Dental Procedures** 3(1.5-3)  
Prerequisite: DBA 001. A basic identification of instruments, sterilization and disinfection procedures, processing and mounting dental radiographs, and description of dental team members are subjects studied and practiced in laboratory sessions.
- DBA 003 Dental Office Methods** 4(2-6)  
Prerequisite: DBA 001 and typing. An introduction to dental office management as it relates to appointment control, recall systems, collections, telephone techniques, record keeping, inventory, and third party payment plans (insurance). Class time is provided to allow participation in simulated exercises for these procedures. Each student will complete 40 hours of on-site experience in a dental office.
- Courses Offered in Dental Hygiene (DH), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- DH 110 Dental Hygiene Seminar** 2(2-0)  
Prerequisite: Admission to program. Lectures, worksheets, and self-instruction are utilized to prepare the student in dental/medical terminology. The student also receives an overview of dental history, basic dental law, the dental health team, professional organizations, professionalism and a code of ethics.
- DH 111 Oral Histology and Embryology** 2(2-0)  
Prerequisite: Admission to program. This course presents a study of the embryology and microscopic anatomy of human tissues with emphasis on formation of the face, oral cavity, and dental structures.
- DH 120 Introduction to Clinical Dental Hygiene** 7(3-8)  
Prerequisite: DHA 110, 111, 112. Introduction to selection and application of prophylaxis instruments, taking medical and dental histories, and performing oral examinations. Small group clinic instruction includes implementation of procedures on student partners.
- DH 121 Oral Anatomy II** 3(2-2)  
Prerequisite: DHA 111. Descriptive anatomical study of the head and neck regions including skeletal, muscular, circulatory, lymphatic and nervous systems through lectures, small group laboratory and AVT session. Anatomical structures related to clinical dental hygiene procedures emphasized.
- DH 122 General Oral Pathology** 3(3-0)  
Prerequisite: DHA 110, 111, DH 111. Diseases affecting the oral region including the principles of inflammation and repair, developmental disturbances, stains and accretions, diseases of the teeth and supporting structures, oral infections, oral injuries and neoplasms.
- DH 123 Dental Emergency Procedures** 3(2-2)  
Prerequisite: DHA 111, 112. Study of dental office emergencies with emphasis on prevention, prompt recognition and effective emergency care. Laboratory instruction will provide experience in monitoring vital signs, recognizing and handling emergency situations and cardio-pulmonary resuscitation treatment.
- DH 130 Clinical Dental Hygiene I** 7(1-12)  
Prerequisite: DH 120, 122. Initial clinical course offering individual instruction and clinical practice in all phases of providing basic dental hygiene services (recognition and recording of oral conditions, medical history, patient education, prophylaxis, fluoride treatment, sterilization, and desk procedures.) Seminar session introduce the clinic evaluation system, office management procedures, and intensifies oral exam observation and recording procedures.
- DH 131 Dental Hygiene Procedures** 3(2-2)  
Prerequisite: DH 120. A continuation of didactic information and skills that will enhance performance of procedures in a clinical setting. Emphasis on treatment planning, patient home care, periodontal examination, caries detection, instrument sharpening, and clinical photography. Small group lab instruction provides application of didactic information in a clinical setting.
- DH 210 Clinical Dental Hygiene II** 7(1-12)  
Prerequisite: DH 130. Continuation of DH 130 offering additional practice in dental hygiene clinical skills. Coordinates the periodontal patient case study and reviews preventive dental hygiene procedures and treatment planning of more complex dental needs of the patient (deep scaling, root planing, periodontal charting, nutritional counseling, intraoral photography, and use of ultrasonic scalers.)
- DH 211 Advanced Dental Hygiene Procedures** 4(2.5-3)  
Prerequisite: DHA 122, DH 130. Study advanced clinical dental hygiene procedures with emphasis on root planing, nutritional counseling, soft tissue curettage, and ultrasonic instrumentation. Small group lab experience includes practice of these procedures on patients and/or typodonts.
- DH 212 Periodontics** 3(3-0)  
Prerequisite: DHA 111, DH 111. Study of anatomy, physiology and histology of the periodontal tissues 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.
- DH 213 Dental Health Education** 2(2-0)  
Prerequisite: DHA 110, DH 130. Studies will include human behavior, interpersonal relations, and communication skills relating to patient education, factors affecting patient motivation and acceptance of health care, introduction to teaching methodology for groups, and utilization of audiovisual aids for delivering oral health care.

- DH 214 Clinical Oral Pathology** 2(2-0)  
Prerequisite: DH 130, DHA 131. Case histories are presented in which the student's objective is to formulate a differential diagnosis of an unknown oral lesion and propose a rational approach for evaluation and treatment of the patient. Lecture will include oral surgery practices and procedures.
- DH 220 Clinical Dental Hygiene III** 7(1-12)  
Prerequisite: DH 210, 211. Practice of clinical dental hygiene procedures continued with emphasis on advanced procedures and skills. A case study presentation utilizes differential diagnosis techniques. Seminar sessions update clinical emergency procedures and support inclusion of myofunctional therapy, study models, pit and fissure sealant application with patient needs assessments.
- DH 221 Dental Materials and Methods 4(2.5-3)** Prerequisite: DH 210, 211.  
Lecture and laboratory sessions will address the terminology, selection, manipulation and evaluation of materials used in dentistry. Laboratory activities emphasize procedures performed and materials used by the hygienist.
- DA 222 Registered Dental Assistant Procedures** 2(.75-2.5)  
Prerequisite: DH 210, 211, 212. A special designed course for dental hygiene students wishing to learn ancillary dental hygiene procedures and those intra-oral functions delegated only to the licensed Registered Dental Assistant in the State of Michigan. Laboratory time is emphasized and field experience assignments arranged to provide clinical application of those techniques that are supportive to the dentist.
- DH 223 Public Health Dentistry** 2(2-0)  
Prerequisite: DH 213. Through lecture and course activities the student will review scientific literature, dental epidemiology, principles of public health and health care delivery systems. Community and private systems are compared for providing dental health care.
- DH 229 Testing Styles & Inventory** 2(2-0)  
Prerequisite: Admission to DH program. Through lecture sessions, the student will be introduced to testing techniques, test construction and item analysis. Students inventory their knowledge of dental hygiene and thorough self evaluation and planning, establish study skills while recognizing their personal study needs.
- DH 230 Clinical Dental Hygiene IV** 7(1-12)  
Prerequisite: DH 220. Clinical sessions combine basic and advanced dental hygiene procedures with time utilization for private practice. Seminar session are planned to correlate clinic experiences with private practice. Professional and individual roles and responsibilities for total health care within the usual dental practice setting are discussed.
- DH 231 Dental Specialties** 4(3-4)  
Prerequisite: DH 220, DHA 112. Lectures and individualized instruction include 1) dental specialists, reviewing their procedures and practices and 2) information for providing oral hygiene care for special needs patients. Students observe specialty procedures in dental specialty offices.
- DH 232 Ethics and Jurisprudence** 2(2-0)  
Prerequisite: DH 220. A discussion of interviewing techniques, employment opportunities, insurance protection, continuing education, law and professional ethics as it relates to dental hygiene and dentistry.
- DH 233 Community Practice** 2(1-2)  
Prerequisite: DH 213, 220, 223. Students implement a dental health education program utilizing assessment, planning, implementation and evaluation processes. Each student will observe and prepare an investigative report on a community health agency/practice.
- Courses Offered in Emergency Medical Services Technology (EMT), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- EMT 103 Extrication** 2(1-2)  
Designed to provide skills in light and heavy extrication. Includes backboards, power tools and extrication in emergency situations.
- EMT 104 Emergency Communications and Telemetry** 3(3-0)  
Introduction to types, methods, and use of emergency communication. Telemetry systems defined and use discussed.
- EMT 105 Ambulance Driving** 3(2-2)  
Designed to teach EMT safety, precision, and confidence. Upon completion, EMT's are expected to apply calculated, calm, proficient and specialized maneuvers to the techniques of good driving. Laboratory sessions in driving an emergency vehicle.
- EMT 108 Emergency Pharmacology** 3(3-0)  
Medications frequently encountered in emergency situations; "street" drugs; medications used in emergency situations, and sterile techniques essential to assisting a paramedic, nurse or physician in administering emergency medication.
- EMT 111 CPR Seminar** 1(4-.6)  
Instruction in the basic life-saving technique of cardio-pulmonary resuscitation (CPR). Laboratory practice using both infant and adult manikins.  
American Heart Association Certificate upon successful completion. Required for all EMT program students but open to any person who wishes to learn CPR.
- EMT 112 Basic EMT I** 6(4-4)
- EMT 113 Basic EMT II** 6(4-4)  
Sequence of two courses to prepare for practice as a Basic Emergency Medical Technician. Skills and knowledge required to provide specialized care at the scene of an emergency: recognition of emergency situation, administer effective care, use equipment properly and use proper communication with emergency departments. EMT 112 and 113 are an MDPH approved Basic EMT course. Upon successful completion the student is eligible to take the State examination for licensure.
- EMT 114 EMT Refresher** 3(3-0)  
Designed to provide the EMT an opportunity to meet licensure requirements. Required content includes CPR, airway management, oxygen administration, patient assessment, diagnostic signs, backboarding, spinal injuries, management of shock and MAST trousers, medical emergencies, trauma, environmental emergencies, emergency childbirth and pediatric emergencies. Successful completion of the course requires passing written and practical exams.
- EMT 116 EMT Physical Assessment** 3(2-2)  
This course is designed for the EMT. A knowledge of anatomy and physiology is necessary to understand concepts that will be presented in physical assessment. Emphasis on history taking, patient interviews, and interpretation of patient vital signs. Collect data, interpret findings and make application to patient's condition. Physical examination, skills of inspection, percussion, auscultation and palpation will be utilized. Guidance will be given and problem solving techniques to establish priorities in assessment and history taking.
- EMT 117 Psychiatric Emergencies** 2(2-0)  
Designed to improve psychological approach to emergency and crisis situations. Includes both psychological and communications theory. Practical application of communications techniques stressed.
- EMT 120 EMT Simulations** 2(0-4)  
Course designed to provide practical application of basic EMT knowledge and skills. Students will be presented with realistic situations and will receive guidance from faculty in responding to the emergency appropriately.
- EMT 122 Basic Emergency Care I** 6(4-4)  
Prerequisite: Admission to program. First of a 3 sequence course which is part of the three term Emergency Medical Technician (EMT) program. Includes the skills necessary to provide on the spot emergency care to accident victims and victims of sudden medical emergencies. Through a combination of lectures, practical lab sessions and clinical rotations the student will utilize information presented.
- EMT 123 Basic Emergency Care II** 6(4-4)  
Prerequisite: EMT 122. Continuation of the skills learned in EMT 122, and skills dealing with medical, environmental, pediatric emergencies, and emergency childbirth consisting of lectures, practical lab sessions, class simulations and clinical rotations.
- EMT 124 Basic Emergency Care III** 5(1-8)  
Prerequisite: EMT 123. Emphasis will be placed on geriatric patients, water related emergencies, triage, treatment of rape and child abuse victims and treatment of patients under the influence of various illegal drugs and alcohol utilizing skills previously learned. Majority of time will be spent in various clinical locations involving direct patient contact.
- Upon successful completion of this 3 term sequence the student will be certified as having successfully completed the EMT program and will be eligible

to take the Michigan state licensing examination for Basic Emergency Medical Technician.

**EMT 125 EMT Field Practicum 4(0-8)**

Currently available only to successful candidates of the Basic EMT program, having completed EMT 122, 123, and 124. Offers the licensed EMT an opportunity to obtain actual field experience by completing a minimum of 8 hour/week "internship" at an agency which provides prehospital emergency care. The agency and faculty advisor will determine the final grade depending upon performance.

**EMT 126 Emergency Medical Legal 3(3-0)**

To assist the prehospital emergency care provider in making decisions based on an understanding of legal principles by familiarizing the student with legal systems, and principles pertinent to prehospital emergency care. Lawyers, judges, physicians and law enforcement officers will present course material through lectures, discussions and role playing.

**EMT 150 EMS Systems I 2(2-0)**

Prerequisite: Admission to program or current EMT. First of a 2 sequence series designed to provide the EMT with skills and knowledge in EMS systems operations and report writing/documentation. The EMT role is reviewed in relation with other health care providers on a local, state and national basis.

**EMT 151 EMS Systems II 2(2-0)**

Prerequisite: EMT 150. Continuation of EMT 150 focusing on more intense history taking, terminology, and documentation, with practice documentation on working report forms. Topics also include; job interviewing skills, employment opportunities, stress management and other systems operations.

**EMT 201 EMT Specialist I 4(4-0)**

Prerequisite: Admission to program. First in a 2 sequence series which prepares the Basic EMT to the level of EMT Specialist for functioning within a limited Advance Life Support System. Students will be prepared in IV therapy and airway management to include esophageal airway and endotracheal intubation. Lectures and skill preparation must be completed before clinical.

**EMT 202 EMT Specialist II 4(2-4)**

Prerequisite: EMT 201. Second in the series which prepares the Basic EMT to the level of the EMT Specialist for functioning within a limited Advance Life Support System. Students will receive clinical experience in IV therapy and airway management to include esophageal airway and endotracheal intubation.

**EMT 203 EMT Specialist-Field Experience 2(0-4)**

Elective course offering for the EMT Specialist to gain additional experience in a field assignment with paramedics.

**EMT 222 EMT Skills A 2(1-2)**

**EMT 223 EMT Skills B 2(1-2)**

A series of two courses designed for students who are licensed Basic EMT's or have completed EMT 112-113 prior to admission to the Basic EMT Program. The courses will provide open lab and skills instruction to assure maintaining adequate skills and knowledge level for entering the 3rd term clinical course.

Courses Offered in Advanced Emergency Medical Technology (ESA), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**ESA 201 Advanced EMT/Paramedic I 14(7-15)**

Prerequisite: Admission to program. The first course in a sequence of 3 courses which prepares the Basic EMT to function as an Advanced EMT. The first half of this course has a high concentration of lecture with minimal hospital-nursing home clinical and campus labs. The hospital clinical in critical care areas increases during the last half of the term. Under direct supervision by faculty, students begin observing and caring for patients with various conditions. Clinical includes time in the nursing home, emergency departments, intensive care units, coronary care units, recovery room and field experience with paramedic units.

**ESA 202 Advanced EMT/Paramedic II 14(7-15)**

Prerequisite: ESA 201. The second course in the sequence of 3 courses which prepares the Basic EMT to function as an Advanced EMT. Additional Advanced EMT knowledge and skills are presented in lectures and labs. Students are expected to continue to use the knowledge presented in Basic EMT and in the first term of Advanced EMT as they prepare to provide a highly specialized level of care at the scene of an emergency. Students must successfully pass precise evaluations of skills, knowledge, judgement and lead-

ership during this course in the program. Additional clinical experiences will include surgery, pediatrics, nursery, labor and delivery.

**ESA 203 Advanced EMT/Paramedic III 14(7-15)**

Prerequisite: ESA 202. The third course in the sequence of 3 courses which prepares the student as an Advanced EMT. A continuation of all knowledge is expected with the addition of more advanced knowledge and skills occurring in lecture and labs. Successful completion of all procedures is required. Students learn to act quickly and use good judgement in simulated situations. They are also required to act in a leadership role. By course completion the student must be able to provide a highly specialized level of care in emergency situations. Clinical experiences are a continuation of second term with an expectation of a higher level of achievement.

The 3 term program is approved by MDPH as an Advanced EMT program. Upon successful completion the student is eligible to take the state exam for licensure as an Advanced EMT.

**ESA 209 Paramedic Concepts 4(3-2)**

A course which provides the Paramedic with the required and elective continuing education points needed for relicensure.

**ESA 211 Paramedic A 8(7-3)**

**ESA 212 Paramedic B 8(7-3)**

**ESA 213 Paramedic C 8(7-3)**

**ESA 214 Paramedic D 6(0-12)**

**ESA 215 Paramedic E 6(0-12)**

**ESA 216 Paramedic F 6(0-12)**

The foregoing courses constitute a series of six courses designed for an EMT to complete the Advanced EMT (Paramedic) Program on a part time basis.

Courses Offered in Emergency Medical Services (EMS), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**EMS 101 EMS Continuing Education 1 0.5(6-0)**

**EMS 102 EMS Continuing Education 2 0.5(6-0)**

**EMS 103 EMS Continuing Education 3 0.5(6-0)**

**EMS 104 EMS Continuing Education 4 0.5(6-0)**

**EMS 105 EMS Continuing Education 5 0.5(6-0)**

**EMS 106 EMS Continuing Education 6 0.5(6-0)**

A series of continuing education seminars for the Basic EMT, Advanced EMT (Paramedic), or EMT Specialist, designed to meet relicensure requirements. Students may elect to take as many as needed to fulfill continuing education requirements.

**EMS 107 Specialist Required Skills Certification Seminar 1(1-0)**

Seminar for EMT Specialists which provides evaluation of patient assessment, endotracheal and esophageal intubation and intravenous therapy. The seminar will provide refresher and practice of the required skills in an open lab with faculty supervision prior to practical testing. A certificate, signed by the instructor coordinator, listing skills and score will be provided. MDPH continuing education points have been issued for this seminar.

**EMS 108 Paramedic Required Skills Certification Seminar 1(1-0)**

Seminar for Paramedics which provides evaluation of patient assessment, endotracheal and esophageal intubation, intravenous therapy and identification and treatment of cardiac rhythms. The seminar will provide refresher and practice of the required skills in an open lab with faculty supervision prior to practical testing. A certificate, signed by the instructor coordinator, listing skills and score will be provided. MDPH continuing education points have been issued for this seminar.

Courses Offered in Emergency Care (ER), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**ER 100 Red Cross First Aid 3(3-0)**

Designed to provide skills to treat emergency situations until professional help arrives.

A Red Cross Certificate issued upon successful completion.

<b>ER 111 CPR Instructing</b>	<b>2(2-0)</b>	<b>HC 201 Dietary Supervisor I</b>	<b>6(3-6)</b>
Instruction in methods of teaching CPR. An instructor-trainer from the American Heart Association teaches the course. Students should have current BCLS certification.		Entry level skills for a dietary supervisor, particularly in nursing home; or to provide credentials. Includes clinical component. Prepares an individual to take complete charge of the food service in a nursing home or related institution, under the supervision of a dietetic consultant. Will include general principles, food storage, hygiene, nutrition and balanced diet.	
<b>ER 222 EMT-IC Seminar</b>	<b>4(4-0)</b>	<b>HC 202 Dietary Supervisor II</b>	<b>6(3-6)</b>
Designed for persons interested in becoming an EMT Instructor Coordinator, and meets the requirements established by Michigan Department of Public Health for an EMT-IC course. Includes teaching and testing methods, lesson plan development, writing performance objectives, administration of a class, application for MDPH course approval and meeting the State requirements. Participants will be required to student teach at least one lesson in an EMT class.		Includes meal planning, therapeutic diets, cooking principles, cooking for large numbers, budgeting, cost accounting and purchasing. To complete a certificate from the American Dietetics Association, complete HC 201, HC 202 and HC 203.	
Courses Offered in Health Careers (HC), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.			
<b>HC 111 Medical Insurance Billing</b>	<b>3(3-0)</b>	<b>HC 203 Dietary Supervisor III</b>	<b>6(3-6)</b>
Prerequisite: HC 113, or 6 months experience with Insurance Billing Prepare to perform medical insurance billing procedures from receiving the patient information until the payment is received. Includes how to obtain the patient information, procedure coding, H-CDA coding plus federal, commercial and independent billing forms and procedures.		The third course designed to prepare to become a Food Service Supervisor in a hospital or nursing home. Focuses on food evaluation and management principles.	
<b>HC 113 Medical Terminology Allied Health</b>	<b>3(3-0)</b>	<b>HC 205 Central Supply Technician</b>	<b>6(4-4)</b>
Introduces medical terminology and the formulation of terms. Covers pronunciation guide, word elements and variations, medical word elements, body parts and function anatomically and physically, diseases, diagnoses and surgical procedures.		Prepares for employment in area hospital Central Supply Departments. Duties: processing of hospital equipment, supplies and instruments for use in all hospital departments. Includes principles and practices of decontamination, cleaning, sterilization and dispensing of supplies.	
<b>HC 123 Phlebotomy Technician</b>	<b>4(4-1)</b>	<b>HC 213 Introduction to Family Care Givers Series</b>	<b>0.5(6-0)</b>
Designed to prepare a person to function as a laboratory phlebotomist technician. Knowledge and skills necessary to obtain a blood specimen from a patient demonstrating venipuncture or micro-technique. A clinical experience is included.		Seminar designed to allow participants to systematically look at themselves as a care giver. Topic areas include: feelings, values clarification, attitudes toward aging, decision making and community resources.	
<b>HC 126 Nurse Health Aide 12</b>	<b>(7-10)</b>	<b>HC 214 Family Care Givers Personal Care</b>	<b>1(11-0)</b>
Qualify to work in homes, acute care hospital, clinics, health care agency or long term care facility as a Home Health Aide or Nurse Aide. Includes supervised clinical experience. Attain a 2.5 grade or better to receive certificates as Nurse Aide and Home Health Aide.		Seminar designed to provide the student knowledge and an opportunity to gain experience in personal care skills; topics include: observation skills, transfer techniques, safety and nutrition.	
<b>HC 127 Advanced Diet Therapy</b>	<b>3(3-0)</b>	<b>HC 218 Family Care Givers Management of Diabetes</b>	<b>0.5(6-0)</b>
In-depth study of therapeutic diets and their relationship to various disease states. Includes modules on: analyzing medical charts for nutrition related information, effective charting, nutrition history and assessment, participation in patient care planning and effective diet instructions.		Seminar designed to assist care givers concerned with the causes, symptoms and treatment of diabetes. Topics will include: definition and symptoms of diabetes, diabetic diet, insulin and oral medications, exercise and activity, emotional stress and community resources.	
<b>HC 128 Advanced Medical Terminology Allied Health</b>	<b>3(3-0)</b>	<b>HC 225 Medical Assistant I</b>	<b>3(3-0)</b>
Prerequisite: 3.0 grade or better in HC 113. Medical terms in context by applying terms to the functioning and structure of body systems. Further knowledge in specific vocational areas through intense study of body systems. Build on medical terms in HC 113.		First term of a program designed to teach the student the clerical portion of the medical office, from maintaining a clean office to the completed visit of each patient. Through lectures, discussions and work sessions the student will prepare for a position in a physician's office and after successful completion will be able to advance to Medical Assisting II, thus becoming more prepared to sit for the Certification Examination at the completion of the program.	
<b>HC 129 Home Health Aide for the Developmentally Disabled</b>	<b>6(5-2)</b>	<b>HC 226 Medical Assistant II</b>	<b>6(4-4)</b>
The program will prepare Respite Care Workers to care for clients who have medical care needs, in their homes. In addition to lectures the student will have supervised clinical experiences on-campus and in selected off-campus sites. Students must be a certified Home Health Aide and have a current BCLS card. A CPR seminar may be taken concurrently. A certificate will be awarded for a grade of 2.5 or better.		Course designed to cover the first sequence of the clinical duties of the Medical Assistant. Student will gain knowledge of prepping patients, vital signs, sterilization, disinfecting, lab procedures and normal values, and other duties while working in the medical office. Students successfully completing this class are eligible to take HC 227, Medical Assistant III.	
<b>HC 132 Ward Secretary I</b>	<b>6(6-0)</b>	<b>HC 227 Medical Assisant III</b>	<b>12(7-11)</b>
Prerequisite: 3.0 grade in HC 113 (Medical Terminology). Introduce basic ward secretary skills. Include communication skills, chart forms, computers and death and dying. Clinical component included.		The third course in a series will cover EKG's, X-rays, castings, pulmonary functions tests, and patient care principles for use in the physician's office. This course combines both lecture and clinical lab. Upon successful completion, the student will progress to the course practicum.	
<b>HC 133 Ward Secretary II</b>	<b>6(6-0)</b>	<b>HC 228 Medical Assistant Practicum</b>	<b>8(0-40)</b>
Prerequisite: HC 132. Advanced ward secretary skills. Includes pharmacology, laboratory tests, transcribing physicians' orders, and job application skills. Clinical component will be included.		The final four week course in this curriculum will consist of 160 hours of hands on clinical experience in a physician's office. Upon successful completion of the full curriculum, the student will receive a Certificate of Achievement.	
<b>HC 134 Cost Effective Nutritional Management</b>	<b>3(3-0)</b>	<b>HC 231 Pharmacology of Substance Abuse</b>	<b>3(3-0)</b>
Course for dietary assistants will stress the providing of nutritional care in extended care facilities in a cost effective manner. Topics covered are: time management, nutritional assessment, menu planning and clinical audit.		Chemical and physiological nature of the substances (alcohol-hard drugs-amphetamines) which have addictive possibilities. A course in a Certificate program on Substance Abuse. Emphasis on pharmacology of substance abuse, detection, identification of physiological responses specific to various substances. Designed for the Allied Health Professional.	
		<b>HC 232 OD Crisis Intervention</b>	<b>2(2-0)</b>
		Designed for the health worker. Focus on psychological and physiological aspects of overdose, assessment of the program, and ways to deal with on-the-spot problems. Emergency intervention measures included.	

**HC 235 Pharmacy Technician I 4(4-0)**

First of a two course series designed to introduce the student to the skills necessary for the position of a pharmacy technician in a hospital or retail pharmacy. Topics include: pharmacy abbreviations, dosages, pharmacy distribution systems and the top 200 drugs. Students must complete the course with 2.5 grade or better to continue to HC 236.

**HC 236 Pharmacy Technician II 4(4-0)**

Prerequisite: HC 235. Second course is designed to prepare the student to function with knowledge and accuracy in the dispensing and control of drugs in either hospital or retail pharmacy. Topics include: familiarization with physiological effect of drugs, inventory control, and computer operations. A certificate will be awarded after successful completion with a 2.5 grade or better.

Courses Offered in Allied Health Careers (AHC), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**AHC 102 Nutrition 2(2-0)**

Principles of nutrition including identification of the major nutrients, metabolism, body requirements during various life stages, effects of variations of intake, and food sources of the nutrients. Some diseases for which diet plays an important role in treatment discussed.

**AHC 104 Patient Care Principles 5(3-4)**

Prerequisite: Admission to Surgical Technology, Radiologic Technology or Respiratory Therapy Technology Programs. Principles of patient care are given with emphasis on Allied Health Personnel role in the health team. Includes basic patient practices with aid to emotional support.

**AHC 106 Introduction to Pathology 3(3-0)**

Concepts of disease processes and effect on normal structure and function of the body. General principles of pathology, rather than specific disease entities, to develop a new way of thinking about disease processes.

**AHC 108 Body Systems 5(5-0)**

Introductory or review course for students in allied health careers. It provides a concise survey of the human body and emphasizes the practical application of physiological concepts. It does not meet the requirements for a full anatomy or physiology course.

**AHC 110 Surgical Asepsis 2(2-0)**

For Surgical Technology Program. Basic course on hospital infections including definitions, pathogenic organisms and bacteria, fungi, viruses, protozoa, helminths and transmission of infectious agents. Covers sterilization and disinfection of equipment and supplies in the operating room.

**AHC 205 Human Sexuality Throughout the Lifecycle 1(1-0)**

Designed to explore the basic concepts of sexuality including the major theoretical perspectives, the physical, psychosocial and cultural aspects, with special emphasis on the changes occurring at various periods of life. Common issues, experiences and conflicts related to sexuality will be incorporated into lecture and discussion periods.

**AHC 210 Computers in Nursing 3(3-0)**

Prerequisite: Allied health personnel. Historical development and present use of computers in the delivery of health care are presented. Also includes basic computer information with examples of applications in health care and nursing. Role of the nurse in computer use and application development will be presented.

**AHC 212 Emergency Care 3(3-0)**

Designed to prepare the student to meet emergency situations encountered as an employee and a citizen. Focus is on the knowledge needed to determine what emergency situation exists and the skills and knowledge needed to take immediate action. Content includes: cardiopulmonary resuscitation, medical emergencies, injuries, shock, hemorrhage, overdoses and poisonings, and psychological emergencies.

**AHC 300 Introduction to Nursing Management 4(4-0)**

First in a three course series which provides an overview of management principles oriented to health care professionals. The role of the manager/supervisor is examined and essential skills for effective management is identified. Emphasis of the course is on development of management behavior and practices, practical basic skills which the nurse manager uses daily.

**AHC 301 Management in the Health Care Setting 4(4-0)**

Provides an introduction to financial management and to selected contemporary nursing management strategies. The health care setting will be considered as a cost control center and used as the basis of study and emphasis

will be on the continued development of basic skills for cost effective resource management.

**AHC 302 Nursing Management Seminar 4(3-2)**

Prerequisites: AHC 300, 301. The course will be divided into two segments. During one segment, the student will study computers as management tools with focus on ways computers provide nurse managers with information for decision making. Management information systems, office automation systems and current issues will be discussed. During the second segment the student will participate in an individually selected application project.

Courses Offered in Surgical Technology (ST), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**ST 101 Introduction to Surgical Technology 6(4-4)**

Prerequisite: Department approval. Introduction to role and function of Surgical Technologist as a member of the surgical team. Historical aspects of surgery, care and safety of the patient, medical terminology, and ethical-moral-legal responsibilities. Hospital laboratory sessions on basic skills to function in the operating room.

**ST 102 General Surgical Procedures 6(6-0)**

Prerequisite: ST 101, ST 103 concurrently. Procedures for bringing the patient to surgery, types and methods of anesthesia, positioning surgical incisions and tissue closures. Includes disease related symptoms, diagnostic procedures, preoperative and post operative care and complications.

**ST 103 Applied Operating Room Techniques I 8(0-8)**

Prerequisite: ST 101, ST 102 concurrently. Clinical session at an assigned area hospital—two full days a week. Participation in and assisting with selected surgical procedures.

**ST 104 Surgical Specialty Procedures 6(6-0)**

Prerequisite: ST 102, 103; ST 105 concurrently. Advanced and special areas of surgery: obstetrics and gynecology, thoracic, genito-urinary, ear, nose, throat, plastic, eye orthopedics, neurosurgery.

**ST 105 Applied Operating Room Techniques II 8(0-8)**

Prerequisite: ST 102, 103; ST 104 concurrently. Clinical session at an assigned hospital—two full days a week. Participate and assist in selected surgical procedures.

**ST 106 Clinical Practicum 3(0-3)**

A June mini-practicum with cooperating hospitals to assure minimum requirements are met. Consists entirely of clinical practice. Meet five days a week, for two-week period.

Courses Offered in Respiratory Therapy (RT), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**RT 100 Orientation to Respiratory Therapy Science 4(4-0)**

Prerequisite: Department approval. Covers history, and agencies associated with respiratory care; review physical and chemical principles applicable to respiratory therapy; a review of respiratory anatomy.

**RT 105 Introduction to Clinical Respiratory Therapy 3(0-9)**

Prerequisite: Admission to program. This first term clinical course is designed to expose the student to the hospital environment and function, in addition to practicing and reinforcing the concepts so outlined at the campus in the RT 115 course.

**RT 115 Respiratory Therapy Techniques I 5(4-2)**

Prerequisite: Department approval. Covers concepts of equipment operation and therapeutic application; procedures, purposes and indications for use, contraindications and hazards, precautions; electrocardiography (procedure); cleaning, disinfection and sterilization; compressed gas usage; regulators, flowmeters and connection systems; humidity, aerosol and oxygen administration.

**RT 102 Physiology for Respiratory Therapy 4(4-0)**

Prerequisite: RT 100. Mechanics of ventilation, pulmonary volumes and capacities, pulmonary defense mechanisms, cardiac physiology, vascular physiology, systemic and pulmonary circulation, diffusion, gas exchange and V/Q relationships, O<sub>2</sub> and CO<sub>2</sub> transport, acid-base balance, controls of ventilation, O<sub>2</sub> and CO<sub>2</sub> abnormalities, blood gas interpretation, work of breathing, respiratory/ventilatory failure.



- RT 108 Pharmacology for Respiratory Therapy** 3(3-0)  
Prerequisite: RT 100. Principles and effects of medications a practicing therapist or technician will be exposed to.
- RT 111 Respiratory Therapy Techniques II** 5(4-2)  
Prerequisite: RT 115. Extends procedures and equipment in RT 115. Emphasis on I.P.P.B. Therapy (principles and theory), I.P.P.B. equipment, beginning patient assessment, patient charting, mechanical aspiration of secretions, percussion, vibration and coughing, respiratory home care, incentive spirometry and breathing exercises.
- RT 101 Clinical Respiratory Therapy I** 5(0-16)  
Prerequisite: RT 105. Involves more clinical instruction and more direct patient care activities. Designed for practice and re-emphasis of those concepts introduced in RT 105.
- RT 103 Respiratory Pathology and Disease** 4(4-0)  
Prerequisite: RT 102. Types of pulmonary disease entities with an approach towards the classification of groups of similar diseases according to their types of dysfunction and related pathophysiology. Emphasizes obstructive pulmonary pathology, restrictive pulmonary pathology, acute inflammatory pathology, diffuse pulmonary pathology, pulmonary vascular pathology.
- RT 114 Respiratory Therapy Techniques III** 5(4-2)  
Prerequisite: RT 111. Continuous Mechanical Ventilation (covering initial setup, indications, contraindications, weaning, etc.), use of mechanical ventilators (volume, time and pressure cycled) adjunctive support (PEEP, IMV, Optimal PEEP, etc.), advanced CPR, artificial airways and airway management, and thoracic suction principles.
- RT 104 Clinical Respiratory Therapy II** 5(0-16)  
Prerequisite: RT 101. Re-emphasizes the principles of clinical practice discussed in RT 114. More emphasis in critical patient care areas.
- RT 116 Respiratory Therapy Techniques - Certificate** 3(3-0)  
Prerequisite: RT 114. Designed to cover neonatal and pediatric physiology, pathology and ventilatory management, use of other mechanical ventilators, seeking employment, pulmonary function testing, hemodynamic monitoring, physical assessment.
- RT 106 Clinical Practicum - Certificate** 10(0-30)  
Prerequisite: RT 104. Ten one-week rotations. Includes pulmonary function lab, non-invasive cardiography lab, neonatal respiratory care, and pulmonary disease rotation (including physician rounds and conferences). Other rotations involve primarily adult intensive care units, utilizing the various techniques required.
- RT 117 Respiratory Therapy Techniques - Associate Degree** 4(4-0)  
Prerequisite: RT 114. A preparatory course for second year of the program. Designed to emphasize areas that will be used and discussed in clinical rotations during second year. Covers cardiovascular hemodynamic monitoring and measurement, pulmonary function testing, chest radiology and physical assessment, basic biomedical concepts and safety.
- RT 107 Clinical Practicum - Associate Degree** 4(0-16)  
Prerequisite: RT 104. Designed to further refine the skills developed during first year and clinical experience and training in new areas. Observe and participate in the drawing and analysis of arterial blood for blood gas studies.
- Courses Offered in Respiratory Therapy Advanced (RTA), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- RTA 201 Advanced Respiratory Physiology and Testing** 4(0-16)  
Prerequisite: RT 103; Admission to second year. Includes ventilatory control, pulmonary ventilation, mechanics of ventilation, cardiovascular function, pulmonary circulation, ventilation, cardiovascular function, pulmonary circulation, ventilation-perfusion relationships, diffusion, gas transport, blood gases, A-B balance, fluid and electrolyte balance, pulmonary and cardiovascular development, and aging.
- RTA 212 Advanced Respiratory Therapy Techniques I** 4(4-0)  
Prerequisite: RT 117. Use of various lung ventilators, proper approaches utilized with patients requiring Continuous Ventilatory Support. Patient management problems. Includes methods of support (and monitor) circulation and principles of neonatal ventilatory management (including physiology, pathology and related equipment).
- RTA 202 Clinical Respiratory Therapy III** 5(0-16)  
Prerequisite: RT 107. Six 5-week rotations (total of 30 weeks over three terms). The specific rotations are blood gas analysis/pulmonary function testing, cardiovascular intensive care rotation, advanced therapeutic techniques, neonatal critical care, adult intensive care, and non-invasive cardiology.
- RTA 203 Advanced Respiratory Pathology and Disease** 4(4-0)  
Prerequisite: RTA 201. Presentation of the many disease entities specific to the cardiorespiratory system, including treatment; various approaches to their treatment. The topics discussed are manifestations of compensation for respiratory pathology, respiratory defense mechanism, pulmonary immune mechanism, pneumonitis, pulmonary infections, adult respiratory distress syndrome, tbc. and pulmonary mycoses, pneumoconiosis, diffuse interstitial fibrosis, sarcoidosis and pulmonary collagen diseases, pulmonary neoplasm, obstructive pulmonary pathology, chronic obstructive pulmonary disease, respiratory immune disease, congenital cardiovascular pathology, acquired cardiovascular pathology, and pulmonary vascular pathology.
- RTA 214 Advanced Respiratory Therapy Techniques II** (4-0)  
Prerequisite: RTA 212. Continuation of advanced techniques and types of ventilators. Includes review of basic and advanced CPR, physiology and methods associated with the support of ventilation and oxygen deficits, medical management of the C.O.P.D. patient and pulmonary rehabilitation. Exposed to type of questioning encountered on Written Registry Examination.
- RTA 204 Clinical Respiratory Therapy IV** 5(0-16)  
Prerequisite: Same as RTA 202 Clinical Respiratory Therapy III
- RTA 205 Respiratory Therapy Management Skills** 4(4-0)  
Prerequisite: RTA 203. Responsibilities and duties of a Department Manager or Educator in Respiratory Therapy. Provides insight into the operation of a hospital, as well as respiratory therapy department.
- RTA 216 Advanced Respiratory Therapy Techniques III** 4(4-0)  
Prerequisite: RTA 214. Heavy emphasis on medical management of CNS abnormalities, peripheral neurological dysfunction, thoracic trauma, aspiration and near drowning, burns, pulmonary vascular disease, pulmonary neoplasm and pulmonary infection and pneumonitis. Also a continuation of written review exams and practice in taking Clinical Simulation Exams, preparation for the N.B.R.C. Registry Exams.
- RTA 206 Clinical Respiratory Therapy V** 5(0-16)  
Prerequisite: RTA 204. Continuation of clinical instruction rotation as listed for RTA 202.
- Courses Offered in Radiologic Technology (RXT), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- RXT 100 Introduction to X-Ray Services** 3(3-0)  
Prerequisite: Admission to program. Survey of the role of Radiologic Technologists in the hospital setting. Includes historical development of x-ray, ethics, medical terminology, radiation protection, and patient-staff relationships. Complementary roles of other health care professionals analyzed.
- RXT 101 Clinical Seminar I** 1(1-0)  
Prerequisite: RXT 100, RXT 111, HC 104. Application of principles learned in previous courses. Introduction to the physical environment of the Radiology Department, the student practices interrelationships skills, basic patient care, and radiographic positioning.
- RXT 111 Radiographic Positioning I** 5(3-4)  
Prerequisite: Admission to program. Review the structure and organs of the body. Topographic anatomy and detailed information on the positions for pediatric and adult x-ray procedures. Application in a radiographic room. Includes the nomenclature of positioning, bones of the extremities, pelvic girdle, thorax, and basic abdominal viscera.
- RXT 112 Radiographic Positioning II** 14(7-4-16)  
Prerequisite: RXT 111. 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. Includes spine, skull, general characteristics of contrast media, organs of the gastrointestinal tract, biliary tract, urinary tract, and procedures in obstetrics. Clinical component is also included.

- RXT 113 Radiographic Positioning III** 10(4-2-16)  
Prerequisite: RXT 112. More complex technical procedures. Includes topographic physiology, studies of sophisticated major and auxiliary equipment, opaque media, and general indications for each examination; specialized neurologic, orthopedic, dental and vascular procedures, and body section radiography. Clinical component.
- RXT 121 Radiographic Exposure I** 4(3-2)  
Prerequisite: Admission to program. Fundamentals of radiographic exposure which are concerned with production, analysis, and recording of the image. Study devices, factors, and properties which are applicable to radiographic quality. Includes a study of basic chemistry, film apparatus, and processing techniques for both manual and automatic processing.
- RXT 122 Radiographic Exposure II** 4(3-2)  
Prerequisite: RXT 121. Factors involved in film contrast, detail and quality application of accessory devices, capabilities/limitations of radiographic equipment, technical conversion techniques, exposure technique charts, and mechanical aspects of fluoroscopy.
- RXT 123 Independent Study in Radiologic Technology** 2(2-0)  
Prerequisite: DA, or graduate/registered technologist. Opportunity to prepare and submit a formal research paper. Advanced study in a specific area. May include patient care, positioning, physics, exposure and quality, special procedures, radiobiology, quality control, or x-ray pathology. Involves library research, laboratory experiments, questionnaires, use of audio visual lab and/or a combination. Bi-weekly meetings required to assess progress.
- RXT 124 Independent Study in Radiologic Technology** 3(3-0)  
Prerequisite: Department approval, or graduate/registered technologist. Opportunity to prepare and submit a formal research paper. Advanced study in a specific area. May include patient care, positioning, physics, exposure and quality, special procedures, radiobiology, quality control, or x-ray pathology. Involves library research, laboratory experiments, questionnaires, use of audio visual lab and/or a combination. Bi-weekly meetings required to assess progress.
- RXT 131 Radiologic Physics I** 2(2-0)  
Prerequisite: MTH 102 or Equivalency. Principles of physics and relationship to radiology, fundamentals of ionizing and radium physics, and principles underlying the construction and operation of x-ray equipment and auxiliary devices. Includes theory for practical radiation monitoring and protection.
- RXT 132 Radiologic Physics II** 2(2-0)  
Prerequisite: RXT 131. Study units of radiation measurement, radiation exposure and instrumentation, quality factors, such as half-layer values, and tube voltage. Specifics of x-ray generators and circuitry, filtration, x-ray beam restrictors, intensifying screens, with emphasis on patient exposure and protection.
- RXT 133 Specialized Fields in Radiology** 2(2-0)  
Prerequisite: RXT 132. Fundamentals of radiation therapy, including types of equipment and devices, and application to disease. Introduction to radiobiology and the effects of radiation on tissue, dosimetry and treatment planning, tumor localization, port films, and treatment positions. Also, fundamentals of medical isotopes, basic instrumentation and clinical application, and basic equipment.
- RXT 200 Introduction to Radiologic Pathology** 2(2-0)  
The disease processes most frequently encountered in the Radiology Department. Emphasizes how each disease is diagnosed radiographically and the relationship of the radiographic appearance of the disease to its anatomic, physiologic and pathologic characteristics. The etiology, treatment and resolution of each disease discussed, with an attempt to relate more recent advances in these areas.
- RXT 210 Clinical Seminar II** 2(2-0)  
Prerequisite: RXT 213. Current concepts in radiology to function more effectively within the radiology department. Includes contrast media utilized, the department, advances in special procedures radiography, ultrasound, xerography, thermography, positioning and new items of equipment. Also to acquaint the student with the organization, function, supervision, and financial arrangements relative to departments of radiology, basic x-ray equipment for performing preventive maintenance, and detecting simple functioning difficulties.
- RXT 211 Clinical Practice I** 6(1-0-16)  
Prerequisite: RXT 113, GPA 2.00 or more in major. First course in a three term sequence of clinical application in radiography theory in all phases of radiologic technology. Weekly discussion groups at each clinical facility. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture is consistent with the 1 to 1 ratio.
- RXT 212 Clinical Practice II** 9(1-0-24)  
Prerequisite: RXT 113, GPA 2.00 or more in major. Second course in a three term sequence of clinical application in radiography theory in all phases of radiologic technology. Weekly discussion groups at each clinical facility. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture is consistent with the 1 to 1 ratio.
- RXT 213 Clinical Practice III** 9(1-0-24)  
Prerequisite: RXT 113, GPA 2.00 or more in major. Third course in a three term sequence of clinical application in radiography theory in all phases of radiologic technology. Weekly discussion groups at each clinical facility. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture is consistent with the 1 to 1 ratio.
- RXT 214 Comprehensive Experience I** 9(1-0-24)  
Prerequisite: RXT 213, GPA 2.00 or more in major. First course in a two term sequence of clinical application in radiography theory in all phases of radiologic technology. Formal and informal discussion groups are held weekly at each clinical facility. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture is consistent with the 1 to 1 ratio.
- RXT 215 Comprehensive Experience II** 9(1-0-24)  
Prerequisite: RXT 214, GPA 2.00 or more in major. Second course in a two term sequence of clinical application in radiography theory in all phases of radiologic technology. Formal and informal discussion groups are held weekly at each clinical facility. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture is consistent with the 1 to 1 ratio.
- Courses Offered in Radiation Therapy Technology (RXT), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.
- RXT 105 Introduction to Radiation Therapy** 3(3-0)  
Prerequisite: Admission to program. Provides the student with an overview of radiation therapy and its role in medicine. Student responsibilities and benefits will be outlined. Students will be oriented to academic and administrative structure, key departments and personnel, and to the profession as a whole.
- RXT 106 Clinical Oncology Seminar** 3(3-0)  
Prerequisite: RXT 105. Provides the student with the basic concepts of: diagnostic process, pathophysiology, oncologic problems, oncologic emergencies, chemotherapy protocols, agents and side effects, bereavement, psychosocial aspects of disease and specific case studies.
- RXT 205 Clinical Radiation Oncology** 3(3-0)  
Prerequisite: Admission to program. Provides the student with the fundamentals of Clinical Radiation Oncology. Malignant conditions, their etiology and methods of treatment are discussed. Attention is given to patient prognosis, treatment results and the effects of combined therapies.
- RXT 221 Technical Radiation Oncology** 2(2-0)  
Provides the student with the technical aspects of Radiation Therapy Technology. Modalities of treatment, the distinctive properties of each and patient set-up considerations will be discussed.
- RXT 231 Radiation Therapy Physics I** 3(3-0) Prerequisite: Admission to program. Provides the student with the basic principles and concepts of radiation protection. Methods for preventing unnecessary radiation exposure to patients, radiation workers and the public are discussed.
- RXT 232 Radiation Therapy Physics II** 3(3-0)  
Prerequisite: RXT 231. Provides the student with the specifics of ionizing radiation. Details of production, interactions and types of radiation are discussed. Application to the treatment of patients is included.
- RXT 233 Radiation Materials** 4(4-0)  
Prerequisite: RXT 232, 293, 270. Provides the student with the principles of radioactivity. Medical uses of radioactive material and technical considerations of application are discussed.

**RXT 235 Clinical Dosimetry I 3(3-0)**

Prerequisite: RXT 232. Provides the student with the basic concepts of clinical dosimetry and treatment planning. Various external beam techniques, depth dose data and summation of simple isodose curves are discussed. Fundamental procedures in dose measurement and verification, as well as machine calibration are included.

**RXT 236 Clinical Dosimetry II 3(3-0)**

Prerequisite: RXT 235. This course is a continuation of RXT 235—see course description under RXT 235.

**RXT 238 Radiation Therapy Math 3(3-0)**

Prerequisite: Admission to program. Provides the student with background material in the areas of whole numbers, fractions, decimals, basic algebra, factors, factoring, equations, and those areas needed for a Radiation Therapy Technologist.

**RXT 270 Radiobiology 3(3-0)**

Prerequisite: RXT 231, 293. Provides the student with the principles of cell response to radiation. Factors which influence the effects of radiation, tissue sensitivity, and environmental factors are discussed.

**RXT 285 Clinical Experience I 6(1-0-16)**

Prerequisite: Admission to program. See description under RXT 286, 287, 288.

**RXT 286 Clinical Experience II 9(1-0-24)****RXT 287 Clinical Experience III 9(1-0-24)****RXT 288 Clinical Experience IV 9(1-0-24)**

Prerequisite: Each clinical is prerequisite to higher number. This four term sequence of clinical application in Radiation Therapy Technology theory in all phases of Radiation Therapy Technology is designed to present the student with an environment of combining cognitive, psychomotor and effective aspects of the profession. Formal discussion groups are held weekly at the clinical facility. These courses are programmed with specific performance activities. Credit is arranged for each individual term as appropriate with a ratio of 1 credit hour to 3 clinical clock hours. The ratio for lecture or discussion group is consistent with the 1 to 1 ratio.

**RXT 293 Radiation Protection 1(1-0)**

Prerequisite: Admission to program. Provides the student with a knowledge of basic physics. Fundamental principles, concepts and terminology are discussed. Basic information on radiation production, properties and characteristics is included.

Courses Offered in Adaptive Cardiac Rehabilitation and Health Maintenance Programs (ARC), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**ARC 130 Adaptive Cancer Rehabilitation 2(1-2)**

A physical rehabilitation course for people who have had either radiotherapy or chemotherapy for the treatment of cancer. Objectives include returning to fitness and endurance, and the promotion of a healthy lifestyle. Physician and rehabilitation counselor included on instructional staff.

**ARC 140 Adaptive Cardiac Rehabilitation 2(2-0)**

Prerequisite: Department approval. Lecture/discussion for people who are convalescing from heart attack/surgery. Recommended for student and a close family member since lifestyles, habits, and information known to increase risks associated with heart problems are discussed.

**ARC 149 Food for Health 2(2-0)**

Designed for the person interested in the role of diet in maintaining good health. The student will learn how to eat, shop, and prepare foods that promote health and reduce risk factors associated with hypertension and heart disease.

**ARC 150 Adaptive Physical Rehabilitation Cardiac Exercise I 3(1-5.3)**

Prerequisite: Department approval. Beginning course in the sequence of health lectures and medically monitored aerobic exercise laboratory sessions. Introduces the student to effects of appropriate (prescribed) aerobic exercises on the cardiovascular physiology. Method of exercise will be determined by the individual participant's physician and/or the program medical director.

Particular emphasis will be on development of skills for self-monitoring, assessing heart rate and early detection of clinical symptoms of complications. Lectures and group discussion arranged each term. Exercise sessions in-

clude 15 minutes early arrival for blood pressure monitoring by staff, general monitoring by staff continues until all students have departed from locker rooms. Graded Exercise Test and physicians referral required upon entry.

**ARC 151 Adaptive Physical Rehabilitation Cardiac Exercise II 4(.85-5.4)**

Prerequisite: ARC 150. Designed for continuing students who wish to participate in the health lectures and medically monitored aerobic exercise classes. The emphasis for students with cardiac problems is to further reduce the risk factors which led to their cardiovascular illness and to improve or maintain their individual fitness level. Methods and level of exercise are determined by the participants physician or by the program medical director. Monitoring by staff continues as in ARC 150. Continuing students enrolled for 13 week terms.

**ARC 155 Adaptive Physical Rehabilitation Pulmonary Exercise I 3(1-5)**

A health lecture/discussion and medically monitored aerobic exercise laboratory session. Introduces the student to the effects of appropriate (prescribed) aerobic exercise on the pulmonary physiology. Method of exercise will be determined by the individual participant's physician and/or the program medical director.

**ARC 160 Health Maintenance 2(2-0)**

Includes development of skills needed to establish, monitor, and evaluate aerobic exercise activities; introduces risk factors of heart disease, with consideration given to individual lifestyles and stressors. (Lab fee for physician supervised exercise screening.)

**ARC 164 Health Education Laboratory 1(0-3)**

An independent aerobic exercise course with supervision for use of weight machines. Optional warm-up and cool-down exercises with aerobic groups students.

**ARC 167 Cardiac Rehabilitation Seminar 1(1-0)**

Seminar designed to teach the basic principles of exercise prescription and theory. An introduction to cardiac rehabilitation will be offered.

**ARC 168 Un-Smoking for Life 2(2-0)**

A lecture series is offered which strives to help individuals change the lifestyle linked with smoking. The goal is to enable the smoker to quit permanently and thereby reduce his/her associated health risks.

**ARC 169 Creative Weight Loss 2(2-0)**

Instruction in a behavioral approach to weight loss teaches students to enjoy food while maintaining control of their intake. The objective of this class is to lose weight by changing eating behaviors.

**ARC 170 Fit for Life Exercises 1(0-3)**

Designed specifically for the older person, this exercise course is aimed at reducing the debilitating effects which inactivity has upon aging. Exercises are taught for ambulatory students and for those confined to wheelchairs.

**ARC 171 Personal Fitness and Health Awareness 2(2-0)**

Lecture/discussion introducing physiology of exercise and the effects of different lifestyles upon the body. Risk factors, nutrition, stress management and importance of regular exercise are emphasized.

**ARC 176 Exercise Leader Seminar 0.5(6-0)**

Seminar designed to increase awareness and skills of persons responsible for leading exercise for the older adult. Student will learn to pace exercise from a slow warm-up through a progressively paced routine back to a slow cool-down. Modifying exercise to an individual's capacity or special problems and recognizing potential problems which limit exercise are included in the course.

**ARC 200 Aerobics and You 1(0-3)**

An aerobic exercise class which uses flexibility and strengthening movement to music without involving high-intensity or severely twisting choreography. Safe and practical exercises, even for middle years and beyond.

**ARC 242 Participating in Your Own Health 2(2-0)**

In order to enhance personal health, this course teaches individuals to identify stress factors in their personal lives and then introduces several stress management techniques, including guided imagery. Several theories on mind-body relationships are presented for discussion.

**ARC 246 Stress Management and Relaxation 2(2-1)**

This class assists students to become aware of patterns of stress and tension in life. Specific approaches and exercises are taught to help people function with greater ease and effectiveness at work and play.



**ARC 247 Stress Management Seminar**

0.5(6-0)

This six hour seminar gives the student an introduction to awareness in patterns of stress. Specific approaches towards stress management are presented.

**ARC 260 Aerobics Groups I**

2(1-3.54)

A physiologically sound exercise program for middle-age and older adults. An aerobic workout complemented by stretching and strengthening exercise, aimed at improving fitness and reducing risk of debilitating illness. Arranged lectures included each term. Fitness screening required before entry.

**ARC 261 Aerobics Groups II**

3(.85-3.6)

An opportunity for continuing students to maintain and/or improve their fitness level through supervised aerobic exercise sessions and health education lecture/discussions. Emphasis is on regular, safe exercise and healthy lifestyles. Continuing students enrolled for 13 weeks.

Courses Offered in Adaptive Neurological Rehabilitation Program (ARN), by the Department of Health Careers & Center for Health Education/Rehabilitation—by Course Number, Title, Credits Allowed, and Description.

**ARN 100 Living with Multiple Sclerosis**

2(2-0)

Prerequisite: Diagnosis of MS. Series of lectures/discussion groups on issues related to living with MS. Lectures include: research, current treatment, diet, exercise, stress management, family dynamics (family members are encouraged to enroll).

**ARN 145 Memory Improvement**

2(2-0)

Prerequisite: Department approval. Class focuses on memory as a process, memory loss and compensation for memory loss. Provides information and exercises in memory compensation and cueing techniques. Participants are people with neurological conditions.

**ARN 150 Body Awareness**

3(3-0)

Prerequisite: Department approval. Course designed for individuals with sensori-perceptive deficits secondary to neurologic conditions and who are ambulatory without assistance. Class activities are designed to promote flexibility, coordination in movement, and comfort with one's own movements.

**ARN 155 Community Exploration for Handicappers**

2(2-0)

Course specifically designed for individuals with neurologic conditions who are interested in exploring community resources. Class will meet one day per week for 2 hours to generate problems solving strategies oriented toward community independence and resourcefulness. Format will be lecture, groups discussion and experiential activities.

**ARN 160 Physical Rehabilitation and Fitness**

2(2-0)

Prerequisite: Department approval. For persons with physical limitations who are interested in developing and maintaining an individualized exercise program to increase strength, endurance, range of motion, and mobility. Instruction and supervision are provided by physical and occupational therapy personnel. This is an ongoing class and participants may enroll at any time.

**ARN 165 Adaptive Aquatics**

2(2-0)

Prerequisite: Department approval. Swim program for individuals with neurological conditions. This class is designed to improve strength, endurance, range of motion, and mobility through swimming and exercise in the water. Swimming skills are worked on when appropriate.

**ARN 170 Independent/Group Study**

1(1-0)

Prerequisite: Student evaluation/Department approval. This course is designed for two students to share individualized instruction for 1 hour per week in any of the following areas: Body Awareness, Physical Rehab and Fitness, Memory Improvement and Lifestyle Adjustment to Chronic Illness (please refer to course descriptions listed under the above course titles). This is an opportunity for student to explore individual and specific concerns, and to work in a small group. \$75.00 lab fee.

**ARN 171 Independent Study**

0.5(6-0)

Prerequisite: Student evaluation. This course is designed for one student to receive 1 to 1 instruction in any of the following areas: Body Awareness, Physical Rehab and Fitness, Memory Improvement and Lifestyle Adjustment to Chronic Illness (please refer to course descriptions listed under the above course titles). \$75.00 lab fee.

**ARN 210 Lifestyle Adjustment to Chronic Illness**

2(2-0)

An information class blended with therapeutic exercise that will aid students with chronic illness to explore issues related to grief and loss, awareness of anger/sadness and other feelings; development of changing values, com-

munications patterns and establishing goals with emphasis on self-responsibility.

**Transportation Training (TT)**

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 systems, communications, customer and public relations, defensive driving course, driver's daily logs, driver's responsibility in maintenance of vehicle, driver situations, fire fighting, highway regulations and laws, D.O.T. safety regulations, orientation, psycho-physical, registration, and 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.

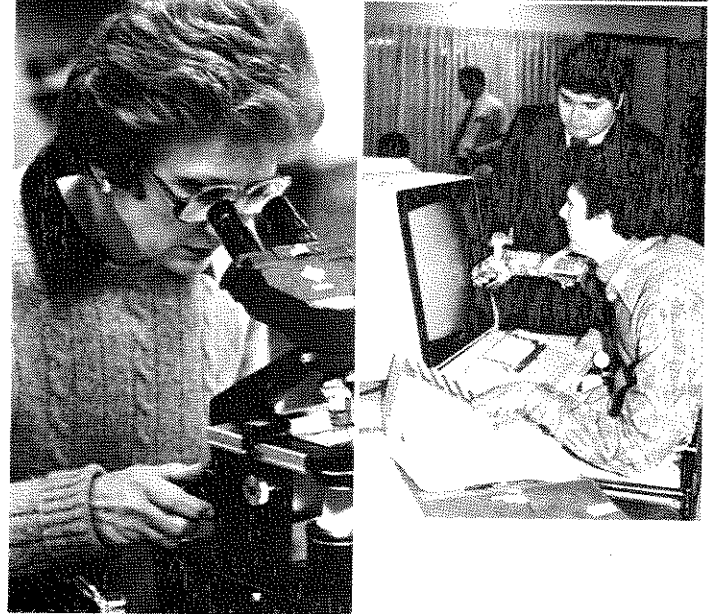
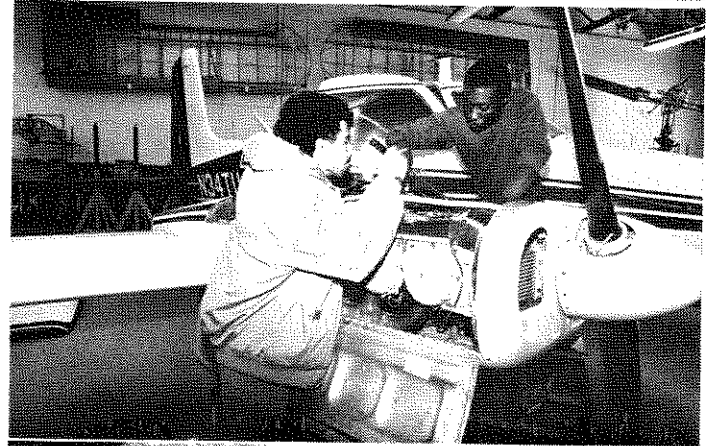
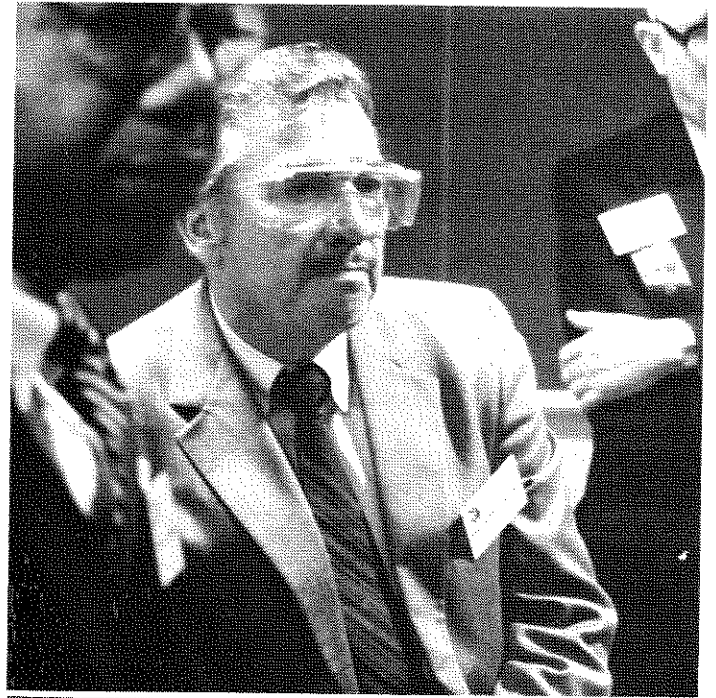
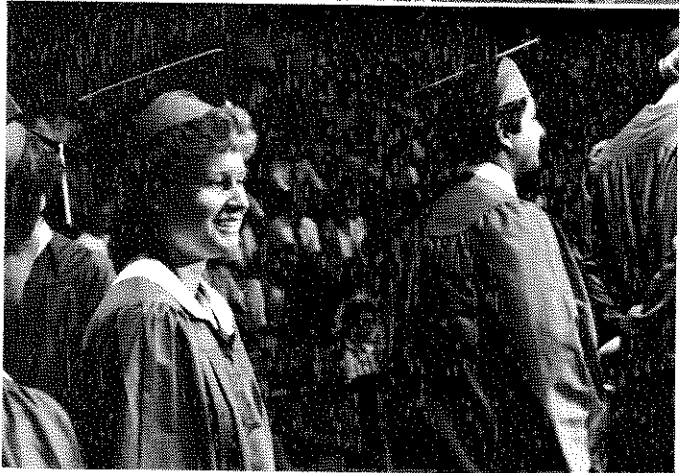
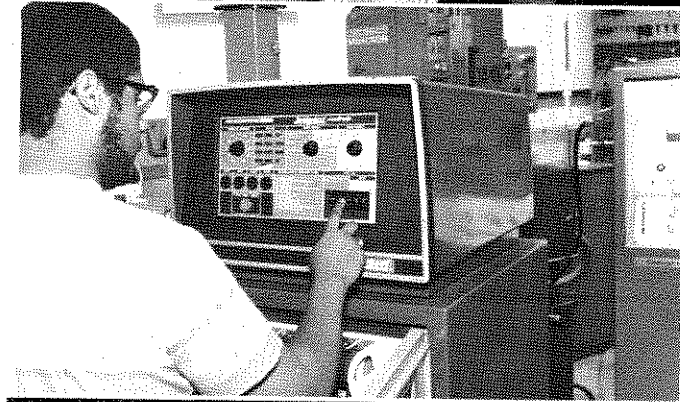
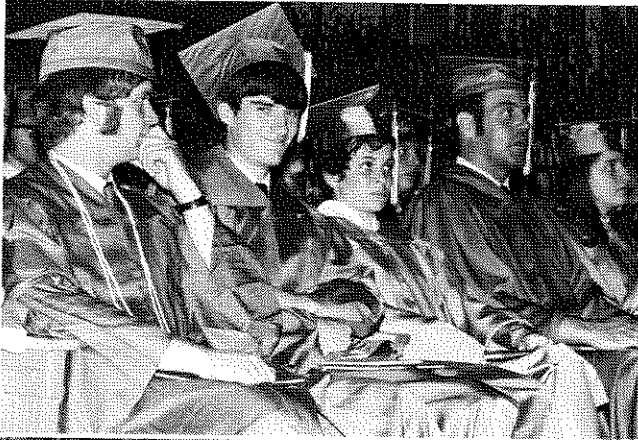
Enrollment requirements for this program include a Department of Transportation physical exam, ability to communicate in the English language, both spoken and written, and a good driving record.

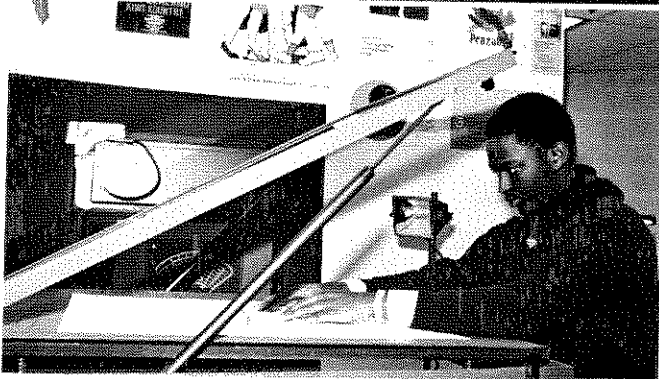
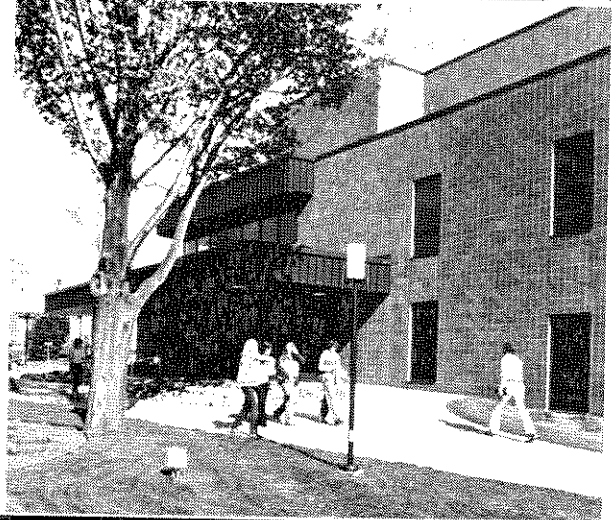
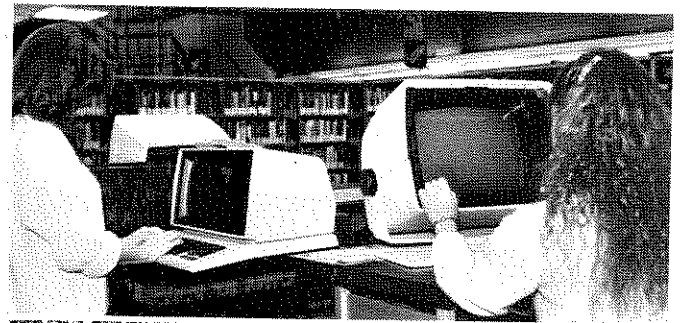
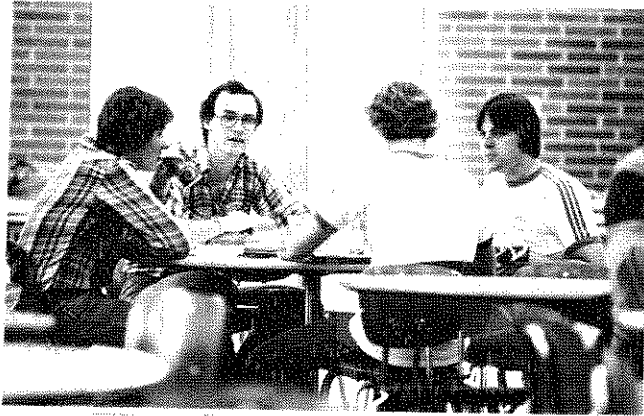
Students are placed on a waiting list. Admission is first-come, first-qualified, first-served. Curriculum Code 580.

**Truck Driver Training (TT)****Division of Technology and Applied Sciences****TT 101 Truck Driver Training**

Instruction covers a four-week period, 8:00-5:00, five days a week. Actual driving time is 120 hours with 40 hours of classroom instruction, with an extended road trip during the last week. Applicants must be 18 years of age. Enrollment requirements include a Department of Transportation physical exam, ability to communicate in the English language, both spoken and written, and a good driving record. Applicants must know how to shift a straight stick transmission and use a clutch, before attending, as shifting a truck requires double clutching. Students are placed on a waiting list, being admitted on a first-come, first-qualified, first-served basis.

A \$100.00 deposit is required with the application to reserve a space in the class desired. This deposit is refunded on cancellation if College is notified at least eighteen (18) days prior to the class starting date. 100% tuition refund (less \$100.00 deposit) if student drops during first week. Fees prorated at \$20.00 per day. Balance refunded. 50% tuition refund if student drops during second week. Fees prorated at \$20.00 per day. Balance refunded. No refunds after second week.







## Lansing Community College



Dean James Platte



# TELECOMMUNICATION & THE ARTS



Department of Library Information Services  
Department of Media  
Department of Performing Arts

- ART 150 Design/Layout I** 4(2-4)  
Prerequisite: ART 145. Layout activities used in visual communications such as newspapers, brochures, and other printed matter. Includes research, conceptualization and execution of layouts from "thumbnail" to "comprehensives"; design principles, their effect on composition and organization, and the role of layout in the commercial art industry.
- ART 151 Drawing Techniques** 4(2-4)  
Prerequisite: ART 132 & 147. Illustrative techniques utilized to take a preliminary pencil drawing and convert it to a "finished" ink drawing, emphasis on sound draftsmanship and variety of contemporary, realistic, illustrative black and white techniques in both solid black line and wash. Suitable for both commercial art and fine art students.
- ART 155 Art Form Development I** 4(4-0)  
Survey of the fine and decorative arts including painting, sculpture and architecture of ancient and primitive cultures: Egypt, Mesopotamia, Greece, and Rome. Covers the original and contemporary affect of the art, the uniqueness of the styles and the social, psychological, and historical correlations with the styles.
- ART 156 Art Form Development II** 4(4-0)  
Emphasis on the humanistic art of the Islamic, Romanesque, Gothic, Renaissance and Mannerist periods. Correlations and comparisons between specific pieces of art and historical events, artists and artistic techniques are identified and compared.
- ART 157 Art Form Development III** 4(4-0)  
Surveys painting, sculpture, and architecture: seventeenth century Baroque through twentieth century Contemporary Art. Correlations and comparisons between specific pieces of art and historical events, artists and artistic techniques are identified and compared.
- ART 160 Interior Design I** 4(2-4)  
Introduction to the profession of interior design, design theory, color, theory, principles and elements of design used to communicate solutions to environmental interior problems; design vocabulary, differences in hue, value, and saturation levels of color as they affect human and interior environments; principles and elements of design in a composition such as space planning of various rooms and wall elevations. ART 163 Interior Design Drawing is recommended concurrently.
- ART 161 Interior Design II** 4(2-4)  
Prerequisite: ART 160 and 101. Styles and materials used in designing interiors with emphasis on floor coverings, accessories, window treatments, and the effects of textiles. Includes the design and drawing techniques of various window treatments. ART 164 Interior Design Drawing II is recommended concurrently.
- ART 162 Interior Design III** 4(2-4)  
Prerequisite: ART 161 and 102. Examines the relationship of human needs to interior environmental design with emphasis on use of lighting to create various atmospheres, effects, and to fulfill certain functions. Art 165 Interior Design Drawing III is recommended concurrently.
- ART 163 Interior Design Drawing I** 4(2-4)  
Practice in fundamental drafting techniques used by the interior designer. Includes drafting terminology; drafting techniques in pencil and ink; kitchen and bathroom planning; principles of architectural lettering; electrical and lighting overlay techniques; interior elevations and one-point perspective.
- ART 164 Interior Design Drawing II** 4(2-4)  
Prerequisite: ART 163. Introduction to various media used by the interior designer, emphasis on techniques and practice in a variety of media; rendering perspectives of interior space in one-point and two-point perspective, eye-ball sketching, isometrics; logos; different methods for reproduction of drawings.
- ART 165 Interior Design Drawing III** 4(2-4)  
Prerequisite: ART 164. Focus on problem solving and practice in all media and preparation of a professional portfolio of renderings and a resume.
- ART 166 Home Decorating** 2(2-1)  
Survey of general information on decorating residential buildings. Introduces and utilizes principles of interior design.
- ART 167 Antiques and Collectibles** 2(2-0)  
Learn to recognize, date, and evaluate antiques and collectibles from the bases of materials, methods of construction, styles and periods.
- ART 190 Matting and Framing Techniques** 2(1-2)  
Various materials and techniques for displaying and exhibiting art work, applying demonstrated techniques to matting and framing.
- ART 200 Painting I** 4(2-4)  
Prerequisite: ART 102 and 131. Introduction to objective oil painting concepts in the realistic tradition; basic materials and tools; handling qualities.
- ART 201 Painting II** 4(2-4)  
Prerequisite: ART 200. A continuation of Painting I (ART 200), emphasizing more advanced techniques and increasingly complex problems in oil painting. May be taken three terms for credit.
- ART 202 Portrait Painting** 4(2-4)  
Prerequisite: ART 132 and 102. An introductory course in human portraiture with primary concentration on oil painting.
- ART 203 Figure Painting** 4(2-4)  
Prerequisite: ART 102 and 132. An introductory course in the human figure using various media with primary concentration on oil painting. May be taken three terms for credit.
- ART 204 Watercolor I** 4(2-4)  
Prerequisite: ART 102. Introduction to the art of transparent watercolor. Examines paper characteristics, degrees of wetness, brushes and tools, and various techniques in producing watercolor artworks.
- ART 205 Watercolor II** 4(2-4)  
Prerequisite: ART 204.
- ART 206 Watercolor III** 4(2-4)  
Prerequisite: ART 205
- ART 207 Advanced Watercolor** 4(2-4)  
Prerequisite: ART 206. A continuation of Watercolor I (ART 204). Each emphasizes more advanced techniques and increasingly complex problems in watercolor painting. ART 207 may be taken three terms for credit.
- ART 208 Experimental Painting** 4(2-4)  
Prerequisite: Department Approval. Developing and analyzing a personal approach toward painting; producing a series of canvasses of increasing complexity for preparation of a portfolio of exhibit-quality works. May be taken three terms for credit.
- ART 210 Design/Layout II** 4(2-4)  
Prerequisite: ART 150. An overall view of the Media; its uses in planning campaigns; procedures for campaign building; and graphic design campaign techniques.
- ART 211 Design/Layout III** 4(2-4)  
Prerequisite: ART 210. Three-dimensional commercial design, packaging and display, with emphasis on surface graphics using a variety of materials, tools, methods, and techniques.
- ART 212 Design/Layout IV** 4(2-4)  
Prerequisite: ART 211. Production of a commercial art portfolio including magazine, newspaper, brochure, billboard, corporate identification, and letterhead layouts.
- ART 213 Illustration I** 4(2-4)  
Prerequisite: ART 151. Practice and development of skills using india ink with pen and brush, and tempera techniques; basic illustrative techniques; preparation of portfolio pieces.
- ART 214 Illustration II** 4(2-4)  
Prerequisite: ART 213 and 102. Full color exercises in tempera; introduction to acrylic techniques; stylized drawing expressions and design-oriented compositions.
- ART 215 Illustration III** 4(2-4)  
Prerequisite: ART 214. Portfolio preparation to include full color illustration in either tempera, acrylic, dyes, or mixed media; black and white ink renderings in pen and brush; wash drawings; and scratch board drawings.
- ART 216 Cartoon Drawing I** 4(2-4)  
Prerequisite: ART 132. Focus on strong, stylized drawing, dramatic exaggerated action, simple but imaginative characterizations, and uncluttered ink

rendering techniques. Exercises in pencil, fibertipped pen, and brush and pen ink.

**ART 217 Cartoon Drawing II 4(2-4)**

Prerequisite: ART 216. Cartoon illustrations from simple spots to complex compositions and comic strip panels, slide film cartoon art in full color; album covers and greeting cards.

**ART 218 Fashion Illustration I 4(2-4)**

Prerequisite: ART 132. Fashion illustration utilizing black and white line and wash technique, emphasizing use of pen and ink.

**ART 219 Fashion Illustration II 4(2-4)**

Prerequisite: ART 218. Fashion illustration using brush, markers, soft pencil, chalk, white ink, and paint.

**ART 220 Fashion Illustration III 4(2-4)**

Prerequisite: ART 219. Introduction of watercolors, pastels and crayons; preparation of a portfolio of sample pieces for presentation and job procurement.

**ART 221 Airbrush Techniques I 4(2-4)**

Introduction to the operation and techniques of the airbrush in shading and creating textures in both black and white and color.

**ART 222 Airbrush Techniques II 4(2-4)**

Prerequisite: ART 221. Focuses on more complex airbrushing problems; work on areas of specialization.

**ART 226 Introduction to Medical Illustration 4(2-4)**

Prerequisite: ART 132. Introduction to medical and scientific illustration. Includes realistic drawing from anatomical models and specimens and the visual presentation of abstract scientific information.

**ART 228 Introduction to Animal Illustration 4(2-4)**

Prerequisite: ART 131 or 132. Introduction to animal illustration includes realistic drawing from mounted specimens and live animals.

**ART 230 Interior Design IV 4(2-4)**

Prerequisite: ART 162 and 163. Emphasizes the architectural aspects of interior design, focusing on building materials, energy efficiency, building codes, efficient utilization of space, and alternative housing design.

**ART 231 Interior Design V 4(2-4)**

Prerequisite: ART 230 and 164. Emphasizes contract design. Includes designing commercial interiors integrating client's needs and the socio-psychological aspects of the environment; estimating and specifying a contract interior.

**ART 232 Interior Design VI 4(2-4)**

Prerequisite: ART 231 and 165. Examines the fundamentals of the interior design business process: design responsibilities in the profession, incorporation of design ethics in the professional practice. Emphasis on problem-solving situations simulating designer-client roles.

**ART 233 Interior Design/Textiles 4(2-4)**

Prerequisite: ART 161 and 102. Examines the fundamentals of textiles, their characteristics and identification, fabric weaves and uses, basic fiber weaves, currently used complex weaves, natural fibers, and man-made fibers.

**ART 234 History of Decorative Arts I 4(4-0)**

Prerequisite: ART 161. A survey of the history of decorative art periods including furniture, architecture, textiles and accessories, covering periods from Ancient through Renaissance and relating to modern day environments.

**ART 235 Interior Design Workroom Practices I 4(2-4)**

Prerequisite: ART 162 and MTH 008. Examines studio workroom methods and techniques of floor, wall and window coverings, and the diagram methods used to enable the designer to communicate the design concept to the workroom person.

**ART 236 Interior Design Workroom Practices II 4(2-4)**

Prerequisite: ART 235. Emphasizes cost estimating for a total job, installation techniques for window treatments and wall coverings, and workroom procedures.

**ART 237 Interior Design Sources**

Prerequisite: ART 235. Examines specific resources used in the current design industry and the setting up of a source file for client presentation.

**ART 239 History of Decorative Arts II 4(4-0)**

Prerequisite: ART 234. Emphasis on the Baroque to Modern periods, and an examination of preservation principles.

**ART 240 Interior Design Business Practices 4(2-4)**

Prerequisite: ART 235. Examines how to facilitate introduction, how to proceed on jobs, recommendation for jobs, when to close them, actual set-ups, estimates, purchase orders, and invoicing.

**ART 256 Advanced Screen Printing 4(2-4)**

Prerequisite: ART 141. Review and practice; producing portfolio pieces. May be taken three terms for credit.

**ART 257 Etching II 4(2-4)**

Prerequisite: ART 138. Review and practice; producing portfolio pieces.

**ART 259 Advanced Etching 4(2-4)**

Prerequisite: ART 257. A continuation of Etching II (ART 257). May be taken three terms for credit.

**ART 260 Basic Art For Elementary Teachers 4(2-4)**

Especially for elementary school teachers responsible for the student art experience. Emphasis on developing a greater art appreciation, awareness of art forms, and competency, working with a variety of art media. Covers the creative and mental growth of children and their needs in an art situation.

**ART 272 Printmaking Independent Study 4(2-4)**

**ART 274 Commercial Art Independent Study 4(2-4)**

**ART 276 Art Independent Study 4(2-4)**

Prerequisite: Department Approval. Individual pursuit of special projects not incorporated in regular course offerings.

**ART 278 Commercial Art Internship 8(4-8)**

**ART 279 Interior Design Internship 8(4-8)**

**ART 281 Art Internship 8(4-8)**

Prerequisite: Department Approval. An off-campus field study. Students will gain pre-career experience by working in a studio environment under the supervision of a professional artist/designer. Regularly scheduled progress reports will be given and discussed with supervising faculty member.

Courses Offered in Media Technology (MRT) by the Media Department—by Course Number, Title, Credits Allowed, and Description.

**MRT 110 Consumer Audio 2(2-0)**

Provides an overview of the audio industry; introduces common audio terms used with home stereo systems; examines equipment specifications, function, and home stereo setup.

**MRT 112 Media Materials I 4(4-0)**

Introduction to graphic processes: graphic photography, screenprinting, letterpress, typography, mounting, laminating, and their application to media materials.

**MRT 114 Media Materials II 4(4-0)**

Prerequisite: MRT 112 or department approval. In a workshop atmosphere, students use MRT 112 skills to meet specific needs of selected college productions or group projects.

**MRT 116 Multi-Media Workshop 4(4-2)**

Shows integrated usage of film, photography, television, graphics, and other audio-visual arts; selection of the best media for a given communication problem or design.

**MRT 118 Multi-Media Workshop II 4(4-0)**

Prerequisite: MRT 116 or department approval. Continuation of MRT 116 with emphasis on specific student projects.

**MRT 120 Audio Production I 4(4-0)**

Covers the basics of audio recording techniques: audio mixing, tape editing, and microphone practices applicable to media production and live performance.

**MRT 125 Audio Production II 4(4-0)**

Prerequisite: MRT 120. Introduces professional audio equipment and techniques used to produce radio commercials and sound tracks for other media;

- explores methods of recording narration and sound effects; also, techniques for selecting music beds, timing mixes, and production mixing.
- MRT 130 Introduction to Broadcasting** 4(4-0)  
Analyzes the nature, origin, function, and development of television and radio.
- MRT 132 Fundamentals of Radio** 4(4-0)  
Survey of the radio broadcast industry: careers, qualifications, responsibilities, station operations. Introduces basic studio production and on-air presentations.
- MRT 134 Radio Production** 4(4-0)  
Prerequisite: MRT 132. Continuation of MRT 132. Studio equipment and techniques used in radio production for recorded and live presentation. Students produce radio programs, commercials and public service announcements.
- MRT 136 Radio Performance** 4(4-0)  
Prerequisite: MRT 134. Continuation of MRT 134. Studio production principles for radio broadcast on air. Commercial, news, on-air skills practiced in class and during lab exercises. Simulation and critique of actual on-air performance.
- MRT 140 Cable Television and Other New Technology** 4(4-0)  
Provides overview of the cable television industry and changing telecommunication technologies. Use of lectures, discussions, field trips, guest experts, films, and video tapes to analyze broadband communications issues.
- MRT 145 Broadcast News I** 4(4-0)  
Survey of the broadcast news industry, including practical exercises in news-writing and presentation.
- MRT 148 Broadcast News II** 4(4-0)  
Prerequisite: MRT 145 or department approval. A continuation of Broadcast News I with more emphasis on newswriting and presentation. Typing skills necessary.
- MRT 150 Fundamentals of Television** 4(4-0)  
Analyzes components of effective visual communication. Stresses pre-production work such as scriptwriting, storyboarding, light plot, and floor plan design, as well as graphic card preparation. Provides some "hands-on" studio experience.
- MRT 152 Television Production I** 4(4-0)  
Prerequisite: MRT 150 or department approval. Offers extended access to TV production equipment and facilities. Practice exercises involve students in all crew responsibilities. Emphasis on practical application of theoretical framework provided in MRT 150. Graded exercises.
- MRT 155 Television Production II** 4(4-0)  
Prerequisite: MRT 152 or department approval. A more vigorous application of skills learned in MRT 152. Student will also participate in individual projects.
- MRT 158 Television Production III** 4(1-6)  
Prerequisite: MRT 155 or department approval. A vigorous application of studio based video production skills learned in MRT 155, emphasizing pre-production and production techniques.
- MRT 160 Radio-Television Copywriting** 4(4-0)  
Planning, preparing, and writing basic script materials for radio and television production. Emphasis on practical copy needs of broadcasting stations, such as commercial messages, station continuity, promotion, and public service announcements.
- MRT 165 Radio News and Public Affairs Writing** 4(4-0)  
Basic writing techniques and formats utilized in preparing scripts for radio newscast and public affairs programs.
- MRT 170 Audio Systems Maintenance** 4(4-0)  
Prerequisite: MRT 120, MRT 220, OR MRT 218. Hands-on experience in troubleshooting and routine maintenance of audio recording, production, and audio systems equipment. Practice in techniques for interconnecting audio devices, basic tape recorder alignment.
- MRT 180 Media and the Future** 4(4-0)  
Study of the interrelationship between media and society.
- MRT 200 TV-Film Graphics** 3(3-0)  
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.
- MRT 210 Broadcast Sales I** 4(4-0)  
Covers methods and specialized skills employed in selling radio and television advertising and air time.
- MRT 212 Broadcast Sales II** 4(4-0)  
A continuation of Broadcast Sales I.
- MRT 215 Radio Program Director** 4(4-0)  
Prerequisite: MRT 132. Covers radio station operation from management's perspective; FCC rules and other legal considerations as they pertain to programming and daily station operations; ratings, advertising and sales, promotion, and station relationships between departments and with community.
- MRT 218 Sound Reinforcement** 4(4-0)  
Prerequisite: MRT 120 or department approval. Teaches principles and practical techniques that apply to sound reinforcement for voice, music performance, theatre, film, and television. Includes equipment selection, setup, troubleshooting, and operations.
- MRT 219 Sound Reinforcement Practicum** 4(4-0)  
Prerequisite: MRT 218 or department approval. A continuation of MRT 218 giving practical experience in planning, setup, and operation of varied sound reinforcement systems used in musical performance theatre.
- MRT 220 Audio Recording I** 4(2-4)  
Prerequisite: MRT 120. Introduces professional audio recording equipment and applies techniques learned in MRT 120 to location and studio recording. Placement of microphones and mixing to two-track format is emphasized.
- MRT 225 Audio Recording II** 4(4-0)  
Prerequisite: MRT 220. Deals with special techniques used in multi-track recording studios, using four- and eight-track recorders and signal processing devices for recording and mixdown.
- MRT 230 Audio Production III** 4(2-4)  
Prerequisite: MRT 125. Advanced techniques in creative audio production; applies the multi-track recorder to complex commercial and media production projects.
- MRT 234 Radio Workshop** 5(2-10)  
Prerequisite: MRT 132 or Department approval. Advanced operations in production and management of the student-operated radio stations.
- MRT 235 Audio Recording III** 4(4-0)  
Prerequisite: MRT 225. Provides additional hands-on experience to refine technical and creative recording skills.
- MRT 242 Radio Practicum** 2(2-0)  
Prerequisite: Department approval. 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.
- MRT 246 TV Practicum** 2(0-4)  
Prerequisite: Department approval. Practical experience in television studio operation. Students work on assigned video projects, which vary according to production schedules.
- MRT 250 Electronic Field Production I** 4(4-0)  
Prerequisite: MRT 152. Remote video production emphasizing equipment operation, single camera shooting styles, and basic video editing.
- MRT 251 Electronic Field Production II** 4(4-0)  
Prerequisite: MRT 250. A more vigorous application of skills learned in Electronic Field Production I, emphasizing individual remote projects. Computer controlled editing stressed.
- MRT 252 TV Producer-Director** 4(4-0)  
Prerequisite: MRT 155. 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.

<b>MRT 255 Television Lighting</b> 4(4-0)	<b>PHO 126 Basic Motion Picture Production</b> 4(3-3)
Prerequisite: MRT 152. Theory and practice of lighting for television.	Introduction to all aspects of filmmaking 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 in introductory procedures in filmmaking.
<b>MRT 260 The Social Impact of Television</b> 4(4-0)	<b>PHO 128 Photographic Design</b> 4(4-0)
Study of the effects of television on society. Critically explores such issues as violence, sexuality, children, advertising, stereotypes, and others.	Prerequisite: PHO 120 or concurrent. Explore, through photographic medium, the elements and principles of design.
<b>MRT 275 Documentary Television in the U.S.</b> 4(4-0)	<b>PHO 129 Professional Photographic Technical Lecture</b> Variable
A critical study of the history of documentary television in the United States.	Facets of the role of the professional photographer: materials, processes, and new developments.
<b>MRT 280 Television in Education</b> 4(4-0)	<b>PHO 136 Fundamentals of Cinematography and Sound</b> 4(4-0)
Design and production of instructional materials for television, instructional design techniques appropriate for video production.	Prerequisite: PHO 126. Principles of composition, lighting, sound, continuity, mood, and dramatic impact. Operation of professional cameras, film and exposure, sync sound, coverage and camera angles.
<b>MRT 285 Media Portfolio</b> 8(8-0)	<b>PHO 138 Understanding Photographic Communication</b> 3(3-0)
Prerequisite: Department Approval. Individualized project provides student opportunity to demonstrate media skills in production of a portfolio tape. Proposal approved by Program Director required.	By viewing photographs, interacting with guest experts, participating in class discussions, and completing assigned readings, the student will acquire an understanding of photographic content and function.
<b>MRT 290 Independent Study</b> 2(2-0)	<b>PHO 140 Introduction to Photography II</b> 4(2-4)
<b>MRT 291 Independent Study</b> 3(3-0)	Prerequisite: PHO 120. Continuation of PHO 120 with refinement of exposure, processing, printing controls, and print finishing.
<b>MRT 292 Independent Study</b> 4(4-0)	<b>PHO 146 Fundamentals of Lighting</b> 4(4-0)
Pursuit of advanced study in areas not formerly taught within the curriculum. Students must submit written applications detailing their projects for departmental approval.	Use of 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.
<b>MRT 296 Internship in Media Production</b> Variable	<b>PHO 149 Photographic Technical Laboratory</b> Variable
Prerequisite: Department Approval. MRT students work up to 30 hours per week as interns in a professional media environment.	Prerequisite: Department approval. Demonstration, laboratory experience, and involvement with and about new ideas in the photographic field.
<b>MRT 299 Seminar in Special Subjects</b> 4(4-0)	<b>PHO 150 Basic Photo-Chemistry</b> 3(3-0)
Courses Offered in Photography (PHO) by the Media Department—by Course Number, Title, Credits Allowed, and Description.	
<b>PHO 108 History of Photography I</b> 3(3-0)	Prerequisite: PHO 120. Introduction to the black-and-white photo-chemical processes including chemical compounding and testing.
Survey of the development of photography through study of the people and processes involved.	<b>PHO 154 Professional Product Lighting</b> 3(3-0)
<b>PHO 110 Basic Camera Operation</b> 3(3-0)	Prerequisite: PHO 140 or concurrent. Lighting problems encountered in photography of products of various shapes, textures, specular quality, and reflectance. Students will conduct problem-solving projects to determine their competence in meeting and overcoming common lighting problems utilizing simple, readily available lighting equipment.
Practical application of camera controls and pictorial composition utilizing commercial processing for class projects.	<b>PHO 155 Black and White Printing Lab</b> 2(0-4)
<b>PHO 111 Basic Camera Operation II</b> 3(3-0)	Prerequisite: PHO 140/Department approval. Guided practice in black and white printing geared to each student's need or problem.
Prerequisite: PHO 110 or equivalent. Emphasis on the photographic image, as opposed to the mechanics of camera operation, practice in photographic composition and design, photography under adverse lighting conditions, photography of sporting events, informal portraiture, close-up photography, creative use of electronic flash, abstract photography, and the use of accessory lenses and lens attachments.	<b>PHO 158 Print Finishing and Presentation</b> 3(3-0)
<b>PHO 116 Film History</b> 3(3-0)	Prerequisite: PHO 120. Development of expertise in print finishing and presentation.
Focus on the major historical, technical, social and artistic developments from the beginning of motion pictures to the present. Each week, the class examines a major theme and views films related to that theme.	<b>PHO 160 Introduction to Photography III</b> 4(4-0)
<b>PHO 117 Law Enforcement Photography</b> 3(3-0)	Prerequisite: PHO 140. Continuation of PHO 140 with emphasis placed on visual perception, introduction to medium and large formats, survey of 200 level specializations, and preparations for 200 level review.
Prerequisite: Department approval and PHO 110. Camera skills required for on-the-spot documentation for use as evidence by enforcement officers.	<b>PHO 161 Camera Maintenance</b> 2(2-0)
<b>PHO 118 History of Photography II</b> 3(3-0)	Prerequisite: PHO 120. Fundamentals of caring for photographic equipment, including routine maintenance, preventive maintenance, simple servicing and cleaning, as well as basic adjustments.
Survey of contemporary photographers and processes.	<b>PHO 165 Manipulative Black and White Printing</b> 4(3-2)
<b>PHO 120 Introduction to Photography I</b> 4(2-4)	Prerequisite: PHO 160 or concurrent. Imagery achieved through manipulative camera and darkroom techniques. An introduction to various special films and papers and their use.
Introduction to types of cameras, camera controls, exposure and selection of sensitized materials. Camera handling and exposure techniques are emphasized. Students will process, proof, and print their own work; print spotting, mounting and presentation will be covered. Adjustable camera required. Students supply film and paper.	<b>PHO 166 Fundamentals of Film Editing and Sound</b> 4(4-0)
<b>PHO 125 Black and White Processing Lab</b> 3(2-2)	Prerequisite: PHO 126. Assembling picture and sound elements for effective and dramatic impact. Editing action and dialogue sequences. Building sound tracks with music, dialogue, and sound effects. Exercise and practical editing projects.
Prerequisite: PHO 110. Film and paper processing, exposure control for black and white work, and information needed to proceed in photographic classes. Students are required to provide film and paper.	



- PHO 170 Basic Color Processing and Printing** 4(2-4)  
Prerequisite: PHO 110. Basic color processing and printing, using readily available equipment, designed primarily for the photographer who has no requirements for production color printing. Emphasis is 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.
- PHO 175 Photographic Theory Laboratory** 2(0-4)  
Prerequisite: Department approval. A trouble-shooting class for students whose deficiencies in photography would prevent their continuing in the course sequences. The objective is to provide the student with the necessary skills to enter the photo program beyond the Intro III level.
- PHO 176 Fundamentals of Film Directing** 3(3-0)  
Prerequisite: PHO 126. Covers directing motion pictures, principles of story development, production planning, work with actors, creative staging, coverage, continuity, sequences for theatrical or documentary films.
- PHO 179 Media Studies: Photography I** 11(7-8)  
Together with PHO 189 and PHO 199, this course forms the first year of the Institute program in photography. At the completion of the year, students will establish credits in the following: PHO 108, PHO 120, PHO 128, PHO 129 (1 cr.), PHO 140, PHO 154, PHO 160, PHO 190, PHO 200, PHO 220.
- PHO 186 Fundamentals of Film Animation** 3(3-0)  
Prerequisite: PHO 126. Covers concepts used in animation of motion pictures; student will produce animated film(s) and projects.
- PHO 189 Media Studies: Photography II** 11(9-4)  
Prerequisite: PHO 179. Together with PHO 179, and PHO 199 this course forms the first year of the Institute program in photography. At the completion of the year, students will establish credits in the following: PHO 108, PHO 120, PHO 128, PHO 129 (1 cr.), PHO 140, PHO 154, PHO 160, PHO 190, PHO 200, PHO 220.
- PHO 190 The Business of Photography** 3(3-0)  
Prerequisite: PHO 160 or concurrent. Study of occupational situations and opportunities in the photographic industry.
- PHO 199 Media Studies: Photography III** 11(9-4)  
Prerequisite: PHO 189. Together with PHO 179, and PHO 189 this course forms the first year of the Institute program in photography. At the completion of the year, students will establish credits in the following: PHO 108, PHO 120, PHO 128, PHO 129 (1 cr.), PHO 140, PHO 154, PHO 160, PHO 190, PHO 200, PHO 220.
- PHO 200 Introduction to Color Theory** 3(3-0)  
Prerequisite: PHO 140. Introduction to color theory, materials, and their practical application.
- PHO 201 Photo-Journalism I** 3(2-2)  
Prerequisite: PHO 140. Techniques involved in photography for publication, including events, story-telling, and photography at the decisive moment.
- PHO 202 Portrait I** 4(4-0)  
Prerequisite: PHO 160. Lighting techniques and lighting systems in a variety of modes; performance of posing and lighting exercises on single persons, couples, and small groups.
- PHO 203 Environmental Photography I** 4(4-0)  
Prerequisite: PHO 160/200. Techniques and equipment utilized in nature and environmental photography.
- PHO 204 Large Format Photography I** 4(2-4)  
Prerequisite: PHO 160. Camera technique, perspective and sharpness controls, optics, processing and printing of large format negatives. 4 x 5 cameras provided.
- PHO 205 Non-Silver Photography I** 4(4-0)  
Prerequisite: PHO 150 or PHO 165. An introduction to the various non-silver processes which preceded the silver print.
- PHO 206 Film Production Workshop I** 4(2-4)  
Prerequisite: 9 credits from PHO 136 - 186. 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.
- PHO 207 Close-up Photography I** 3(3-0)  
Prerequisite: PHO 160. Study of the specialized equipment and lighting techniques unique to this area of photography.
- PHO 208 Color Applications and Aesthetics** 4(4-0)  
Prerequisite: Department approval. Will survey the history of color photography, evaluate the use of color as a commercial tool and evaluate students use of color in photography.
- PHO 209 Professional Black and White Printing** 4(4-0)  
Prerequisite: PHO 160. Introduction to production printing, including processing, proofing, finishing, and presentation of commercial black-and-white prints.
- PHO 210 Color Processing** 2(2-0)  
Prerequisite: PHO 160/200. Study of reversal and negative color film and paper processing procedures. Emphasizes process monitoring for quality control.
- PHO 214 Zone System Photography** 4(2-4)  
Prerequisite: PHO 160. 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.
- PHO 216 Film Production Workshop II** 4(2-4)  
Prerequisite: PHO 206. Students who have completed PHO 206 may produce their own films, under supervision, to increase their technical and practical experience.
- PHO 220 Color Printing I** 4(2-4)  
Prerequisite: PHO 160/200. Introduction to the materials and processes of color printing.
- PHO 221 Photo-Journalism II** 4(4-0)  
Prerequisite: PHO 160/201. Continuation of photography for publication.
- PHO 222 Portrait Photography II** 4(4-0)  
Prerequisite: PHO 202/204/220. 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.
- PHO 224 Large Format Photography II** 4(4-0)  
Prerequisite: PHO 204/220. Continuation of techniques used in large format photography. Emphasis on studio product lighting, architectural photography, and use of color films.
- PHO 225 Non-Silver Processes II** 4(4-0)  
Prerequisite: PHO 160/205. Continuation of PHO 205 providing in-depth experience in several non-silver photo processes.
- PHO 226 Film Production Workshop III** 4(2-4)  
Prerequisite: PHO 216. Students who have completed PHO 216 may produce their own films, under supervision, to increase their experience and build their personal film portfolios.
- PHO 230 Cibachrome Printing** 4(2-4)  
Prerequisite: PHO 220 and Department approval. Designed to introduce the student to the equipment, technique and process of the cibachrome color print system.
- PHO 231 Composition, Cropping and Editing** 4(4-0)  
Prerequisite: PHO 160/201. Fundamentals of composing, cropping and editing photographs. This is essential for photojournalism students and valuable for all students in the vocational photography program.
- PHO 232 Bridal and Wedding Photography** 3(3-0)  
Prerequisite: PHO 200/202. Problems and opportunities inherent in bridal and wedding photography.
- PHO 240 Color Printing II** 4(4-0)  
Prerequisite: PHO 220. Continuation of materials and processes used in color printing.
- PHO 242 Photographic Illustration** 4(4-0)  
Prerequisite: PHO 202/220. Combines the techniques of portrait and product 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.

**PHO 244 Large Format Photography III 4(4-0)**

Prerequisite: PHO 204/220. Continuation of large format techniques with emphasis on architectural photography.

**PHO 250 Color Printing III 4(4-0)**

Prerequisite: PHO 220. Advanced color processing and printing with emphasis on the mastery of techniques of color image construction. Includes various forms of color print manipulation, reversal processes, duplicating methods, and proper use of color analyzers.

**PHO 260 Professional Photo Workshop 4(4-0)**

Prerequisite: Department approval. Courses include field expeditions for specific study areas, professional guest lectures and workshops, and producing special requests for industry or other academic departments in the College. Specific descriptions are published in advance. May be repeated for credit.

**PHO 270 Field Projects 4(4-0)**

Prerequisite: Department approval. Work experience in actual photography situations for practical application of curriculum based skills.

**PHO 275 Advanced Photographic Theory 4(4-0)**

Prerequisite: PHO 205 or 221 or 224 or 244. Allows advanced students to pursue an area of weakness in their field of study under the guidance of an instructor. Thus the student can obtain competencies needed to proceed. May be repeated for credit.

**PHO 280 Independent Study 2(2-0)**

Prerequisite: Department approval.

**PHO 290 Independent Study 3(3-0)**

Prerequisite: Department approval. Advanced study in areas not formerly taught within the curriculum. Students must submit written application detailing their projects for departmental approval.

**PHO 296 Internship in Photography 12(12-0)**

Prerequisite: Department approval. Work up to 30 hours per week as technical assistants on photo assignments, becoming familiar with the daily operation of a production company from contact with clients in both technical and creative aspects.

**PHO 297 The Portfolio 4(4-0)**

Prerequisite: PHO 190/201/202/220. Preparation and presentation of final portfolio. Successful completion required for all Associate Degree candidates.

**PHO 298 Independent Study 4(4-0)**

Prerequisite: Department approval. Pursue advanced study in areas not formerly taught within the curriculum. Students must submit written application detailing their projects for departmental approval.

**PERFORMING ARTS DEPARTMENT**

The Performing Arts Department features courses in three disciplines: Dance, Music, and Theatre. The objectives of the Department are to direct students in development of their skills in creative expression and to provide the necessary background essential for advanced training. Course offerings are designed to meet the goals of both beginning and advanced students and to enable them to explore their potential for artistic development and achievement.

By closely coordinating the academic and production activities of programs in dance, music, and theatre, the Performing Arts Department provides students with the opportunity to explore the essential interrelationship of the arts while at the same time increasing their skills and expanding their career potential. The career training opportunities in dance have modern dance and ballet emphasis. In music, career training is offered in vocal and instrumental skills. In theatre, training emphasis may be in either performance or design and technical theatre.

Courses Offered in Dance (DNC) by the Performing Arts Department—by Course Number, Title, Credits Allowed, and Description.

<b>DNC 101 Modern Dance Beginning I</b>	<b>3(2-1)</b>
<b>DNC 102 Modern Dance Beginning II</b>	<b>3(2-1)</b>
<b>DNC 103 Modern Dance Intermediate I</b>	<b>3(2-1)</b>

<b>DNC 201 Modern Dance Intermediate II</b>	<b>3(2-1)</b>
<b>DNC 202 Modern Dance Advanced I</b>	<b>3(2-1)</b>
<b>DNC 203 Modern Dance Advanced II</b>	<b>3(2-1)</b>

Consult Dance advisor for initial placement based on previous experience.

Courses in Modern Dance technique are identified by progressive skill level. Courses include warm-up exercises, technique development, dance vocabulary, spacial relationships. Each level may be repeated for credit until skills are achieved.

**DNC 105 Dance History II 2(1-2)**

Prerequisite: DNC 106

**DNC 106 Dance History I2 (1-2)**

History of dance from prehistoric period through the development of modern dance, the beginning of jazz dance to the present; interrelationships and repetitions of major phases of dance throughout.

**DNC 107 Beginning Ballet I 3(2-1)**

**DNC 108 Beginning Ballet II 3(2-1)**

**DNC 109 Intermediate Ballet I 3(2-1)**

**DNC 207 Intermediate Ballet II 3(2-1)**

**DNC 208 Advanced Ballet I 3(2-1)**

**DNC 209 Advanced Ballet II 3(2-1)**

Consult Dance advisor for initial placement based on previous experience.

Courses in Ballet technique are identified by progressive skill level. Courses include ballet exercises for development of strength, coordination and balance. Technique development, dance vocabulary, and spacial relationships are emphasized. Each level may be repeated for credit until skills are achieved.

**DNC 110 Dance Choreography-Beginning 3(2-1)**

Creation of dance for performance. Students organize, conduct auditions, rehearse, and present a three-minute composition using three or more dancers. May be repeated three times for credit.

**DNC 114 Dunham Beginning I 3(2-1)**

**DNC 115 Dunham Beginning II 3(2-1)**

**DNC 117 Dunham Intermediate I 3(2-1)**

Consult Dance advisor for initial placement based on previous experience.

Designed to prepare the body for movement in the primitive rhythm style of the Katherine Dunham technique of modern dance. Each level may be repeated until skills are achieved.

**DNC 120 Lansing Ballet Company 4(2-4)**

Prerequisite: Audition. A performing class under the artistic direction of the Lansing Ballet Association; concerts, lecture/demonstration, and inter-discipline productions. May be repeated for credit.

**DNC 127 Gymnastics/Dance 3(2-1)**

**DNC 128 Gymnastics Dance Intermediate 3(2-1)**

**DNC 129Gymnastics Dance Advanced3 (2-1)**

Consult Dance advisor for initial placement based on previous experience.

Tumbling and dance to gymnastics on floor and balance beams. Emphasis will be on flexibility, strength and correct technique in this style of movement. May be repeated for credit.

**DNC 133 Tap I 3(2-1)**

**DNC 134 Tap II 3(2-1)**

**DNC 135 Tap III 3(2-1)**

Consult Dance advisor for initial placement based on previous experience.

- Courses in tap technique are identified by progressive skill level. Basic tap steps progressing to character and novelty tap technique. Choreographic problems in movement, time, and space analysis. May be repeated for credit until skills are achieved.
- DNC 136 Character Dance** 2(1-2)  
Prerequisite: DNC 107. Designed to provide students with the basics of character dancing as applied in classical ballet. May be repeated three times for credit.
- DNC 137 South American Folk Dance** 2(1-2)  
Introduction to culture, music, and movement in traditional dances from Argentina, Chile, Brazil and Venezuela.
- DNC 138 Pantomime** 3(1-3)  
Covers presentation and theatrical aspects of pantomime, emphasizing physical communication through flexibility and body coordination. Includes exercises designed to create illusions and characters to be performed for the class and invited guests. Also listed as THR 155.
- DNC 139 Folk Dance Intermediate** 2(1-2)
- DNC 147 Folk Dance Beginning** 2(1-2)  
Consult Dance advisor for initial placement based on previous experience.  
Instruction in the dance forms of such countries as Yugoslavia, Russia, Bulgaria, and Israel. No partner required. May be repeated for credit.
- DNC 140 Jazz Dance Beginning** 3(2-1)
- DNC 170 Jazz Dance Intermediate** 3(2-1)
- DNC 171 Jazz Dance Advanced** 3(2-1)  
Consult Dance advisor for initial placement based on previous experience.  
Courses in jazz technique are identified by progressive skill level. Music and dance of American jazz, accents and phrases of jazz music composition and performance will be emphasized in intermediate and advanced levels. May be repeated for credit until skills are achieved.
- DNC 141 Spanish Dance** 2(1-2)  
Introduction of flamenco dance as performed in southern Spain; music, hand clapping, and musical origin. May enroll singly or in couples. May be repeated for credit.
- DNC 142 Mexican Folk Dance** 2(1-2)  
Introduction to Mexican dance, music, steps, and techniques; costumes and customs; cultural evolution. May be repeated for credit.
- DNC 144 Polkas** 2(1-2)  
Introduction to fundamentals and variations in polkas. Covers music, customs, and background. May be repeated for credit.
- DNC 297 Introduction to Square Dance** 1(0-2)  
Prerequisite: Couples Only
- DNC 145 Square Dancing** 2(1-2)  
Prerequisite: Couples Only
- DNC 150 Square Dance II** 2(1-2)  
Prerequisite: DNC 145 Couples Only. Introduction to music and movement in traditional American square dance and ethnic contributions. May be repeated for credit.
- DNC 149 African Dance** 2(1-2)  
Introduction to African dance forms (Ashanti, Anlo Ewe, Ghanaia, Akan) rhythmic patterns of music, and geographic origin. May be repeated for credit.
- DNC 151 Dramatic Expression for Dance** 3(2-1)  
Prerequisite: DNC 102 or DNC 108. A course to develop dramatic expression for dance performance. May be repeated three times for credit.
- DNC 154 Independent Study I** 1(0-2)
- DNC 155 Independent Study II** 2(1-2)
- DNC 156 Independent Study III** 3(1-4)  
Prerequisite: Department Approval. For dance majors who wish to devote time to research projects, choreography, assigned student teaching projects, and other related dance interests. May be repeated for credit.
- DNC 157 Semi Private Dance Technique I** 1(1-0)
- DNC 158 Semi Private Dance Technique II** 2(2-0)
- DNC 159 Semi Private Dance Technique III** 3(3-0)  
Prerequisite: Department Approval. Intensive technical training for intermediate/advanced dance majors with special problems or areas of skill. May be repeated for credit.
- DNC 160 Private I** 1(1-0)  
Prerequisite: Department Approval. Intensive technical training for intermediate/advanced dance majors with special problems or areas of special skill.
- DNC 161 Holistic Exercise** 1(0-2)  
Instruction on becoming aware of your own patterns of stress and tension. Through body awareness and proper exercise you will learn to overcome these patterns and gain new energies and pleasures. May be repeated three times for credit.
- DNC 162 Introduction to T'ai Chi** 1(1-1)  
Basic principles of T'ai Chi, Zazen meditation, T'ue Shoe. May be repeated for credit. P/Z course.
- DNC 163 Holistic Therapy** 2(1-1)  
Techniques and therapies in Myomassology, Acupressure, Craniology, Touch for Health, and energy balancing will be taught. May be repeated three times for credit.
- DNC 164 Aerobics Maintenance** 1(0-3)  
Prerequisite: DNC 220. Advanced aerobics to increase muscle tone, improve endurance, and cardiovascular efficiency. May be repeated three times for credit. P/Z course.
- DNC 165 Applied Yoga 1** 1(1-1)  
Prerequisite: Instructor Approval. A course to utilize several stages of Yoga. Hatha Yoga, Pranayama, and Dharama will be emphasized.
- DNC 166 T'ai Chi** 3(2-1)  
Introduction to Zazen Meditation and basic principles of T'ai Chi; first 17 movements in Yang School of T'ai Chi Ch'uan. May be repeated for credit. P/Z course.
- DNC 167 Tuning Human Body Workshop** 5(0-5)  
A one day workshop which introduces techniques from Movement Therapy, Bioenergetics, Myomassology, and Acupressure to aid the student in body awareness.
- DNC 169 Dance Exercise** 1(0-2)  
Dance exercises and techniques. 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.
- DNC 176 Tuning the Human Body** 2(1-2)  
Introduction of various techniques of Movement Therapy, Bioenergetics, Myomassology and Acupressure. May be repeated for credit.
- DNC 178 Mid-Eastern Dance Performing** 2(1-2)  
Prerequisite: Audition and Department Approval. Preparation for public performance, developing a repertory of dances. Student makes costume, creates and presents a fifteen-minute dance solo, and participates in public performances. May be repeated for credit.
- DNC 187 Introduction to Clown** 3(2-2)
- DNC 188 Advanced Clown I** 3(2-2)
- DNC 189 Advanced Clown II** 3(2-2)
- DNC 190 Advanced Clown III** 3(2-2)  
Consult Dance advisor for initial placement based on previous experience.  
Basic clown types, make-up, juggling and magic will be taught. Also listed as THR 285, 286, 287, & 288.
- DNC 191 Improvisation II** 2(1-1)  
Prerequisite: Instructor Approval

<b>DNC 192 Improvisation</b>	<b>2(1-1)</b>	<b>DNC 234 Fencing Stage</b>	<b>1(0-2)</b>
Prerequisite: DNC 102. Explores the process and techniques of improvisation; personal resources, talent, and solution of improvisational problems. May be repeated for credit.		Prerequisite: Instructor Approval. To bring about realistically simulated duels using old style weapons in the fashion of the period desired. Also listed as THR 168.	
<b>DNC 195 Adagio</b>	<b>3(2-1)</b>	<b>DNC 240 Pre-classical and Medieval Dance Forms</b>	<b>2(1-2)</b>
Prerequisite: Instructor Approval		Movement and dances from eleventh to seventeenth centuries; floor patterns, rhythms, combinations; general history. May be repeated three times for credit.	
<b>DNC 200 Adagio Advanced</b>	<b>3(2-1)</b>	<b>DNC 241 Belly Dance Beginning</b>	<b>2(1-2)</b>
Prerequisite: DNC 195. Duets, solos, lifts, and precision timing between dancers to improve ability to relate physically to each other. May be repeated for credit.		<b>DNC 242 Belly Dance Intermediate</b>	<b>2(1-2)</b>
<b>DNC 198 Intermediate Ballet Practicum</b>	<b>2(1-1)</b>	<b>DNC 243 Belly Dance Advanced</b>	<b>2(1-2)</b>
Prerequisite: DNC 109. Practice and development for body conditioning, re-view of movement, and reinforcement of techniques. May be repeated for credit until skills are achieved.		Consult Dance advisor for initial placement based on previous experience.	
<b>DNC 204 Modern/Men</b>	<b>2(1-1)</b>	Basic Belide movement of Mid-Eastern dance, finger zills, structures of music, costume and history. May be repeated for credit.	
Prerequisite: Some experience. Introduction to basic modern and ballet movements for male dancers, singers, actors, and athletes to increase body control, physical strength, and agility. May be repeated for credit.		<b>DNC 265 Makeup Dance/Theatre</b>	<b>3(2-2)</b>
<b>DNC 206 Ballet/Men</b>	<b>2(1-1)</b>	Applying makeup properly for stage; effectively using supplies and techniques; evaluating assortment of makeup on the market.	
Prerequisite: Some experience. An introduction to basic ballet movement for male dancers, singers, actors, and athletes, to increase body control, physical strength, and agility. May be repeated for credit.		<b>DNC 266 Makeup Dance/Theatre Practicum</b>	<b>2(1-1)</b>
<b>DNC 210 Pointe Technique Beginning</b>	<b>2(1-1)</b>	Dance/Theatre techniques and practice in the application of makeup.	
Prerequisite: Instructor Approval.		<b>DNC 267 Introduction to Modeling</b>	<b>3(2-1)</b>
<b>DNC 213 Pointe Technique Intermediate</b>	<b>2(1-1)</b>	<b>DNC 271 Modeling II</b>	<b>1(1-1)</b>
Prerequisite: DNC 210.		Prerequisite: DNC 267	
Consult Dance advisor for initial placement based on previous experience.			
For the advanced female ballet dancer. Stresses development of strength in feet and ankles, elongated line, and classical technique. May be repeated for credit.			
<b>DNC 211 Choreography Workshop</b>	<b>3(2-1)</b>	<b>DNC 268 Visual Poise/Modeling</b>	<b>3(2-1)</b>
Prerequisite: DNC 110 and Department Approval. Students 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. May be repeated for credit.		Grace in movement; body posture and control; coordination of clothing for visual poise; adaptation of personal wardrobe.	
<b>DNC 212 Performance Workshop</b>	<b>2(1-2)</b>	<b>DNC 272 Wardrobe Coordination</b>	<b>3(2-1)</b>
Prerequisite: Instructor Approval. Students memorize a repertory for production; practice rehearsal techniques; utilize makeup, costuming, and projection techniques for public viewing. May be repeated for credit.		Development and assimilation of individual clothing style and fashion type. Clothing personality will be inspired by detail, fabric, color and accessories. A lifestyle analysis, how-to's of planning a wardrobe and shipping guidelines will also be discussed. May be repeated for credit.	
<b>DNC 214 Anatomy/Dance</b>	<b>3(2-1)</b>	<b>DNC 273 Runway Modeling</b>	<b>2(1-2)</b>
Anatomy/physiology for the dancer, actor, or athlete. Examines skeletal, muscular, respiratory, and nervous systems; principles of good nutrition; correct body placement for prevention of injuries.		Prerequisite: DNC 267. Runway modeling routines, model's turns, stage entrances and exits. May be repeated three times for credit.	
<b>DNC 215 Pirouette</b>	<b>2(1-1)</b>	<b>DNC 274 Body/Mind Compatibility</b>	<b>3(2-1)</b>
Prerequisite: DNC 108. The basic technique of pirouettes as done in classical ballet is introduced.		Developing the proper frame of mind; diet, health and total physical fitness will be under constant evaluation. Students will learn to develop into their lifestyle a strong positive attitude leading to and maintaining top physical condition. May be repeated three times for credit.	
<b>DNC 216 Ballet Literature</b>	<b>2(1-2)</b>	<b>DNC 275 Model's Internship I</b>	<b>6(3-6)</b>
The general history of the stories and music of ballets from 1861 to present. The development of the composers/choreographers and their dance contributions to the art form.		Prerequisite: DNC 267, DNC 270, Audition, and Department Approval. An advanced level training of all modeling techniques, practical experience, and individual professional development.	
<b>DNC 217 Integral Yoga I</b>	<b>1(0-2)</b>	<b>DNC 276 Skin Care and Makeup I</b>	<b>3(2-1)</b>
<b>DNC 218 Integral Yoga II</b>	<b>1(0-2)</b>	Instruction in all aspects of individual personal grooming; coordination hair style, makeup, and wardrobe will be stressed.	
Prerequisite: DNC 217 or PED 127. Emphasis on physical movement and posture of Hatha Yoga. May be repeated three times for credit.		<b>DNC 277 Hair Care and Makeup II</b>	<b>3(2-1)</b>
<b>DNC 219 Aerobic for Men</b>	<b>1(0-3)</b>	Prerequisite: DNC 276. Second level of instruction in individual hair care and makeup techniques.	
<b>DNC 220 Jazz Aerobic</b>	<b>1(0-3)</b>	<b>DNC 280 Ballroom Bronze I</b>	<b>3(2-1)</b>
Progressive physical conditioning, improving endurance and cardiovascular efficiency. May be repeated three times for credit. P/Z course.		<b>DNC 281 Ballroom Bronze II</b>	<b>3(2-1)</b>
<b>DNC 227 Fencing Beginning</b>	<b>2(1-2)</b>	<b>DNC 298 Ballroom Bronze III</b>	<b>3(2-1)</b>
Fencing skills, safety, and the opportunity to participate in a tournament. May be repeated for credit. Also listed as THR 164.		Prerequisite: Couples Only. Consult Dance advisor for initial placement based on previous experience. Introduction through the advanced level of five basic	

ballroom dances: fox trot, rhumba, swing, cha-cha, and waltz. May be repeated three times for credit.

**DNC 282 Ballroom Silver I** 3(2-1)

**DNC 283 Ballroom Silver II** 3(2-1)

Prerequisite: Couples Only. Consult Dance advisor for initial placement based on previous experience. Leading or following a partner; blending patterns in fox trot, tango, and waltz. May be repeated three times for credit.

**DNC 284 Ballroom Gold I** 3(2-1)

**DNC 285 Ballroom Gold II** 3(2-1)

Prerequisite: Couples Only. Consult Dance advisor for initial placement based on previous experience. Gold level steps in cha-cha, rhumba, samba, and meringue: developing for personal style. May be repeated three times for credit.

**DNC 286 Break Dance** 1(0-2)

Prerequisite: Department Approval. Instruction in the current style of American Jazz/Ballroom dance called Break Dance. May be repeated for credit.

**DNC 290 Free-Style Ballroom** 2(1-2)

Prerequisite: DNC 283 Couples Only. Developing and perfecting techniques in free-style exhibition. Includes principles of competition dancing; advanced movement patterns; public performance. May be repeated three times for credit.

**DNC 291 Swing/Ballroom** 1(0-2)

Prerequisite: Couples Only. Study in techniques, patterns, music and style of swing dances. Evaluation of the differences in movement, rhythms, and techniques of contributing styles in development of swing dances. May be repeated three times for credit.

**DNC 299 Western Swing Ballroom** 1(0-2)

Techniques, patterns, music and style of western style swing. Evaluation of the differences in movement, rhythms, and techniques of contributing styles in adaptation of western dances to ballroom techniques. May be repeated three times for credit.

Courses Offered in Dance Repertory (DNR) by the Performing Arts Department—by Course Number, Title, Credits Allowed, and Description.

#### **DNR 100 - DNR 149 REPERTORY CLASSES**

Prerequisite: Audition and Departmental Approval. Dance repertory classes for a single event or continuing public performance. Courses may be arranged in variable length and will include rehearsals, technical rehearsals and all performances scheduled for each section. Course content and/or title of performance is identified by course title as listed in the term schedule book. Performing classes may be repeated for credit. The following repertory classes are scheduled regularly:

**DNR 101 Modern Repertory II** 2(1-2)

Prerequisite: Audition and Department Approval. Modern repertory classes focus on the preparation of dance for performance. The student concentrates on memorization, projection, character training and polishing for performance. May be repeated for credit.

**DNR 104 Ballet Repertory II** 2(1-2)

Prerequisite: Audition and Department Approval. Ballet repertory classes focus on the preparation of dance for performance. The student concentrates on memorization, projection, character training and polishing for performance. May be repeated for credit.

**DNR 110 Jazz Repertory II** 2(1-2)

Prerequisite: Audition and Department Approval. Jazz repertory classes focus on the preparation of dance for performance. The student concentrates on memorization, projection, character training and polishing for performance. May be repeated for credit.

**DNR 119 Dance International Repertory** 1(0-2)

Prerequisite: Audition and Department Approval. A repertory class which will focus on the preparation of dances for the production of "Dance International." The students concentrate on memorization, projection, character training and polishing for performance.

**DNR 121 Summer Musical Repertory** 2(1-3)

Prerequisite: Audition and Department Approval. A repertory class which will focus on the preparation of dances for the annual summer musical. The students concentrate on memorization, projection, character training and polishing for performance. May be repeated for credit.

#### **DNR 150 - DNR 199 Performing Company Classes and Master Classes**

Prerequisite: Variable as listed in term schedule book.

Company technique classes are offered to members of performing groups to support choreography and performance skills. Some class meetings may be rescheduled to accommodate performances. Enrollment is open to all students who meet level requirements and obtain instructor approval. May be repeated for credit.

Master classes are conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes are usually scheduled in concentrated sessions of two to four days. Master class enrollment is open to all students who meet level requirements. Course content is identified by title as listed in term schedule book. Master classes may be repeated for credit. The following company classes and master classes are scheduled regularly.

**DNR 153 Master Class Ballet-Begin/Low Intermediate** 5(5-0)

Prerequisite: DNC 101 or DNC 107

**DNR 154 Master Class Ballet-High/Intermediate Advanced** 5(5-0)

Prerequisite: DNC 103 or DNC 109. Conducted by professional dancer/instructor in residence, or one who is performing/teaching in the service area. Concentrated sessions of two to four day period. May be repeated for credit. P/Z course.

**DNR 156 LBC Advanced Ballet I** 3(2-1)

Prerequisite: DNC 207

**DNR 157 LBC Advanced Ballet II** 3(2-1)

Prerequisite: DNC 208. Support ballet classes for Lansing Ballet Company (DNC 120). May be repeated for credit.

**DNR 159 Master Class Modern-Begin/Low Intermediate** 5(5-0)

Prerequisite: DNC 101 or DNC 107

**DNR 160 Master Class Modern-Intermediate/Advanced** 5(5-0)

Prerequisite: DNC 103 or DNC 109. Conducted by professional dancer/instructor in residence, or by one who is performing/teaching in the service area. Concentrated sessions of two to four day period. May be repeated for credit. P/Z course.

#### **DNR 200 - DNR 299 Dance Workshops and Seminars**

Prerequisite: Variable as listed in term schedule book.

Workshop and seminar content is identified by course title as listed in term schedule book. Classes may be scheduled for the term or may be concentrated sessions of two to four days. Guest instructors assist when available. Enrollment is open to all students who meet requirements as posted and listed in schedule book. May be repeated for credit. The following dance workshops and seminars are scheduled regularly.

**DNR 202 Advanced Jazz Workshop** 2(1-2)

Prerequisite: Instructor Approval. A course for the advanced jazz dancer concentrating on memorization, projection, character development and style variations. May be repeated for credit.

**DNR 210 Polka Workshop** 1(1-1)

International polka dance techniques. Discussion of national origin and historic significance. May be repeated for credit.

**DNR 216 Ballroom Bronze I Workshop** 1(1-1)

Traditional ballroom techniques in cha-cha, samba, tango, and rhumba. Enrollment with partner recommended but not required. May be repeated three times for credit.

**DNR 218 Beginning Tap Workshop** 1(0-2)

Introduction to and exploration of the fundamentals of tap dance technique. May be repeated for credit.

Courses Offered in Music (MUS) by the Performing Arts Department—by Course Number, Title, Credits Allowed, and Description.

**MUS 101 LanSwingers** 1(0-2)

Prerequisite: Instructor Approval. Selected vocal and instrumental ensemble that participates almost exclusively in jazz, swing, and pop choral performance.

**MUS 102 Lansing Women's Glee Club** 1(0-2)

An ensemble of women vocalists composed of students and community members to develop general musicianship and provide training in choral singing.

<b>MUS 106</b> Lansymphonic Choral Society	1(0-3)	<b>MUS 139</b> Class Piano/Major	3(2-1)
Prerequisite: Instructor Approval. 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: MUS 138	
<b>MUS 107</b> Opera Workshop	2(1-2)	<b>MUS 140</b> Class Piano/Major	3(2-1)
Prerequisite: Instructor Approval. An introductory course to the elements of opera as musical theatre.		Prerequisite: MUS 139. Sequence limited to transfer music majors to gain keyboard facility, skill in sight reading, and ability to transpose. The electronic piano lab is utilized in both individual and group playing.	
<b>MUS 108</b> Omni Opera Company	1(0-3)	<b>MUS 144</b> Keyboard Beginner I	2(1-1)
Prerequisite: Audition. A performing ensemble comprised of students who are advanced in vocal training and performing experience. This company performs in the Opera Workshop productions, fall and winter terms, and a full-scale opera each spring term.		Prerequisite: None	
<b>MUS 113</b> Summer Musical Chorus	2(1-3)	<b>MUS 145</b> Keyboard Beginner II	2(1-1)
Prerequisite: Audition. LCC's annual summer musical chorus. Members are reselected for their acting as well as singing ability and past performance experience.		Prerequisite: MUS 144	
<b>MUS 119</b> Lansing Concert Band	1(0-3)	<b>MUS 147</b> Intermediate Piano I	2(1-1)
Prerequisite: Instructor Approval. A community band 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: MUS 145	
<b>MUS 120</b> Musical Comedy Workshop	2(1-2)	<b>MUS 148</b> Intermediate Piano II	2(1-1)
Prerequisite: Audition. Develops musical comedy vocal, acting, and stage movement skills. Students perform in one or more musical comedy numbers as an end-of-term performance project.		Prerequisite: MUS 147. Sequential classes in an electronic piano lab. Students progress at own speed. For non-majors.	
<b>MUS 123</b> Jazz Ensemble	2(1-1)	<b>MUS 159</b> Piano Pedagogy/Literature	2(1-1)
Prerequisite: Some Experience. A standard performing ensemble in the jazz idiom. Necessary jazz theory instruction included throughout the course.		Prerequisite: Advanced Beginner	
<b>MUS 126</b> Lansing A Cappella Choir	1(0-3)	<b>MUS 160</b> Piano Pedagogy/Literature	2(1-1)
Prerequisite: Instructor Approval. An advanced performing group, knowledgeable in good tone production, blend and rhythm.		Prerequisite: MUS 159	
<b>MUS 130</b> Classical Guitar I	2(1-1)	<b>MUS 161</b> Piano Pedagogy	2(1-1)
Prerequisite: Instructor Approval		Prerequisite: MUS 160. Sequential classes for piano teachers and majors, covering students at elementary and intermediate levels.	
<b>MUS 141</b> Classical Guitar II	2(1-1)	<b>MUS 162</b> Survey/Piano Literature	2(1-1)
Prerequisite: Instructor Approval		Prerequisite: Advanced Skills	
<b>MUS 142</b> Classical Guitar III	2(1-1)	<b>MUS 163</b> Survey/Piano Literature	2(1-1)
Prerequisite: Instructor Approval. Sequential classes for classical guitar. Covers basic guitar technique, and musicianship, including proper sitting position, holding the instrument, proper hand positions and finger action, practicing effectively, reading music, and basic music theory. In advanced classes, students will begin to acquire a repertoire of solo pieces.		Prerequisite: MUS 162	
<b>MUS 132</b> Old Time Fiddle	2(1-1)	<b>MUS 164</b> Survey/Piano Literature	2(1-1)
Prerequisite: Some Experience. Learn 20 fiddle tunes representing different types and styles of fiddling. The tunes will be taught by ear as much as possible, although music will be made available. Tape recorder recommended.		Prerequisite: MUS 163. Sequential classes to acquaint piano teachers with piano literature suitable for developing musicianship in students at various levels of advancement.	
<b>MUS 133</b> Folk Guitar I	2(1-1)	<b>MUS 165</b> Classical Guitar Forum	1(0-2)
Prerequisite: Some Experience		Prerequisite: Instructor Approval. Students perform in class at least twice a term, and engage in discussion of a variety of musical topics related to performance. Students not ready to perform are invited to audit.	
<b>MUS 134</b> Folk Guitar II	2(1-1)	<b>MUS 168</b> Introduction to Musicianship I	3(2-1)
Prerequisite: MUS 133. Sequential classes in fingerpicking and flatpicking with emphasis on fingerpicking, both as accompaniment and soloing. Also, basic music theory, ear training, and arranging for the folk musician.		<b>MUS 169</b> Introduction to Musicianship II	
<b>MUS 135</b> Blue Grass Guitar	2(1-1)	Prerequisite: MUS 168	
Prerequisite: Some Experience. For students with some knowledge of folk guitar desiring to be introduced to the Blue Grass style of playing. Student provides own instrument.		<b>MUS 170</b> Introduction to Musicianship III	
<b>MUS 136</b> Class Organ/Pop	2(1-1)	Prerequisite: MUS 169. Sequential courses covering notation of pitch and rhythm, musical terminology, and the principles of rhythmic and melodic reading. Also, basic introduction to musical scales, key signatures, intervals, and chords.	
Class organ instruction in popular music. Students will progress at their own rate.		<b>MUS 173</b> Basic Musicianship	
<b>MUS 137</b> Blue Grass Banjo	2(1-1)	Prerequisite: Department Approval	
Introduction to Blue Grass style on banjo.		<b>MUS 174</b> Basic Musicianship	
<b>MUS 138</b> Class Piano/Major	3(2-1)	Prerequisite: MUS 173	
Prerequisite: Department Approval		<b>MUS 175</b> Basic Musicianship	
		Prerequisite: MUS 174. A sequence of courses in music theory as a freshman year requirement for a Bachelor of Music or similar four-year college degree, including a full series of ear training, sight singing and dictation.	
		<b>MUS 176</b> Advanced Musicianship	
		Prerequisite: MUS 175	
		<b>MUS 177</b> Advanced Musicianship	
		Prerequisite: MUS 176	

<b>MUS 178 Advanced Musicianship</b>	<b>4(2-3)</b>	<b>MUS 202 Kodaly Methods</b>	<b>2(2-1)</b>
Prerequisite: MUS 177. A sequence of courses in music theory as a sophomore year requirement for a Bachelor of Music or similar four-year college degree, including a full series of ear training, sight singing, and dictation.		Prerequisite: MUS 200. Supplemental to MUS 200 to give the elementary teacher assistance in teaching Kodaly methods of music instruction.	
<b>MUS 179 Class Voice/Majors</b>	<b>2(1-1)</b>	<b>MUS 205 Private Voice/Majors</b>	<b>3(0-5)</b>
Prerequisite: Department Approval. 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.		Prerequisite: Audition.	
<b>MUS 180 Class Voice/Majors</b>	<b>2(1-1)</b>	<b>MUS 206 Private Voice/Majors</b>	<b>2(0-3)</b>
Prerequisite: MUS 179. Instruction in the phonetic approach to the pronunciation of French designed for singers. The performance of the language utilizes the song literature of major composers of the French chanson.		Prerequisite: Audition.	
<b>MUS 181 Class Voice/Majors</b>	<b>2(1-1)</b>	<b>MUS 207 Private Instrument/Majors</b>	<b>3(0-5)</b>
Prerequisite: MUS 180. 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: Audition.	
<b>MUS 182 Class Voice</b>	<b>2(1-1)</b>	<b>MUS 208 Private Instrument/Majors</b>	<b>2(0-3)</b>
<b>MUS 183 Class Voice</b>	<b>2(1-1)</b>	Prerequisite: Audition.	
Prerequisite: MUS 182. Sequence of classes for group and individual work on classic literature and study of vocal techniques such as breathing, tone production, diction, phrasing, and style. Some pop music included.		<b>MUS 209 Private Keyboard/Majors</b>	<b>3(0-5)</b>
<b>MUS 185 Music Reading I</b>	<b>3(2-1)</b>	Prerequisite: Audition.	
<b>MUS 186 Music Reading II</b>	<b>3(2-1)</b>	<b>MUS 210 Private Keyboard/Majors</b>	<b>2(0-3)</b>
Prerequisite: MUS 185		Prerequisite: Audition.	
<b>MUS 187 Music Reading III</b>	<b>3(2-1)</b>	<b>MUS 211 Private Guitar/Majors</b>	<b>3(0-5)</b>
Prerequisite: MUS 186. Sequential courses for students with no previous experience in ear training. Covers solfege, musical thinking, including rote and mnemonic procedures, and introduction to the principles of sight-reading and the fundamentals of melodic, harmonic and rhythmic dictation.		Prerequisite: Audition.	
<b>MUS 188 Guitar I</b>	<b>2(1-1)</b>	<b>MUS 212 Private Guitar/Majors</b>	<b>2(0-3)</b>
<b>MUS 189 Guitar II</b>	<b>2(1-1)</b>	Prerequisite: Audition. Private lessons for music transfer students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries. Students who are not admitted into the 211 or 212 levels are recommended to take private lessons for non-majors and reaudition to meet the admission criteria.	
Prerequisite: MUS 188. Sequential classes for beginners. Note reading and music theory, learn to play single-note melody lead and chord accompaniment. Folk, blues, and classical traditions of the instrument. "Finger-style" and "Flat-pick" techniques introduced. Provide own instrument.		<b>MUS 213 Private Voice/Non-Majors</b>	<b>3(0-5)</b>
<b>MUS 190 Intermediate Bluegrass Banjo</b>	<b>2(1-1)</b>	<b>MUS 214 Private Voice/Non-Majors</b>	<b>2(0-2)</b>
Prerequisite: MUS 137. This course assumes a working knowledge of 5-string banjo tablature. Two traditional bluegrass instrumentals will be learned in the Scrugg's method. Emphasis will be placed on timing and style of playing.		<b>MUS 215 Private voice/Non-Majors</b>	<b>1(0-1)</b>
<b>MUS 192 Vocal Repertoire</b>	<b>2(2-0)</b>	Private instruction for non-major voice students.	
A historic overview of literature and performance practices of vocal repertoire by European and American composers. Students will perform representative pieces of the literature presented.		<b>MUS 216 Private Instrument/Non-Majors</b>	<b>3(0-5)</b>
<b>MUS 194 Vocal Pedagogy</b>	<b>3(2-1)</b>	<b>MUS 217 Private Instrument/Non-Majors</b>	<b>2(0-3)</b>
Prerequisite: Instructor Approval. A study of the physiologic and acoustic mechanics of singing, and an overview of the different methodological approaches used in teaching singing.		<b>MUS 218 Private Instrument/Non-Majors</b>	<b>1(0-1)</b>
<b>MUS 198 International Music</b>	<b>2(2-0)</b>	Private instruction for non-major instrumental students.	
An overview of various cultures throughout the world and their effects on the development of music theory, education and performance.		<b>MUS 219 Private Keyboard/Non-Majors</b>	<b>3(0-5)</b>
<b>MUS 199 Music Appreciation</b>	<b>2(2-0)</b>	<b>MUS 220 Private Keyboard/Non-Majors</b>	<b>2(0-3)</b>
Gives a general knowledge of musical structure, composers, compositions, terms, and the relationships of music to other arts. For non-music majors.		<b>MUS 221 Private Keyboard/Non-Majors</b>	<b>1(0-1)</b>
<b>MUS 200 Basic Music/Elementary Teachers</b>	<b>4(4-0)</b>	Private instruction for non-major piano or organ students.	
Provides Elementary Teacher majors with the basic skills to teach music in the classroom. Meets State Department of Education certification requirements for elementary classroom teachers.		<b>MUS 222 Private Guitar/Non-Majors</b>	<b>3(0-5)</b>
<b>MUS 201 Orff Methods</b>	<b>2(1-1)</b>	<b>MUS 223 Private Guitar/Non-Majors</b>	<b>2(0-3)</b>
Prerequisite: MUS 200. Supplemental course to MUS 200 designed to give the elementary classroom teacher further musical classroom skills through the demonstration of Orff methods and instruments.		<b>MUS 224 Private Guitar/Non-Majors</b>	<b>1(0-1)</b>
		Private instruction for non-major guitar students.	
		<b>MUS 226 Music Notation</b>	<b>1(1-0)</b>
		Prerequisite: MUS 168 or MUS 173. Notating music on paper, learning ranges of voices and instruments and the proper way to utilize within the concept of the music.	
		<b>MUS 227 Independent Study</b>	<b>1(1-1)</b>
		<b>MUS 228 Independent Study</b>	<b>2(1-2)</b>
		<b>MUS 229 Independent Study</b>	<b>3(1-3)</b>
		Prerequisite: Department Approval. Work on specific projects, to be approved by the instructor and/or program director.	
		<b>MUS 230 Church Choir Conducting</b>	<b>2(1-1)</b>
		<b>MUS 231 Church Choir Conducting</b>	<b>2(1-1)</b>
		Prerequisite: MUS 230. Conducting techniques and church choir literature review.	

<b>MUS 232 Music Seminar</b>	<b>1(1-0)</b>	<b>MUS 255 Class Voice/Pop</b>	<b>3(2-1)</b>
Prerequisite: Department Approval.		<b>MUS 256 Class Voice/Pop</b>	<b>3(2-1)</b>
<b>MUS 233 Music Seminar</b>	<b>2(1-1)</b>	Prerequisite: MUS 255	
Prerequisite: Department Approval.		<b>MUS 257 Class Voice/Pop</b>	<b>3(2-1)</b>
<b>MUS 234 Music Seminar3 (2-1)</b>		Prerequisite: MUS 256. Class and individual work on assigned pop music and study of important vocal techniques in pop, jazz, and rock music. Recommended as a prerequisite to private voice lessons.	
Prerequisite: Department Approval. Designed to meet special needs of students and offered on demand. Students are approved in advance by faculty. Acceptable elective credits for curriculum codes 942 and 943.		<b>MUS 258 Pop Rock Keyboard</b>	<b>2(1-1)</b>
<b>MUS 235 Harmonica I</b>	<b>1(1-1)</b>	<b>MUS 259 Pop Rock Keyboard</b>	<b>2(1-1)</b>
Introductory course demonstrating the sound techniques employed in the mastery of the harmonica.		Prerequisite: MUS 258	
<b>MUS 236 Harmonica II</b>	<b>2(1-1)</b>	<b>MUS 260 Pop Rock Keyboard</b>	<b>2(1-1)</b>
Prerequisite: MUS 235 or Equivalent. Introduces blues changes. The student will perform five blues songs and gain the ability to improvise over standard blues changes.		Prerequisite: MUS 259. An introduction to the keyboard, reading music, and principles of improvisation. Topics include chord construction, voicing, playing from chord symbols, major, minor, and blues construction.	
<b>MUS 239 Jazz History</b>	<b>2(2-0)</b>	<b>MUS 263 Arranging</b>	<b>1(1-0)</b>
General introduction to recorded jazz. Each week the class will focus on a different period, style, or group of performers. Covers instrumentation, arrangement, ensemble qualities, unison, counterpoint, call and response, differences between collective improvisation and group backing for a soloist, the differing forms of big bands and the small jazz group, the individuality of soloists within a style, the changes in style from one period to the next, the role of innovators within the music, how they influence others (or alienate others), etc.		Prerequisite: MUS 245. Planning and writing an arrangement. Includes discussions of ranges and technical possibilities of brass, strings, reeds, and electric instruments, their voicing and performance considerations.	
<b>MUS 240 Music History I</b>	<b>3(3-0)</b>	<b>MUS 264 Pop/Rock Independent Study</b>	<b>2(1-1)</b>
Prerequisite: Department Approval. Ancient Greece through Romanesque and Gothic periods, concluding with the Renaissance, Greek theory and "ethos"—age of plainsong, development of polyphony.		<b>MUS 265 Pop/Rock Independent Study</b>	<b>4(2-3)</b>
<b>MUS 241 Music History II</b>	<b>3(3-0)</b>	<b>MUS 266 Pop/Rock Independent Study</b>	<b>6(3-6)</b>
Prerequisite: MUS 240. Baroque and classical periods with special attention to fugue, opera, oratorio, sonata, and symphony. Characteristic works analyzed.		Prerequisite: Instructor Approval. Work on specific projects, to be approved by the instructor and/or program director.	
<b>MUS 242 Music History III</b>	<b>3(3-0)</b>	<b>MUS 267 Performers Band</b>	<b>2(0-3)</b>
Prerequisite: MUS 241. Romantic, impressionistic, and contemporary periods. A comprehensive final examination is administered covering MUS 240-242.		Prerequisite: Instructor Approval. For pop/rock students, with emphasis on developing and upgrading competence and effectiveness as "pop" performers.	
<b>MUS 243 Introduction to Music Education</b>	<b>3(3-0)</b>	<b>MUS 269 Recording Band</b>	<b>2(1-2)</b>
An overview of the elements involved in being a music teacher. Covers basic educational tools as well as historical perspectives of teaching music.		Prerequisite: Audition. Student 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.	
<b>MUS 244 Pop Studio Production</b>	<b>3(2-1)</b>	<b>MUS 270 Pop Guitar I</b>	<b>2(1-1)</b>
Prerequisite: Department Approval. Introduction to modern multi-channel recording techniques, taught in an off-campus 24-track recording studio. Covers equipment functions, separation techniques, basic tracks and over dubs, and the roles of musicians, producers, and engineers in the pop recording field.		<b>MUS 271 Pop Guitar II</b>	<b>2(1-1)</b>
<b>MUS 245 Pop Rock Fundamentals</b>	<b>3(3-0)</b>	Prerequisite: MUS 270. Consecutive courses in 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.	
Introduction to the patterns behind chords, scales and harmonic movement, and learning to read music.		<b>MUS 273 Pop Rock Seminar</b>	<b>1(1-0)</b>
<b>MUS 251 Lennon/McCartney</b>	<b>2(2-0)</b>	<b>MUS 274 Pop Rock Seminar</b>	<b>2(1-1)</b>
An historical survey and 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.		<b>MUS 275 Pop Rock Seminar</b>	<b>3(2-1)</b>
<b>MUS 252 History of Rock I</b>	<b>3(3-0)</b>	The subject matter, meeting special needs of the students, is approved in advance by faculty.	
Introduction to the varied styles and origins of the music called Rock 'n' Roll, as well as some of the major figures behind it.		<b>MUS 276 Lyric Writing</b>	<b>3(3-0)</b>
<b>MUS 253 Business of Music</b>	<b>4(4-0)</b>	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.	
Lectures by professional musicians, booking agents, union officials, recording artists, etc. to assist in understanding the pitfalls of the profession, how to avoid them, and how to succeed.		<b>MUS 277 Private Songwriting</b>	<b>1(0-1)</b>
<b>MUS 254 Pop Band Management</b>	<b>2(2-0)</b>	Prerequisite: MUS 245.	
Prerequisite: MUS 253 or Instructor Approval. Designed to assist the professional musician or manager in the creation or improvement of a performing band. All major aspects of band management are covered, including intra-band agreements, contracts, negotiations, choice of format and material, equipment, finances, promotion and sales, road management, and basic organizational information.		<b>MUS 278 Private Songwriting</b>	<b>2(0-3)</b>
		Prerequisite: MUS 245.	
		<b>MUS 279 Private Songwriting</b>	<b>3(0-5)</b>
		Prerequisite: MUS 245. Private coaching in writing and copyrighting musical compositions, giving attention and suggestions in harmony, chord substitution, and formal design.	
		<b>MUS 280 Rock Percussion</b>	<b>2(1-1)</b>
		<b>MUS 281 Advanced Rock Percussion</b>	<b>2(1-1)</b>
		Prerequisite: Advanced Skills. Percussion techniques with emphasis on rock rhythms and concepts.	



<b>MUS 282 Private Voice/Pop Rock</b>	<b>1(0-1)</b>	<b>THR 131 Studio Theatre Performance</b>	<b>2(1-2)</b>
<b>MUS 283 Private Voice/Pop Rock</b>	<b>2(0-3)</b>	Prerequisite: THR 130 concurrently. Provides the student an opportunity to practice the process of rehearsal and performance. Focus on the understanding and implementation of the skills acquired and the relationships experienced between the actor and the script, and the actor and director. Production skills also taught.	
<b>MUS 284 Private Voice/Pop Rock</b>	<b>3(0-5)</b>	<b>THR 150 Oral Interpretation</b>	<b>3(2-1)</b>
Private vocal instruction emphasizing pop production.		Themes and concepts of literature, drama and poetry, and the technical skills (voice, emotion, etc.) needed to communicate them. Students will perform selections at the end of the term for an audience.	
<b>MUS 285 Private Instrument/Pop Rock</b>	<b>1(0-1)</b>	<b>THR 151 Readers Theatre</b>	<b>2(1-2)</b>
<b>MUS 286 Private Instrument/Pop Rock</b>	<b>2(0-3)</b>	An oral approach to the study of literature. Students participate in individual and group readings of plays, poetry, and stories. Exploration of the principles of vocal production, expression, and characterization included.	
<b>MUS 287 Private Instrument/Pop Rock</b>	<b>3(0-5)</b>	<b>THR 152 Stage Voice I</b>	<b>2(2-0)</b>
Private instrumental instruction emphasizing pop technique and style.		Basic techniques of expressive speech, vocal projection, and other stage-related communication methods. Examines the major physiological features of the speaking voice, control through abdominal breathing, practice of the phonetic alphabet, and recitation of short passages using various dialects.	
<b>MUS 288 Private Keyboard/Pop Rock</b>	<b>1(0-1)</b>	<b>THR 153 Stage Voice II</b>	<b>2(2-0)</b>
<b>MUS 289 Private Keyboard/Pop Rock</b>	<b>2(0-3)</b>	Prerequisite: THR 152. A continuation of THR 152 with emphasis on more sophisticated style of voice for the stage, involving individual production requirements.	
<b>MUS 290 Private Keyboard/Pop Rock</b>	<b>3(0-5)</b>	<b>THR 155 Pantomime</b>	<b>3(1-3)</b>
Private keyboard instruction emphasizing pop technique and style.		Covers presentation and theatrical aspects of pantomime, emphasizing physical communication through flexibility and body coordination. Includes exercises designed to create illusions and characters to be performed for the class and invited guests. Also listed as DNC 138.	
<b>MUS 291 History of Rock II</b>	<b>3(3-0)</b>	<b>THR 157 Advanced Pantomime</b>	<b>3(1-3)</b>
Prerequisite: MUS 252. A continuation of MUS 252 with more emphasis on contemporary Rock and Roll music and the major performers and figures behind it.		Prerequisite: THR 155. Improving and perfecting skills learned in THR 155. Additional skills include application of make-up, creating a costume, and the rehearsal process. When possible, public performances will be scheduled.	
<b>MUS 294 Piano Tuning</b>	<b>4(2-4)</b>	<b>THR 164 Fencing Beginning</b>	<b>2(1-2)</b>
Prerequisite: Instructor Approval. Basic knowledge and skills to tune and repair pianos.		Introduces basic skills and concepts of fencing. Fencing safety also included. Opportunity to bout in addition to practice sessions. Also listed as DNC 227.	
<b>MUS 296 Introduction to Music Therapy</b>	<b>3(3-0)</b>	<b>THR 168 Fencing Stage</b>	<b>1(0-2)</b>
An overview of music therapy with emphasis on employment qualifications and opportunities.		Prerequisite: Instructor Approval. Uses and expands the rudiments of competitive fencing, specifically movements designed for use on the stage and in choreography. Also listed as DNC 234.	
<b>MUS 297 Computers and Music</b>	<b>2(1-2)</b>	<b>THR 175 Theatre History</b>	<b>3(3-0)</b>
Prerequisite: Instructor Approval. A broad survey of the role of computers in the discipline of music. Topical areas include an historical overview of the applications of computers in music, sound synthesis techniques, synthesis hardware and signal processing, computer-assisted instruction, psychoacoustics and sound analysis. Students will receive practical experience in the computer laboratory with computer-assisted analysis and instruction on the DEC VA X 11/780 and IBM personal computers.		An examination of the history of drama from primitive times to the present, introducing the overall pattern of theatre history with emphasis on European and American development.	
<b>MUS 298 Rhythmic Skills</b>	<b>2(1-1)</b>	<b>THR 176 Introduction to Black Theatre</b>	<b>2(2-1)</b>
Introduction to rhythmic notation and performance. Learn to recognize, perform, notate, and hear rhythmic patterns in various meters.		Covers important periods of black theatre. Playwrights and their works read and discussed. Corresponding scene work and script analysis provide students with practical opportunities to become familiar with styles, themes, and aesthetics of black theatre.	
<b>MUS 299 Blues Harp</b>	<b>2(1-1)</b>	<b>THR 184 Stage Combat</b>	<b>2(1-2)</b>
Prerequisite: Instructor Approval. Introduction to the techniques of playing blues or cross harmonica. No background in the instrument is necessary.		Provides a grounding in skills necessary for creating the illusion of physical conflict—without peril to the performer. Respect for the weapon, for the fight partner, and for oneself is stressed. This course covers basic rapier, dagger, and broadsword techniques; international choreography notation; and simple rules for combat as good theatre.	
Materials provided except for a key of C Diatonic harmonica.		<b>THR 187 Audition Techniques</b>	<b>3(2-1)</b>
Courses Offered in Theatre (THR) by the Performing Arts Department—by Course Number, Title, Credits Allowed, and Description.		Examines the theatrical audition process by developing monologues and characters, experiencing sight-reading techniques, and preparing working resumes. Study includes musical auditions and the preparation of musical pieces.	
<b>THR 105 Introduction to Theatre</b>	<b>3(3-0)</b>	<b>THR 188 Advanced Audition Techniques</b>	<b>3(2-1)</b>
Elements in theatre: audience, cast, director, designers, technicians, and historical development. Students will discuss and participate in production techniques and evaluate performances.		Prerequisite: THR 187. A continuation of THR 187 with further refinement of basic audition techniques and concepts.	
<b>THR 110 The Teacher as a Performing Artist</b>	<b>3(2-1)</b>	<b>THR 200 Method Acting Workshop</b>	<b>3(2-1)</b>
A presentational approach to the art of public speaking, in the classroom, in professional situations, or in one-on-one communication. Includes development of vocal and physical (gestures, facial expressions) skills to enhance presentations, identification of distracting habits and mannerisms, and dealing with nervousness and stress.			
<b>THR 111 Creative Dramatics for Elementary Teaching</b>	<b>2(1-1)</b>		
Focus on developing drama skills in children, using techniques in improvisation, music, costumes, and puppetry. Develops the concentration, imagination, cooperation, and observation skills of students. Useful in teaching other subjects in various curricula.			
<b>THR 130 Studio Theatre Practicum</b>	<b>2(1-2)</b>		
Prerequisite: THR 131 concurrently. Covers the "scoring" of an entire script and uses skills acquired in Introduction to Acting (THR 250) and Acting I (THR 251); i.e., character development, rhythm, style, pacing, and movement.			

<b>THR 201 Advanced Method Acting Workshop</b>	<b>3(2-1)</b>	<b>THR 230 Theatre Workshop</b>	<b>12(5-15)</b>
Prerequisite: THR 200. An in-depth study of Method Acting as formulated by Constantin Stanislavski and popularized by the Actor's Studio. Includes preparation, internal control, and approach necessary to sustain a character for dramatic presentation. Teaches use of emotion as a portion of the technique an actor learns in developing personal performance process.		Prerequisite: Department Approval. An extensive summer apprentice experience in elementary principles of theatrical production under the supervision of professional actors, directors, and technicians with an area theatre company. Includes acting, properties, set construction, costuming, and lighting principles. Requires additional lab time.	
<b>THR 210 Introduction to Production</b>	<b>2(2-0)</b>	<b>THR 231 Theatre Workshop - LCC</b>	<b>6(2-10)</b>
A backstage look at live theatre as an introduction to production. Provides an overview of performing arts with special tours to area theatres and performances spaces. The class will attend performances in the facilities toured and will evaluate the spaces and performances.		A modified summer apprenticeship program designed for high school students as well as college students. Includes acting, technical theatre, and costuming, using the facilities at the college as a laboratory. Requires additional lab time.	
<b>THR 211 Production Practicum I</b>	<b>1(1-2)</b>	<b>THR 235 Theatre Special Projects</b>	<b>2(1-3)</b>
Prerequisite: Department Approval.		<b>THR 236 Theatre Special Projects</b>	<b>4(2-4)</b>
<b>THR 212 Production Practicum I</b>	<b>2(1-4)</b>	<b>THR 237 Theatre Special Projects</b>	<b>1(0-2)</b>
THR 211-213 offered for variable credit depending on the student's desire for scope of laboratory experience. An introduction to techniques of stage craft for the performing arts. The basic fundamentals involved in tool usage and safety, stage lighting, lighting plot interpretation, fundamentals of color, and understanding of the organization of backstage production.		Prerequisite: Department Approval. Limited to individuals who have been selected as cast members in a scheduled LCC theatre production.	
<b>THR 213 Production Practicum I</b>	<b>3(1-6)</b>	<b>THR 246 Introduction to TV/Film Acting</b>	<b>3(2-1)</b>
Prerequisite for THR 211: Departmental Approval. These courses offered for variable credit depending on the student's desire for scope of laboratory experience. An introduction to techniques of stage craft for the performing arts. The basic fundamentals involved in tool usage and safety, stage lighting, lighting plot interpretation, fundamentals of color, and understanding of the organization of backstage production.		Designed to introduce the beginning acting student to the basic skills needed for working in front of the camera, including scene study, basic terminology, use of energy in front of the camera, and individual evaluation.	
<b>THR 215 Design Practicum I</b>	<b>3(2-1)</b>	<b>THR 247 Acting for TV Commercials</b>	<b>3(2-1)</b>
An introduction to the elements of design and how they relate to performance. Introduction to color theory as it relates to paint, light, and fabric. Techniques of rendering, translation of a picture to 3-dimensionality, spacial relationships and development of a design concept also covered.		Designed to provide the student with an introduction to the concept of commercials, the audition, the cold reading, and the taping session.	
<b>THR 216 Design Practicum II</b>	<b>3(2-1)</b>	<b>THR 250 Introduction to Acting</b>	<b>2(2-1)</b>
Prerequisite: THR 215 or Department Approval. A continuation of study begun in Design Practicum I. In addition, the student will learn model building as the final element in the design process.		Discusses various acting techniques and introduces the beginning student to the skills necessary to maintain a sustained dramatic performance. Theatre games and improvisation exercises to overcome stage fright and to develop concentration and listening skills are heavily emphasized.	
<b>THR 217 Design Practicum III</b>	<b>3(2-1)</b>	<b>THR 251 Acting I</b>	<b>3(2-2)</b>
Prerequisite: THR 216 or Department Approval. Advanced study in the design process. A continuation of training begun in Design Practicum I and II.		An introduction to the vocal and physical skills necessary to sustain public performance. The fundamentals of acting, including improvisational techniques, the rehearsal process, character analysis, scene study, and production a recovered.	
<b>THR 218 Scene Painting</b>	<b>3(1-2)</b>	<b>THR 252 Acting II</b>	<b>3(2-2)</b>
Designed to teach the basics of scene painting, including instruction in color theory, various brands and types of paint available, and use of tools and techniques of scene painting.		Prerequisite: THR 251. A continuation of the fundamental skills of acting. Students review techniques presented and add more complicated skills as abilities increase.	
<b>THR 221 Production Practicum II</b>	<b>1(1-2)</b>	<b>THR 253 Acting III</b>	<b>3(2-2)</b>
THR 211-213 offered for variable credit depending on the student's desire for scope of laboratory experience. An introduction to techniques of stage craft for the performing arts. The basic fundamentals involved in tool usage and safety, stage lighting, lighting plot interpretation, fundamentals of color, and understanding of the organization of backstage production.		Prerequisite: THR 252. Continued training in the fundamentals of acting. Students review and practice skills demonstrated, and apply them to acting styles from various historical periods. Course may be repeated up to three times for credit.	
<b>THR 222 Production Practicum II</b>	<b>2(1-4)</b>	<b>THR 255 Stage Makeup</b>	<b>3(2-2)</b>
Prerequisite: THR 211 or 212 or 213 or Department Approval. Intermediate techniques of stage craft for the performing arts. Students continue training in tool usage and safety, stage lighting, lighting plot, floorplan, working drawing interpretation and fundamentals of color, acquiring a more detailed understanding of the organization of backstage production.		A study in the application of stage makeup to develop a character and to assist the actor in sustaining the character in performance. Emphasizes skills in the use of different kinds of makeup, hairstyling, and appearance changes utilizing various chemical compounds.	
<b>THR 223 Production Practicum II</b>	<b>3(1-6)</b>	<b>THR 260 Directing</b>	<b>3(2-2)</b>
Prerequisite: THR 211 or 212 or 213 or Department Approval. Intermediate techniques of stage craft for the performing arts. Students continue training in tool usage and safety, stage lighting, lighting plot, floorplan, working drawing interpretation and fundamentals of color, acquiring a more detailed understanding of the organization of backstage production.		Prerequisite: THR 251. A study of the theories and practice used in directing for the stage. Students examine the principles and terms used in dramatic analysis, prepare written character analyses, develop a comprehensive rehearsal schedule, and conduct rehearsals with goals selected for each rehearsal.	
<b>THR 224 Production Practicum III</b>	<b>3(1-6)</b>	<b>THR 267 Costume History</b>	<b>3(3-0)</b>
Prerequisite: THR 223 or Department Approval. A continuation of training begun in Production Practicum I and II.		Styles and approaches to costuming design through the ages with an emphasis on European and American Theatre.	
<b>THR 225 Stage Management</b>	<b>3(3-0)</b>	<b>THR 275 Children's Theatre</b>	<b>3(2-2)</b>
An introduction to the basic techniques of stage management, emphasizing 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.		Acting in and directing shows for young people. Includes writing and/or adapting scripts, rehearsal techniques, and development of skills necessary to sustain a characterization for performance.	
<b>THR 226 Advanced Stage Management</b>	<b>3(3-0)</b>	<b>THR 276 Advanced Children's Theatre</b>	<b>3(2-2)</b>
Prerequisite: THR 225. Practical experience in stage work; the student is assigned to act as stage manager or assist the stage manager in a production.		Prerequisite: THR 275. Continuing experience in acting in and directing shows for young people, sharpening skills with specific projects for the actor and	

director. In-depth research into aspects-costuming, staging, makeup, rehearsal periods, music, sponsors, audiences, and forming a company.

**THR 281 Directed Independent Study 6(3-6)**

**THR 282 Directed Independent Study 4(2-4)**

**THR 283 Directed Independent Study 2(1-2)**

**THR 284 Directed Independent Study 3(2-1)**

Prerequisite: Instructor Approval. Independent study are provided for advanced students working on special projects outside the scope of standard classroom instruction.

**THR 285 Introduction to Clown 3(2-2)**

Introductory course in the art of clowning. Basic clown types, makeup, juggling, balloonology, and beginning magic. Also listed as DNC 187.

**THR 286 Advanced Clown I 3(2-2)**

Prerequisite: THR 285. An advanced course in the art of clowning for the performance career student. Unique clown types, advanced clown makeup, juggling, balloonology, and sleight of hand tricks are examined. Emphasis on creating an original clown character including costume, makeup, and appropriate skits; projection and performance. Also listed as DNC 188.

**THR 287 Advanced Clown II 3(2-2)**

Prerequisite: THR 286. A more advanced course in the art of clowning for the performance career student. The student interacts with small groups to develop circus skits. Sight gags, prat falls, prop tricks, and staging techniques also developed. Some class time reassigned for public performance. Also listed as DNC 189.

**THR 288 Advanced Clown III 3(2-2)**

Prerequisite: THR 287. Further advancement in the art of clowning; finding clown employment through marketing research, public relations, and management. Designed for the professional clown. Also listed as DNC 190.

**THR 289 LCC Clown Alley 3(1-3)**

Prerequisite: Instructor Approval. An advanced performance course in the art of clowning. The student will interact with small groups to develop circus skits. Sight gags, prat falls, prop tricks, and staging techniques will be developed and used. Class time will be reassigned for public performance.

**THR 295 Alexander Technique 1(0-3)**

Introduces a system of mind-body dynamics beneficial to actors, dancers, and musicians, focusing on realignment of body usage to develop full capability of energy, control, and relaxation.

Theatre Seminars and Workshops (THW) in the Performing Arts Department—by Course Number, Title, Credits Allowed, and Description.

**THW 105 Acting Workshop 2(2-0)**

Full or variable length course designed to take advantage of special talents of current or visiting performance faculty.

**THW 110 Play in Progress 1(1-0)**

A practical workshop designed for theatre/music/dance students to observe all phases of the play process; including, production meetings, scene rehearsal, blocking rehearsal, technical rehearsals, run-throughs, actor-director working relationship, and note giving. Discussions with a working director will focus on applied technique and rehearsal theory.

**THW 200 Experimental Theatre 2(1-2)**

A workshop study of scripts, philosophies or theories mostly outside the mainstream of theatre activity. Productions and scene study may be included.

## FACULTY AND STAFF DIRECTORY

- ABDO, Saide**  
Public Safety Supervisor, Lt., Public Safety  
A.G., Lansing Community College; B.A., Northwood Institute
- ADRIAN, Joanne K.**  
Assistant Professor, Health Careers  
B.S.N., University of Michigan
- ALFARO, Rogelio R.**  
Assistant Professor-Counselor, Center for Student Support  
B.A., Michigan State University; M.A., Michigan State University
- ALLEN, Richard L.**  
Senior Systems Analyst, Information Systems & Computer Services  
A.A., Lansing Community College; B.A., Cleary College
- ANDERSON, Joseph L.**  
Chairperson, Humanities  
A.B., Augustana College; B.D., Augustana Theological Seminary;  
S.T.M., Union Theological Seminary; Ph.D., Boston University
- ANSELMO, FeGaddi**  
Associate Professor, Social Science  
B.A., University of Santo Tomas; M.A., Michigan State University;  
Ph.D., Michigan State University
- ANTICO, John**  
Associate Professor, Humanities  
B.A., Wayne State University; M.A., Wayne State University;  
Graduate Study, Michigan State University
- ANTONIDES, Chris** Associate Professor, Communication  
B.A., New York University; M.A., New York University;  
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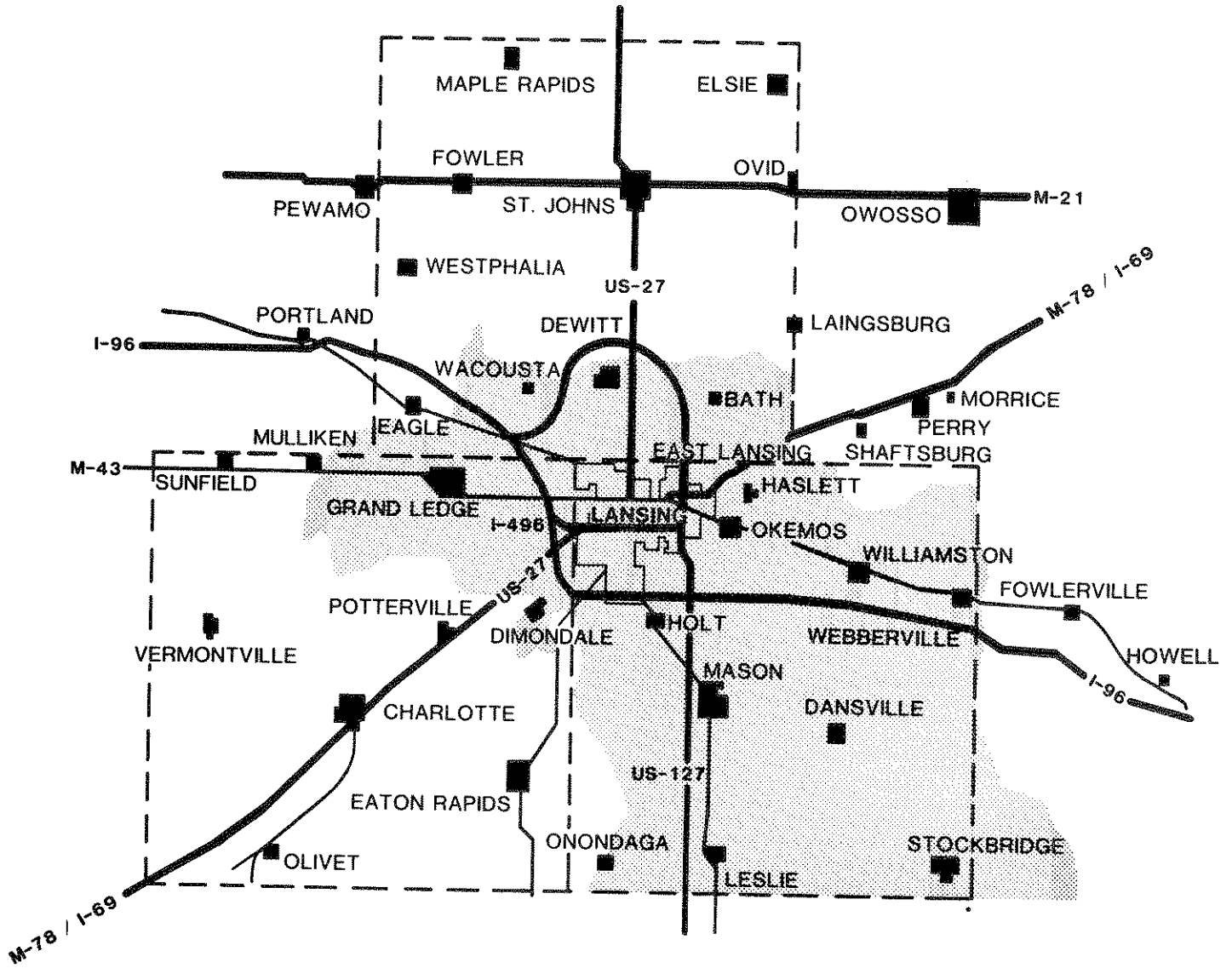
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Withdrawal	17	Withdrawal, Student	17
Surgical Technology	113	Women's Resource Center	28
Surgical Technology, Course Descriptions	124	Word Processing, Certificate and Associate Degree	64
Systems Analysis, Associate Degree	70	Writing, Course Descriptions	47
<b>T</b>			
Table for Determining Academic Status	13		
Team Sports, Course Descriptions	35		

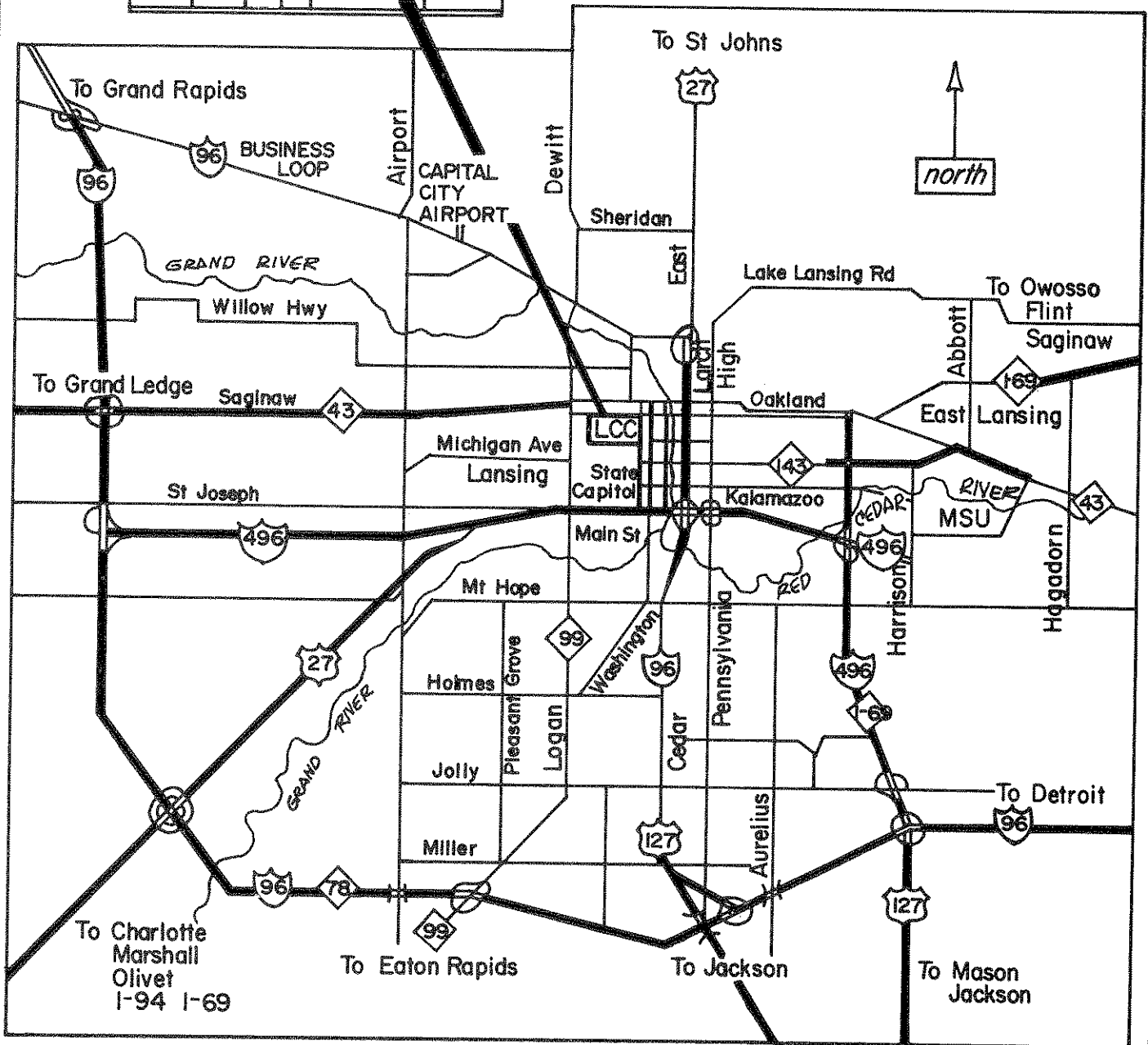
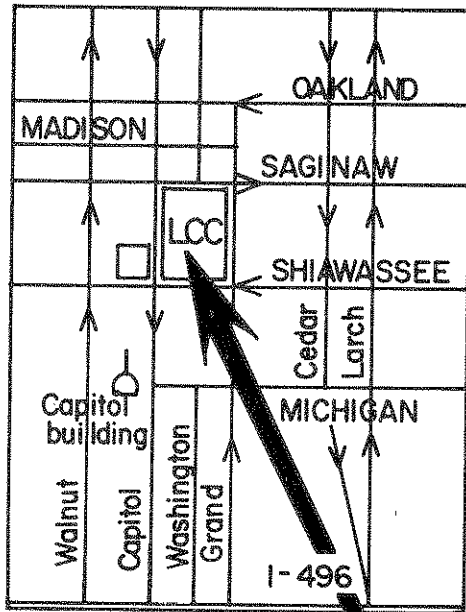
# Lansing Community College Service Area



Lansing Community College Resident District

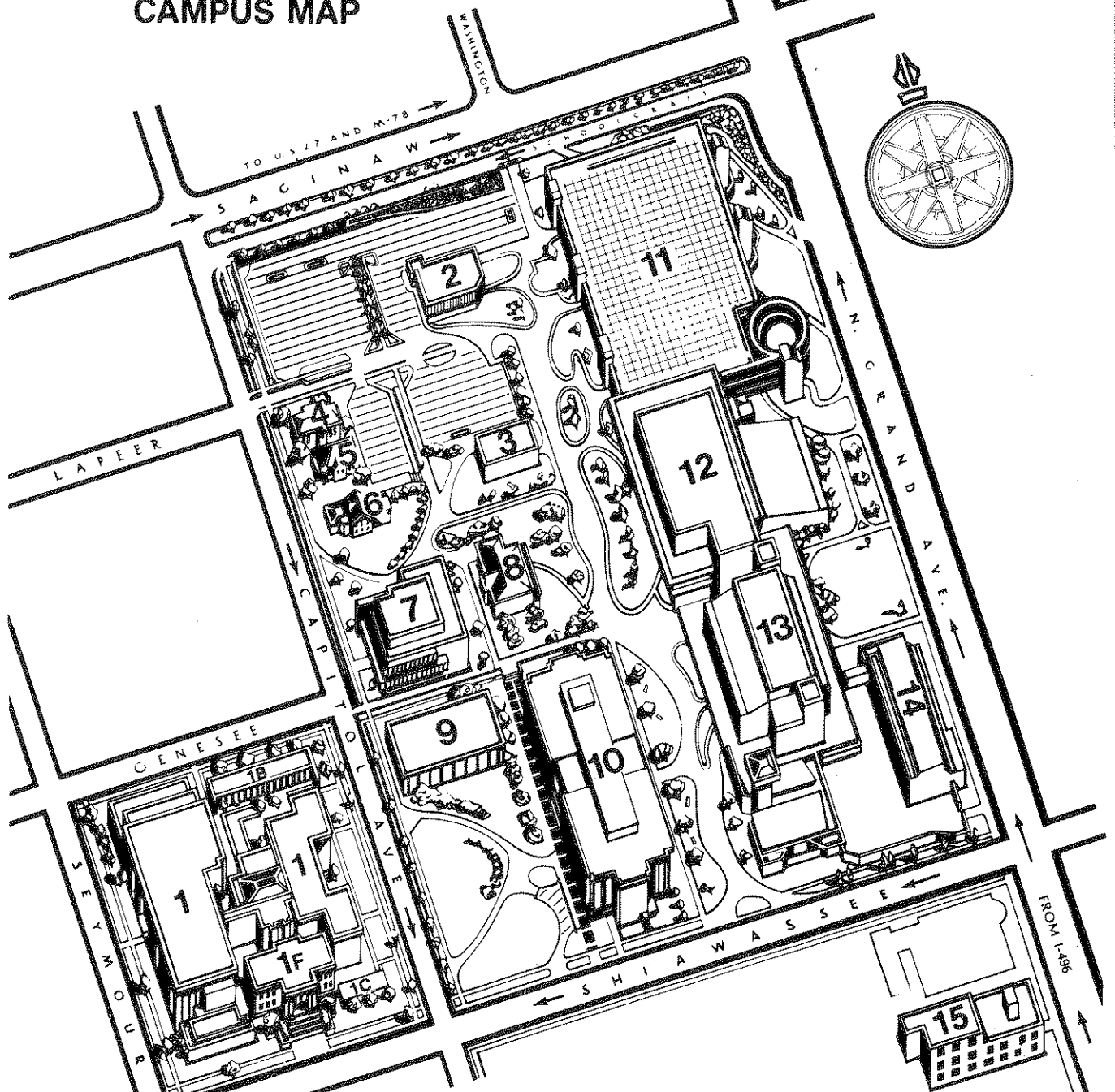
# Lansing Community College

500 N. Washington Square • Lansing, MI 48901



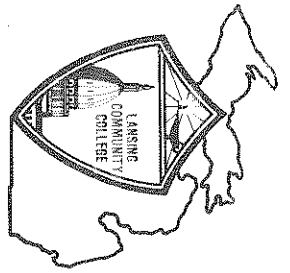


# LANSING COMMUNITY COLLEGE CAMPUS MAP



## BUILDING INFORMATION

- |                               |   |
|-------------------------------|---|
| 1B. Office Unit B (OUB)       | 7. Dart Auditorium (DRT)                                  |
| 1C. Office Unit C (OUC)       | 8. Turner House   |
| 1F. Office Unit F (OUF)       | 9. Student Personnel Services (SPS)                       |
| 1. Old Central (OC)           | 10. Arts & Sciences (A&S)                                 |
| 2. Photography Center (PC)    | 11. Parking Ramp  |
| 3. Administration (ADM)       | 12. Gannon Center-Health Careers/Physical Education (GPE) |
| 4. North House (NH)           | 13. Gannon Center-Vocational-Technical (GVT)              |
| 5. 528 Office Building        | 14. Voc-Tech Automotive Center                            |
| 6. Herrmann Conference Center | 15. Academic & Office Facility (AOF)                      |



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