1991 AND 1992

LANSING COMMUNITY COLLEGE CATALOG
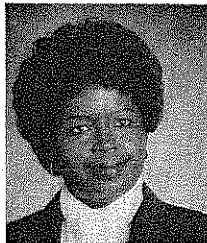
LANSING COMMUNITY COLLEGE

Lansing Community College

BOARD OF TRUSTEES

LOOKING TO THE YEAR 2000

Over the years Lansing Community College has made a significant impact on the lives of those it serves. The College is a reflection of the community, evolving and changing with flexibility and innovation in response to the needs of business, industry, government, labor and education. This is evidenced in the wide variety of education and training available at LCC today. In keeping with its mission to provide the community with relevant, quality and timely education and training at a reasonable price, the College has embarked on some exciting times—looking to the future through the development of plans that will upgrade facilities and services to better meet instructional needs in the years ahead.

Please keep this catalog for future reference to the lifelong learning opportunities that are available at Lansing Community College. Education is a lifelong process, and LCC continues to be a resource for its students through the nation and the world. Futures begin at LCC, and they can be enriched—over and over again, for a lifetime.
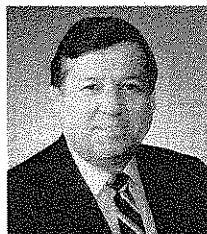
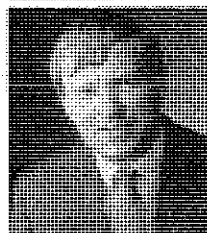This catalog was produced by the Publications Office, Lansing Community College.
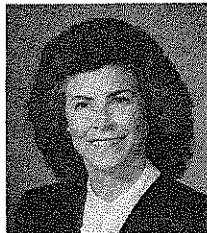
LANSING COMMUNITY COLLEGE

Lansing Community College

1991 AND 1992 CATALOG

400-600 NORTH WASHINGTON SQUARE
P.O. BOX 40010 LANSING MICHIGAN 48901-7210
AREA CODE 517 TELEPHONE 483-1957

**Handicapper Student Services
Telephone Device for the Deaf
TDD (517)483-1218**

**Accredited by
North Central Association of Colleges and Schools**

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 139 GVT.

The programs, policies, rules, regulations, procedures, fees, and tuition printed in this catalog are represented as of Fall Term 1991, and will generally remain in effect through Summer Term 1993.

The College reserves the right to make changes in its programs, policies, rules, regulations, procedures, fees, tuition, organizational structure, and faculty and staff through the appropriate College processes. Every effort will be made to give as much advance notice as possible.

LCC must reserve the right to modify or eliminate programs that are described in this publication. In the event such an action is taken, students affected will be advised by their departments of the options available to them to complete their degrees. Every reasonable effort will be made to permit students to complete these programs or similar programs.

The College reserves the right to limit enrollments and to change requirements for enrollment in both programs and courses as necessary. When enrollment limitations are imposed, every reasonable effort will be made to provide alternatives for students affected.

It is the responsibility of each student to be aware of and understand College regulations as published.

LANSING
COMMUNITY
COLLEGE

TABLE OF CONTENTS

Contributing Photographers: Brian Kurtz, John Rocco and Roger Ward

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 lifelong 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 its students with instruction that has quality, timeliness and relatively low cost. To meet this commitment the College works 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.
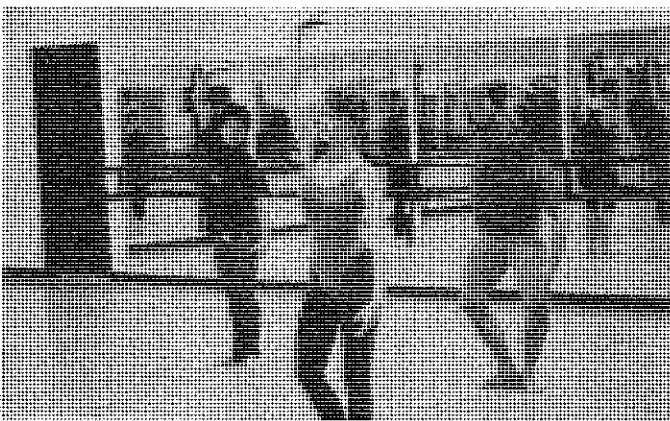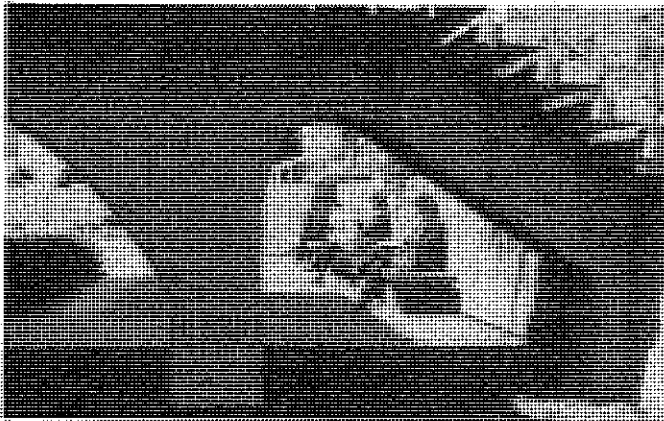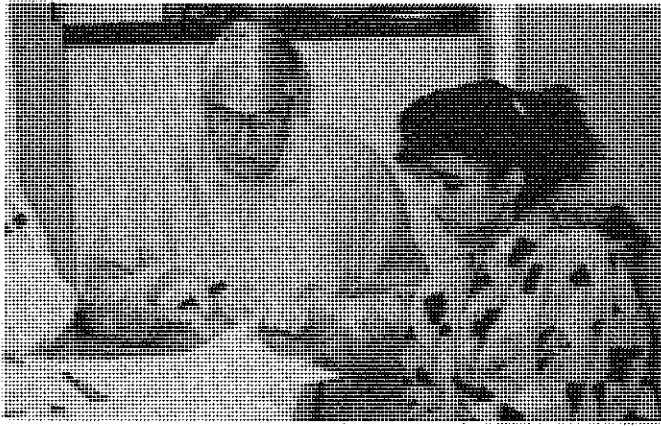
The College recognizes that in this world of economic and technological change there is a growing interdependence of this metropolitan community with other communities throughout the world. The challenge is to be effective in that larger community, enhancing understanding and cooperation through international education and networking 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 of 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 businesses throughout the service area, the programs and services are more accessible to students. Through its open admissions policy and a wide variety of courses and programs, the College is sensitive to and aware of its diverse student population and pledges equal educational opportunity to all in its service area.

The College can best meet these commitments by doing the following:

1. Maintaining continuous review and evaluation of the essentials of an effective learning environment—instruction, resources and facilities—so that the learning programs have quality and relevence to the individual and the community.
2. Supporting an educational environment that permits a person not only to acquire a mastery of skills of career goals but also to enhance self identity and clarify personal values.
3. Developing and supporting faculty and staff committed to academic excellence and professional competence in instructional development and delivery.
4. Providing 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. Providing opportunities for students to develop leadership and social interaction skills through formal and informal student activities.
6. Making available a general education program to students.
7. Providing 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. Providing career-oriented courses and programs for students now employed or contemplating employment.
9. Providing courses and curricula in the arts, sciences, business and other preprofessional programs that will articulate with degree programs at other colleges.
10. Conferring certificates and associate degrees.
11. Developing and offering specialized training through consultative relationships with business, labor, industry and government.
12. Providing learning resources and instructional support services that meet the diverse information needs of students, staff and community.
13. Providing programs and activities that enhance the community's cultural life and economic well being.
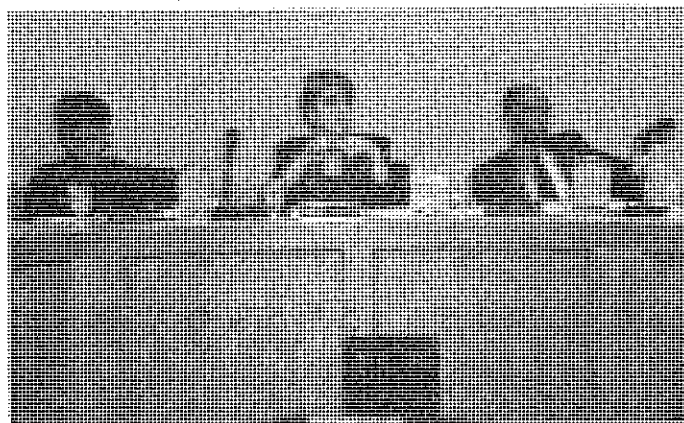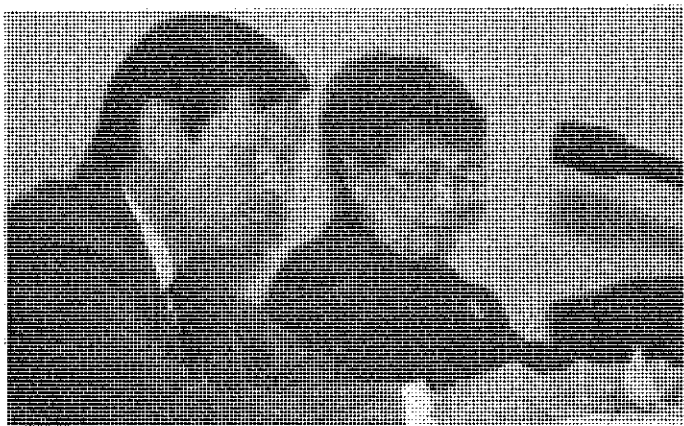
STRATEGIC GOALS

1. Maintain and develop the highest standards of academic and curricular excellence in order to promote recruitment, retention and student success in a diverse society.
2. In recognition and awareness of the value of the College's human resources, continue to provide professional development activities as a commitment to faculty, staff, students and community.
3. Recruit faculty, staff and students to promote academic excellence while continuing to emphasize diversity, affirmative action and equal opportunity in staffing and student body.
4. Emphasize critical/analytical thinking skills across the College's curricula.
5. Emphasize writing, reading, speaking and listening skills across the College's curricula.
6. Develop sufficient technology skills in students, faculty and staff to enable them to function in a modern technological environment.
7. Continue to be sensitive to the issues of governance and statewide coordination and planning.
8. Continue to strengthen the College's internal and external communications.
9. Enhance the College's resource base in order to maintain the quality of its education, training and support services.
10. Develop additional partnerships with business, industry, government, labor, public agencies, health service organizations, K-12 school districts, colleges and universities.
11. Increase the internationalization of the College's curricula and services in recognition of the competitive international marketplace, world interdependence and a pluralistic society.
12. Provide for continuous development, review and evaluation of the College's total learning environment using, among other analytical tools, integrated information and decision-support systems.
13. In order to protect the community's investment, provide and maintain adequate and up-to-date equipment and facilities.
14. Increase educational opportunities for students through greater emphasis on the use of learning/extension and state-of-the-art telecommunication systems.
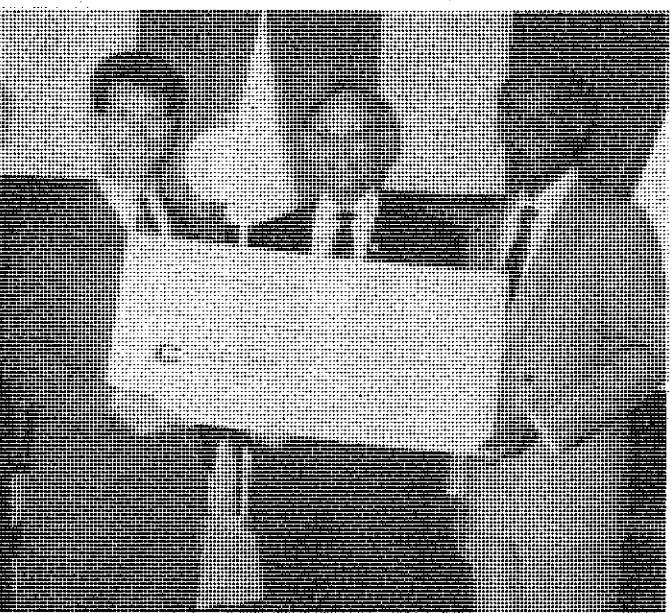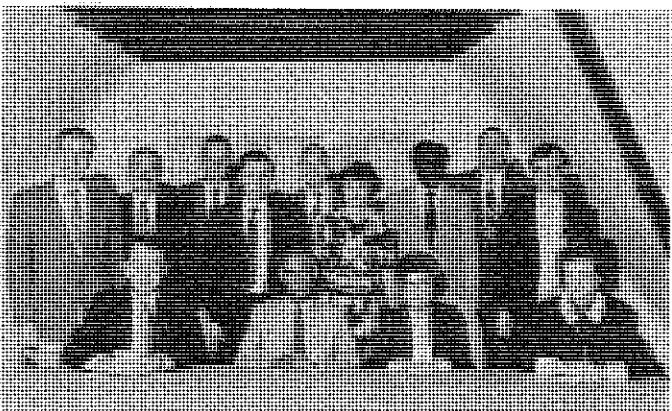
CENTRAL ADMINISTRATION

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, Academic and Student Affairs, Institutional Research, Planning and Development, Public Relations, Publications, Equal Opportunity/ Affirmative Action, Professional Development, Continuing Education and the College Foundation. Planning, management, internal and external relations 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:

Abel B. Sykes, Jr., President
M. Valeriana Moeller, Executive Vice President
Dale M. Herder, Vice President for Academic and Student Affairs
Bruce G. Newman, Vice President for Business and Finance
Jacqueline D. Taylor, Vice President for Institutional Research, Planning and Development
Ilse H. Burke, Director, Professional Development and Affirmative Action
Ronald E. Dove, Director of Personnel
Charles H. Bettinson, Executive Director, Business and Industry Institute
William R. Darr, Dean, Division of Technology and Applied Sciences
Thomas L. Franke, Interim Dean, Division of Arts and Sciences
James E. Person, Dean, Division of Business
Oswell Person, Dean, Division of TeleCommunication and the Arts
William G. Schaar, Dean, Division of Student Personnel Services

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, and the departments of Information Systems and Computer Services, Public Safety, Business Services, Accounting and Payroll, Purchasing and Physical Plant.

The objectives of the College Services Division are as follows:

* Maintain general accounting, property accounting, internal audit, time-keeping, 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
* Provide other business-related services such as College insurance packages and the preparation and execution of contracts with vendors and other institutions, agencies and consultants.

LANSING COMMUNITY COLLEGE FOUNDATION

The Lansing Community College Foundation is a non-profit, tax-exempt corporation, administered by an independent board of community volunteers, all concerned and dedicated to the continuing excellence of Lansing Community College. The Foundation is autonomous and exists to help the College achieve its educational purposes through building an additional financial base. The officers and directors are:

Wilford E. Maldonado, M.D., Chairperson
Joan M. Hosey, Vice Chairperson
Bruce B. Dunn, Secretary
Dale R. Martin, Treasurer

Lucile E. Belen	Patricia L. Linnell
Judith A. Corr	Sarah A. McCarthy
Stephen H. Dart	Donna G. McKeague
George L. Goodell	Larry L. Meyer
Michael J. Guthrie	Abel B. Sykes, Jr.
Richard C. Hacker	Louise B. Werbelow
John W. Hearns	Wayne H. Williams
Judith A. Hollister	Philip F. Workman
William A. Holtgrieve, Jr.	

Hortense G. Canady, Director

Lansing Community College Staff
Bruce Newman   Jacqueline D. Taylor

A MESSAGE FROM THE PRESIDENT
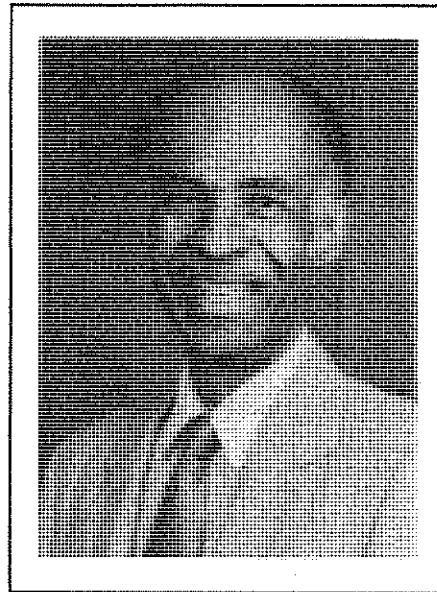
Dear Students:

Welcome to Lansing Community College. We are pleased to serve you — the current and future leaders of our community, state and nation.

LCC is a center of lifelong learning, where inspired professionals challenge your intellect, while encouraging you to grow and broaden your horizons to fully participate in a global society. The Board of Trustees, faculty and staff are committed to working with you to provide a learning environment based on partnerships in business, industry, labor and government.

We ask you to do your part. Help us take care of LCC and dedicate yourself to do your best to work hard, learn well and serve your community as a responsible citizen involved in making this a better society.

Cordially,

Abel B. Sykes, Jr.
President
Lansing Community College

FACULTY ACADEMIC CALENDAR
1991-92

FALL TERM, 1991

Registration/Preparation/ Record Days	September 12, 13, 16, 17, 18
Classes Begin	September 19
Thanksgiving Recess	November 28, 29
Last Class Day	December 8

WINTER TERM, 1992

Registration/Preparation/ Record Days	January 2, 3
Classes Begin	January 5
Last Class Day	March 21

SPRING TERM, 1992

Registration/Preparation/ Record Days	March 26, 27
Classes Begin	March 29
Memorial Day	May 25
Graduation Day	June 7
Last Class Day	June 13

SUMMER TERM, 1992

Registration/Preparation/ Record Days	June 17, 18, 19
Classes Begin	June 21
Independence Day	July 3
Last Class Day	August 15

1992-93
FALL TERM, 1992

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

WINTER TERM, 1993

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

SPRING TERM, 1993

Registration/Preparation/ Record Days	April 1, 2
Classes Begin	April 4
Memorial Day	May 31
Graduation Day	June 6
Last Class Day	June 19

SUMMER TERM, 1993

Registration/Preparation/ Record Days	June 24, 25
Classes Begin	June 27
Independence Day	July 5
Last Class Day	August 21

LANSING COMMUNITY COLLEGE
General Information
Telephone (517) 483-1957

OFFICE OF THE REGISTRAR
Student Personnel Services Bldg.
Telephone (517) 483-1266

OFFICE OF ADMISSIONS
Gannon Vocational Technical Bldg.
Telephone (517) 483-1200

OFFICE OF STUDENT DEVELOPMENT SERVICES
Student Personnel Services Bldg.
Telephone (517) 483-1184

OFFICE OF STUDENT FINANCIAL SERVICES
Student Personnel Services Bldg.
Telephone (517) 483-1296

EMPLOYMENT PLACEMENT SERVICES
Gannon Vocational Technical Bldg.
Telephone (517) 483-1172

OFFICE OF THE PRESIDENT
Administration Bldg.
Telephone (517) 483-1851

OFFICE OF THE EXECUTIVE VICE PRESIDENT
Administration Bldg.
Telephone (517) 483-5240

OFFICE OF THE VICE PRESIDENT FOR BUSINESS & FINANCE
Administration Bldg.
Telephone (517) 483-1730

OFFICE OF THE VICE PRESIDENT FOR ACADEMIC & STUDENT AFFAIRS
Administration Bldg.
Telephone (517) 483-1850

OFFICE OF THE VICE PRESIDENT FOR INSTITUTIONAL RESEARCH, PLANNING & DEVELOPMENT
Rogers-Carrier House
Telephone (517) 483-1963

OFFICE OF COLLEGE & COMMUNITY RELATIONS
Administration Bldg.
Telephone (517) 483-1880

OFFICE OF CONTINUING EDUCATION
North House
Telephone (517) 483-1860

DIVISION OF ARTS & SCIENCES
Arts & Sciences Bldg
Telephone (517) 483-1010

DIVISION OF BUSINESS
Old Central Bldg.
Telephone (517) 483-1522

DIVISION OF STUDENT PERSONNEL SERVICES
Student Personnel Services Bldg.
Telephone (517) 483-1162

DIVISION OF TECHNOLOGY & APPLIED SCIENCES
Gannon Vocational Technical Bldg.
Telephone (517) 483-1317

DIVISION OF TELECOMMUNICATION & THE ARTS
Office Unit F Bldg.
Telephone (517) 483-1621

AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY OFFICE
Gannon Vocational Technical Bldg.
Telephone (517) 483-1858

BUSINESS & INDUSTRY INSTITUTE
Gannon Vocational Technical Bldg.
Telephone (517) 483-1741

EVENING COLLEGE OFFICE
Arts & Sciences Bldg.
Telephone (517) 483-1011

EVENING COLLEGE OFFICE
Gannon Vocational Technical Bldg.
Telephone (517) 483-1324

EVENING COLLEGE OFFICE
Old Central Bldg.
Telephone (517) 483-1527

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 is the responsibility of the 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 or special admissions programs explained later in this section.

Directions for completing the admission 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.
3. Lansing Community College 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 the Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901.
5. Lansing Community College provides placement assessment testing and recommendations for students in courses requiring proficiency in reading, writing, mathematics and science. Information relating to placement testing may be obtained by contacting:

Reading and Writing — Academic Enrichment Center located in Room 309 (third floor) of the Arts & Sciences Building (Phone: (517) 483-1060). A reading placement test is given to all new students enrolling in courses in the Arts & Sciences Division.

Math — Mathematics Laboratory located in Room 309 (third floor) of the Arts & Sciences Building (Phone: (517) 483-1073).

Science — Science Department located in Room 408 (fourth floor) of the Arts & Science Building (Phone: (517) 483-1092).

Phase I of the S.T.A.R.T. (Student Testing Advising Registration Times) Program requires students to take appropriate placement tests prior to attending Phase II (advising and registration) of the Program. Placement testing is also given in English as a second language, vocabulary and spelling for designated students.

Admission 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 Student Applicants
Health Career Applicants
Other Special Circumstance Applicants

All questions and requests for specific information regarding these special circumstance admission procedures should be directed to the Office of Admissions, Lansing Community College, 25-Admissions, P.O Box 40010, Lansing, Michigan, 48901, or call (517) 483-1200.

ADMISSION TO COURT AND CONFERENCE REPORTING PROGRAM

Applicants to the Court and Conference Reporting Program at Lansing Community College should contact the Department of Office Administration's Court Reporting Office concerning prerequisites. Proof of high school graduation is necessary. You may call (517) 483-1587 or write: Department of Office Administration, 42-Court and Conference Reporting Program, P. O. Box 40010, Lansing, MI 48901.

ADMISSION TO HEALTH CAREER TECHNOLOGY

A Health Career Supplemental Application must be completed for admission into a health career program. There may be waiting lists for some programs. Students are admitted on a first qualified, first served basis. Applicants to any Health Career Technology Program at Lansing Community College should contact the Admissions Office for specific information concerning the process and prerequisites. You may call (517) 483-1254 or write: Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901.

INTERNATIONAL STUDENT ADMISSIONS

Lansing Community College's international student admissions procedures have been developed to create a positive experience for the international student, the service community, and the College community.
1. Request an International Admissions Application from the Admissions Office at the following address:
   Admissions Office
   Lansing Community College
   Box 40010
   Lansing, MI 48901

2. Submit the completed application along with a $10 non-refundable application fee to the Admissions Office. Also submit official academic records which have been translated into English (include high school and any college work).
3. Provide evidence of English competency by submitting official test results from one of the following:
   A. The Test of English as a Foreign Language with a score of 500 or above (TOEFL).
   B. The English Language Center test administered by Michigan State University with a score of 75 or above.
      The above tests must be taken within one year of date of admission.
4. Submit a financial guarantee indicating the ability to cover all expenses for the entire stay in the United States. Evidence must also be provided of at least $2,000 on deposit in a local bank or with the College to cover tuition and fees and living expenses for initial entry into LCC.
      Students whose tuition and fees will be paid by a sponsoring agency must submit a letter of authorization for billing from the agency.
5. When all required information has been received, an admissions decision will be made. If the applicant is accepted, an approved I-20 form will be issued and sent along with a letter of acceptance. All admission material must be received by the College no later than six weeks prior to the first day of the term of attendance.
6. Upon acceptance, our office will assist each student with the necessary U.S. immigration guidelines and academic counseling.
7. 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 or M-1 visa must successfully maintain full-time student status, twelve or more credits completed each term for three consecutive terms, annually.**
8. Admitted international students are subject to English evaluation upon arrival on campus. If evaluation indicates a need for improved English language skills, appropriate language course placement will be required. Program coursework may be taken along with English improvement courses based on recommendations of college officials.
9. Lansing Community College charges an administrative fee for international students admitted under Federal, State or local government, private agency or group contracts. This fee covers the costs of special services to the international students such as accounting services, agency reports, emergency funding, personal assistance and contract implementation. This administrative fee is currently $125 per student per 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.

The International Student Services Committee has been established in the Division of Student Personnel Services with the following membership:
1. Dean of Student Personnel Services
2. Director of Admissions
3. Director of International Programs
4. Bilingual Coordinator
5. Advisor to International Students
6. Representative from Academic Enrichment Services
7. An appointed faculty member who has shown interest in international students

The function of this Committee is:
1. To serve as a body to review guidelines of required English proficiency for international student admission.
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 the College's and immigration regulations.

International students who would like copies of documents submitted to Lansing Community College for admission purposes must request these copies no later than one year after the last term of attendance with the College. Lansing Community College does not keep such documents beyond legally required time limits.

GUEST APPLICATIONS

Guest applicants must submit a guest application form supplied by the Registrar's Office of the college they are attending. The guest applicant must also complete the LCC application form. Transcripts are not necessary. A non-refundable, one time only, application fee of $10 is required. A guest application must be submitted each term if the applicant wishes to continue in that category of admission. It is recommended that any student planning to attend LCC more than one term seek regular student admission.

DUAL ENROLLMENT AND SPECIAL ADMISSIONS

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 unusual ability and interest are displayed in high school.

For eligibility in the Dual Enrollment Program:

1. Applicant must be working toward high school graduation requirements.
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 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 written approval from his/her high school principal or representative.
3. Applicant then submits application to the high school records office with an accompanying $10 application fee.
4. The application is completed by the high school records office and sent to the Admissions Office at Lansing Community College.

PLEASE NOTE: Recommendation from the high school counselor or representative must be submitted for each term of attendance.

Applicant eligibility in the Special Admissions Program:
1. Applicant must be working toward high school graduation requirements.
2. Applicant must have attained freshman or sophomore high school standing prior to applying for the program.
3. Applicant must have written approval from his/her parent or guardian, high school counselor or representative, and LCC departmental approval.
4. The final decision for acceptance rests with Lansing Community College.

Applicant procedures for Special Admissions:

1. Applicant must complete an Admissions Application and a Special Admissions Supplemental Application.
2. Applicant must obtain written approvals as stated on the Special Admissions Supplemental Application.
3. Applicant then submits the Admissions Application, Special Admissions Supplemental Application, high school transcript, and $10 application fee to the Admissions Office.

PLEASE NOTE: A Special Admissions Supplemental Application must be submitted for each term of attendance.

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, provided the Director has not rendered the initial denial of the student. 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: a 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, a 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. A student must be an American citizen or permanent resident 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).

II. Proof Of Residency

All students must provide proof of residency at the time of registration (Michigan House Bill No. 4166, 1985). Lansing Community College reserves the right to make the final decision on residency eligibility. To be classified as a resident, a student must have lived within the LCC District for six months immediately prior to the first day of class. AN UPDATED MICHIGAN DRIVER'S LICENSE OR A DATED VOTER'S REGISTRATION CARD PLUS ONE OF THE DOCUMENTS LISTED BELOW ARE ACCEPTABLE AS PROOF OF RESIDENCY.

1. Property tax receipts
2. Rental or lease agreement
3. Canceled rent checks (for each month of residency)
4. The purchase of property within the LCC College District eliminates the waiting period for the establishment of residency. The student or the student's guardian must reside on the property. Acceptable proof of ownership includes:
   a. Deed-Abstract of Title
   b. Current Tax Statement

III. Petitioning for a Change in Residency Status
   A. Upon registering for classes, 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.

IV. Adjustments in Tuition
   A. The student shall be refunded the difference of resident and non-resident tuition for the term enrolled in, if a Residency Petition is submitted by the deadline date.
   B. Any adjustments in tuition due to a change in residency are not retroactive.

V. 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.

HOUSING

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

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.

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	$23.00*
Tuition, Non-Resident Students	
Per credit hour	$35.00*
Tuition, Out of State Students	
Per credit hour	$47.00*
Tuition, International Students	
Per credit hour	$48.00*

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*

Course 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 course 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 the action of the Board of Trustees. Costs listed are those in effect at date of publication.

The class schedule for each term will list all course fees.

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 and grade at time of drop are not required until after the fourth week of the term.
3. Return form to Registrar's Office for proper recording. Do not leave until processing of the form has been completed and a copy has been received.

REPEAT COURSES

When repeating a course, the highest grade earned will be used in computing the LCC cumulative grade point average. Both the repeated and repeating courses will appear on the academic record and be appropriately identified. An updated copy of the student's academic record will be mailed to the student when the repeat grade has been processed. A student must indicate that he/she is repeating a course when registering.

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 percent refund for classes. Beyond the last day for 100 percent 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 the last day of 100

percent refund. Status as an auditor must be requested by the student through the Registrar.

WEEKEND AND EVENING CLASSES

In addition to the regular day course offerings, Lansing Community College offers a highly diversified program of evening, Saturday and Sunday courses for those who choose for personal or occupational reasons to attend class outside of regular daytime sessions both on-campus and at off-campus learning centers.

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.

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

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 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/her future course of action.

VETERANS' SERVICES

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

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

Lansing Community College cautions veterans matriculating under this program to be prepared to pay their expenses for at least two months after the beginning of the academic year. (ALL TUITION AND FEES MUST BE PAID AT THE TIME OF REGISTRATION.) Once the veteran's application is approved and the award processed, monthly checks will be issued if the veteran is prompt in maintaining satisfactory academic progress and following a chosen curriculum.

ADVANCE PAYMENT FOR VETERANS

New student veterans, and veterans wishing advance payment should apply at the Veterans' Services Office at least five (5) weeks prior to the beginning of a term. Monetary allowances provided for by the G.I. Bill vary according to the level at which the veteran is pursuing an academic program as indicated by the following schedule:

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

After enrollment, veterans should direct their inquiries concerning eligibility to the Office of Veteran Services 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 ROTC program, Army ROTC program, and USMC open admissions program.

ACADEMIC DEFINITIONS

The following are definitions of academic terms commonly used at Lansing Community College with which the reader may not be familiar.

COURSE: A course is a sequence of planned learning experiences leading to a set of expected learning outcomes. Such a series of planned learning experiences and outcomes are normally scheduled over an academic term. Successful completion of a course results in the student earning academic credit based on contact hours in class or laboratories. It also results in the awarding an academic grade which evaluates the student's success in achieving the expected outcomes. A course also routinely includes tests, quizzes, a final examination and regular out-of-class assignments. A course is publicized in the College Catalog and Class Term Schedule, and at Lansing Community College there is a standard college-wide course syllabus created for each course.

At Lansing Community College a course is not to be confused with a seminar, workshop or fee-for-service learning/training unit.

CREDIT HOUR: An instructional unit carried out for the expressed purpose of eliciting some measure of educational change in a learner or group of learners. A credit can be awarded on a student's academic transcript when he or she successfully completes a unit of instruction of not less than 550 instructional minutes.

CURRICULUM: A structured program of study leading to an Associate Degree or Certificate. Each curriculum is assigned a number. (Certain transfer curricula do not lead to an Associate Degree.)

MAJOR: The predominant subject area within a curriculum.

PROGRAM: The organizational structures of the College which provide or deliver instruction and/or services.

CERTIFICATE OF ACHIEVEMENT: The Certificate of Achievement consists of a minimum of 45 term credits in designated courses. It is earned with a minimum of a 2.00 GPA and is recorded on the official academic record.

CERTIFICATE OF COMPLETION: The Certificate of Completion consists of fewer than 45 term credits in designated courses. It is earned with a minimum of a 2.00 cumulative GPA and is not recorded on the official academic record.

ASSOCIATE DEGREE: The Associate Degree consists of a minimum of 90 term credits in designated courses. It is earned with a minimum of a 2.00 cumulative GPA, a specified course in government, and is recorded on the official academic record.

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.

CREDIT BY EXAMINATION (COMPREHENSIVE 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.

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.

1. 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.
2. 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.
3. 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 ten 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:

1. Grades on the P-Z system are not included in computing the term or cumulative grade average.
2. The grades granted on the P-Z system are determined with definition of P and Z as follows:
   a. (P) credit—represents a level of performance equivalent to a regular number grade of 2.00 or above on a 4.00 system.
   b. (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.

ACADEMIC STANDING POLICIES AND 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 a course. 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 five credit/hours of 4.0, five credit/hours of 3.0 and five 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.

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 " "	1.00 - 1.88	1.00 "
13	1.89 " "	1.03 - 1.88	1.02 "
14	1.89 " "	1.05 - 1.88	1.04 "
15	1.90 " "	1.06 - 1.89	1.05 "
16	1.90 " "	1.08 - 1.89	1.07 "
17	1.90 " "	1.10 - 1.89	1.09 "
18	1.91 " "	1.11 - 1.90	1.10 "
19	1.91 " "	1.13 - 1.90	1.12 "
20	1.91 " "	1.14 - 1.90	1.13 "
21	1.92 " "	1.16 - 1.91	1.15 "
22	1.92 " "	1.18 - 1.91	1.17 "
23	1.92 " "	1.19 - 1.91	1.18 "
24	1.93 " "	1.21 - 1.92	1.20 "
25	1.93 " "	1.22 - 1.92	1.21 "
26	1.93 " "	1.24 - 1.92	1.23 "
27	1.94 " "	1.26 - 1.93	1.25 "
28	1.94 " "	1.27 - 1.93	1.26 "
29	1.94 " "	1.29 - 1.93	1.28 "
30	1.95 " "	1.30 - 1.94	1.29 "
31	1.95 " "	1.32 - 1.94	1.31 "
32	1.95 " "	1.34 - 1.94	1.33 "
33	1.96 " "	1.35 - 1.95	1.34 "
34	1.96 " "	1.37 - 1.95	1.36 "
35	1.96 " "	1.38 - 1.95	1.37 "
36	1.97 " "	1.40 - 1.96	1.39 "
37	1.97 " "	1.42 - 1.96	1.41 "
38	1.97 " "	1.43 - 1.96	1.42 "
39	1.98 " "	1.45 - 1.97	1.44 "
40	1.98 " "	1.46 - 1.97	1.45 "
41	1.98 " "	1.48 - 1.97	1.47 "
42	1.99 " "	1.50 - 1.98	1.49 "
43	1.99 " "	1.51 - 1.98	1.50 "
44	1.99 " "	1.53 - 1.98	1.52 "
45	2.00 " "	1.54 - 1.99	1.53 "
46	2.00 " "	1.56 - 1.99	1.55 "
47	2.00 " "	1.58 - 1.99	1.57 "
48	2.00 " "	1.59 - 1.99	1.58 "
49	2.00 " "	1.61 - 1.99	1.60 "
50	2.00 " "	1.62 - 1.99	1.61 "
51	2.00 " "	1.64 - 1.99	1.63 "
52	2.00 " "	1.66 - 1.99	1.65 "
53	2.00 " "	1.67 - 1.99	1.66 "
54	2.00 " "	1.69 - 1.99	1.68 "
55	2.00 " "	1.70 - 1.99	1.69 "
56	2.00 " "	1.72 - 1.99	1.71 "
57	2.00 " "	1.74 - 1.99	1.73 "
58	2.00 " "	1.75 - 1.99	1.74 "
59	2.00 " "	1.77 - 1.99	1.76 "
60	2.00 " "	1.78 - 1.99	1.77 "
61	2.00 " "	1.80 - 1.99	1.79 "
62	2.00 " "	1.82 - 1.99	1.81 "
63	2.00 " "	1.83 - 1.99	1.82 "
64	2.00 " "	1.85 - 1.99	1.84 "
65	2.00 " "	1.86 - 1.99	1.85 "
66	2.00 " "	1.88 - 1.99	1.87 "
67	2.00 " "	1.90 - 1.99	1.89 "
68	2.00 " "	1.91 - 1.99	1.90 "
69	2.00 " "	1.93 - 1.99	1.92 "
70	2.00 " "	1.94 - 1.99	1.93 "
71	2.00 " "	1.96 - 1.99	1.95 "
72	2.00 " "	1.97 - 1.99	1.96 "
73	2.00 " "	1.97 - 1.99	1.96 "
74	2.00 " "	1.97 - 1.99	1.96 "
75	2.00 " "	1.97 - 1.99	1.96 "
76	2.00 " "	1.97 - 1.99	1.96 "
77	2.00 " "	1.97 - 1.99	1.96 "
78	2.00 " "	1.97 - 1.99	1.96 "
79	2.00 " "	1.97 - 1.99	1.96 "
80	2.00 " "	1.97 - 1.99	1.96 "
81	2.00 " "	1.97 - 1.99	1.96 "
82	2.00 " "	1.97 - 1.99	1.96 "
83	2.00 " "	1.97 - 1.99	1.96 "
84	2.00 " "	1.97 - 1.99	1.96 "
85	2.00 " "	1.97 - 1.99	1.96 "
86	2.00 " "	1.97 - 1.99	1.96 "
87	2.00 " "	1.97 - 1.99	1.96 "
88	2.00 " "	1.97 - 1.99	1.96 "
89	2.00 " "	1.97 - 1.99	1.96 "
90	2.00 " "	1.97 - 1.99	1.96 "
91	2.00 " "	1.97 - 1.99	1.96 "
92	2.00 " "	1.97 - 1.99	1.96 "
93	2.00 " "	1.97 - 1.99	1.96 "
94	2.00 " "	1.97 - 1.99	1.96 "
95	2.00 " "	1.97 - 1.99	1.96 "
96+	2.00 " "	1.97 - 1.99	1.96 "

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 re-enroll 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 sub-paragraph 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).

CERTIFICATION POLICY FOR VETERANS ADMINISTRATION EDUCATIONAL BENEFIT RECIPIENTS

Lansing Community College will notify the U.S. Department of Veterans Affairs if a student receiving Veterans educational benefits is awarded a grade of 0.0, "W", or "Z" for course work pursued. In this event, the College will report the first day of the certified attendance period as the last date of attendance, unless the benefit recipient provides to the Lansing Community College Veterans Office a written and signed statement indicating a different last date of attendance.

Veterans educational benefit recipients neglecting to request an official evaluation for credits earned at colleges other than Lansing Community College and for active duty military service, will not have their enrollment certified beyond their second term of attendance.

COMPLETION OF CREDITS ATTEMPTED FOR FINANCIAL AID ELIGIBILITY

In addition to the above, and beginning with the second term of attendance, a student financial aid recipient who does not complete 60 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

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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.

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.

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.

GRADE CHANGES

Students may petition an instructor for a grade change of a final grade in a course. The line of appeal for grade change petitions can be found in the College's "Due Process" statement. A student's final grade in a course may be changed by the course instructor. Grade changes made by instructors are done by submitting signed grade change forms to the department or program office for review and approval by the chairperson or program director. The completed grade change form is then forwarded to the Registrar's Office by the department chairperson or program director for posting on the student's permanent academic record. Completed grade change forms are not to be carried by the petitioning student to the Registrar's Office and will not be processed. Students will be officially notified in writing by the Registrar's Office after a grade change has been completed.

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. The student's academic record includes courses waived, courses attempted and completed, courses and credit transferred, credit hours, honor points and Lansing Community College grade point averages.

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 ensure 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 tha 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.

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, ara transferred for "C" 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 or program director of his/her academic department to waive a requirement(s) in which he/she has previously earned a 1.0-1.5 or "0." 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 or program director of the department in which the student has enrolled. The department chairperson or program director 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 or program director 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. The final transcript evaluation will have the signature of the appropriate divisional dean.

When two or more instructional departments are involved, the chairperson or program director of the department in which the student is enrolled will be responsible for consulting with the additional departmental chairpersons or program directors. 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 or program director and the respective deans.

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 Lansing Community College.
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 or program director 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 or program director 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 two- or four-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 or program director 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 or program director 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 Lansing Community College course or an elective credit. In cases where Lansing Community College has no department or area similar to the courses on incoming transcripts, no credit will be given.

7. Only official transcripts will be evaluated. Lansing Community College will accept as official transcripts only incoming student transcripts that have appropriate signatures and seals mailed directly to the College from an issuing institution. Transcripts or copies of transcripts carried by individuals may be used for academic advising or counseling but no transfer credits will be posted to the Lansing Community College academic record from transcripts that have not been identified as official. It will be the function of the Office of the Registrar of the College to verify the official status of all incoming student transcripts prior to the evaluation and posting of transfer credit.

8. Transfer credits granted will be shown on the student's academic record.

CREDIT FOR PREVIOUSLY ACQUIRED KNOWLEDGE AND LEARNING EXPERIENCE

Lansing Community College recognizes 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 his or her 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, comprised 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 clea understanding of a student's background and competencies. Lansing Community College requires certification that the work or trainin 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 ma be applied towards an LCC Associate Degree. (Thirty credits must be earned at Lansing Community College to comply with the College' residency requirements.) NOTE: Lansing Community College's decision t award credit for experiential learning does not obligate any other institution to accept such credits in transfer. Receiving institutions reserve the right t assess transcripts of incoming students, and award credit as they see fit.

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

Lansing Community College does not accept the transfer of credit fc experiential learning awarded at other institutions.

4. Applicability of Credit:

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

5. Student Appeal Procedures:

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

GRADUATION REQUIREMENTS AND DEGREES

Associate Degrees and Certificates are granted to all who meet graduatic requirements. A minimum of 90 credit hours is required for an Associate Degre and 45 credit hours for a Certificate of Achievement. A student completing th requirements should apply for graduation during the term prior to that in whic the work is completed. Those students who maintain a 3.75 grade point averag will be graduated Summa Cum Laude; those who maintain a 3.50 grade poi average will be graduated Magna Cum Laude; those with a 3.25, Cum Laud Students must complete 60 credit hours of work at Lansing Community Colleg to qualify for honors.

To graduate from Lansing Community College a student must:

1. Complete a course of study adapted to individual needs, interests ar capacities, and conform to a plan acceptable to the College. The course study should: (a) be suitable for transfer to admit the student to the lev of upper-division work in a four-year college of personal choice, or (b) for a program of study to be completed 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 Lansir Community College.

4. File with the Office of the Registrar an application for graduation one te preceding the term of graduation.

5. Have completed a course in Political Science, required by LCC (Soc Science 103 Political Science, 104 American Government and 105 Sta and Local Government will satisfy this requirement).

6. Satisfy all general and specific requirements of Lansing Community Colleg including the fulfillment of all financial obligations.

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

HOW TO APPLY FOR THE ASSOCIATE DEGREE OR CERTIFICATE OF ACHIEVEMENT

The student submits his/her application for diploma/certificate to the Office the Registrar. It is important that the student attach copies of any authoriz course substitutions or waivers to the application. It is also beneficial to t Registrar's Office if the student will attach a copy of the curricular guide sha/ has been following.

Copies of the student's academic record, current term schedule and curricu guide (if not submitted by the student) are attached to the application. T information is reviewed in the Office of the Registrar.

1. If any requirements remain after this initial review, the student will be s a Degree Audit Report along with an unofficial copy of his/her transcri Any exceptions to the courses listed on the audit report must be noted the form by the student's program director or authorized representati stamped by the departmental office, and be returned to the Registra Office. A copy will be attached to the Application for Diploma. The stud will be responsible for completing the remaining courses unless a revis form is submitted to the Office of the Registrar.

2. If no requirements remain after the initial review, the application will be sent to the appropriate departmental program director and divisional dean for approval. When the application is returned to the Registrar's Office, the student is sent a letter indicating they must successfully complete the current term.

The application is held on file until the current term grades are recorded and successful completion of the term verified. Applications for students who do not successfully complete the term are recycled and are held on file until all requirements are met for up to one year. It is important that a student make application for his/her degree at least one term in advance of graduation. The procedure outlined above may take a full term to complete.

Soon after the end of the term, an official copy of the student's LCC transcript, noting the degree and date of completion, will be sent to the student. This transcript is official notification that all course requirements have been met. Diplomas are mailed within two months after the last day of the term.

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

I. REQUIREMENTS Effective Fall Term, 1985.
A. 90 credits
B. G.P.A. of 2.0 or higher
C. 30 credits in attendance at LCC
D. Completion of SS 103, or 104 or 105
E. 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.
1. 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:
a. Art and Music History (HUM 101, 150, 151, 152)
b. History (HST 104-296)
c. Literature (ENG 201-296 and HUM 102)
d. Philosophy and Religion (PHL 101-296; REL 150-296; and HUM 104)
e. 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.
2. 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.
3. 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 GEQ 201 cannot be used as core general education courses for psychology or geography majors respectively.
4. 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 "0" 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 Sciences Division, which shall serve as a review committee and recommend to the Dean of Arts and Sciences appropriate action. Voting members shall be department chairpersons, faculty representatives and a student representative.

CRITERIA FOR THE ASSOCIATE DEGREES IN APPLIED ARTS AND IN APPLIED SCIENCE, 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:

1. Completion of course requirements of specific programs for specialized study areas outlined in the curriculum guides of each department.
2. Completion of minimum of 90 credits.
3. G.P.A. of 2.0 or better.
4. 30 credits in attendance at LCC.
5. Completion of four credits of American Government or State and Local Government (SS 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:

1. Completion of course requirements of specific programs for specialized study areas outlined in the curriculum guides of each department or the requirements of the associate degree in General Technology as outlined in the 830 curriculum guide.
2. Completion of minimum of 90 credits.
3. G.P.A. of 2.0 or better.
4. 30 credits in attendance at LCC.
5. Completion of four credits of American Government or State and Local Government (SS 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.

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

1. 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.
2. Completion of a minimum of 90 credits.
3. G.P.A. of 2.0 or better.
4. 30 credits in attendance at LCC.
5. Completion of SS 103 or SS 104 or SS 105 or LR 208.

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 (517-483-1191) 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. Completion of a minimum of 90 credits.
2. G.P.A. of 2.0 or better.
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.

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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 (517-483-1191) 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, non-repetitive 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 A BACHELOR'S DEGREE

A student who has earned a Bachelor's 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.

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 aspects 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 interest 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:

1. 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
2. When the person is in fact in violation of such rules; and
3. When, thereafter, such officer or designee directs the person to vacate the premises, building or other structure of the institution; and
4. When the person thereafter willfully remains in or on such premises, building or other structure; and

5. When, in so remaining therein or thereon, the person constitutes
   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 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."

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."

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:

1. Conduct or communication which a reasonable person in a similar circumstance would consider unwelcome.
2. 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.

*Robert, Henry M., Robert's Rules of Order (Revised), Scott, Foresman and Company. 1951, page five.

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 139 Gannon Vocational-Technical Building (517/483-1858) or the Office of the Dean of Student Personnel Services located in the Student Personnel Services Building (517/483-1162) 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 (517/483-1162).
2. The student may process a formal grievance through the College's Affirmative Action Office using the appropriate formal grievance procedure for the alleged discrimination or sexual harassment. The College's Affirmative Action Office is located in the 139 Gannon Vocational-Technical Building (517/483-1858).

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 of the student 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

In continuing compliance with the Michigan Clean Indoor Act, P.A. 198 of 1986, and in the interest of providing a safe and healthy environment for the College's students, employees, and visitors, smoking will not be permitted in Lansing Community College facilities.

WEAPONS AND 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.

ALCOHOL AND DRUG ABUSE - STUDENTS AND GUESTS

1. In recognition of the serious health risks[1] associated with the illegal use of controlled substances[2] and the abuse of alcohol, and in compliance with the Drug-Free Schools and Communities Act Amendments of 1989 (Public Law 101-226), and to initiate Board Policy 4490, Alcohol and Drug Abuse, the following regulation is effective immediately:
   A. Students and guests may not manufacture, distribute, dispense, possess or use any alcoholic beverage or controlled substance on College premises or while engaged in College activities.
   B. Being under the influence of alcohol or any controlled substance while on College premises or engaged in College activities is prohibited.
   C. No College student activity funds will be used for the purpose of purchasing alcoholic beverages or controlled substances.
   D. Students and guests are personally accountable for knowledge of federal, state and local laws relating to alcoholic beverages and controlled substances, the minimum drinking age, transporting open containers of alcoholic beverages, and false representation of age by a minor.
   E. Public intoxication on College premises or while engaged in College activities is considered to be an inappropriate condition under any circumstance.
2. Violation of this regulation may result in disciplinary action up to and including expulsion from the College and referral for prosecution. A lack of legal conviction of relevant laws is not a defensa in a charged violation of this regulation.[3]

3. Guests on College premises are expected to follow the above requirements. Failure to do so may result in a request to leave College property or College activities.
4. In the spirit of providing a safe, healthy, and drug-free environment, the College will:
   A. Offer educational programs that support a drug-free campus and workplace as a normative social value.
   B. Offer opportunities for substance abuse counseling.
   C. Make referrals to appropriate counseling professionals and/or agencies within the community to help students and employees who may benefit from such counseling.
   D. Incorporate in classes throughout the curriculum, where appropriate, references and class-related assignments related to the medical, legal, social and wellness issues inherent in a drug-free campus and workplace.
   E. Conduct a biennial review of the College's drug and alcohol prevention program to determine the program's effectiveness.

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[1] Substance abuse is a serious but treatable condition or disease that can lead to short-term or long-term physical and psychological consequences, including but not limited to dependence, damage to the nervous system, heart and respiratory conditions and death.

[2] A "controlled substance" is defined as one: 1) which is not legally obtainable; 2) which is being used in a manner different from that prescribed; or 3) which is legally obtainable but has not legally been obtained. (21 U.S.C. 821; MCLA, 333.7101, et seq.)

[3] A "conviction" under this policy is defined as a defendant pleading guilty or no contest and/or a guilty finding by a court of law.

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 impaired 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 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.

VIDEO CASSETTE

The federal copyright law, Title 17 of the United States Code, provides copyright protection of "original works of authorship," including "motion picutres and other audio visual works." Thus, the use of video cassettes and films is restricted to private showings, and public showings are prohibited without the copyright owner's consent. Under the "fair use" limitation, copyrighted cassettes, motion pictures, and other audio visual works may be used for purposes such as "teaching (including multiple copies for classroom use), scholarship, or research" without violation, and audio visual materials purchased or rented by the College

have the written consent of the copyright owners and, therefore, are legally appropriate for classroom use.

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.
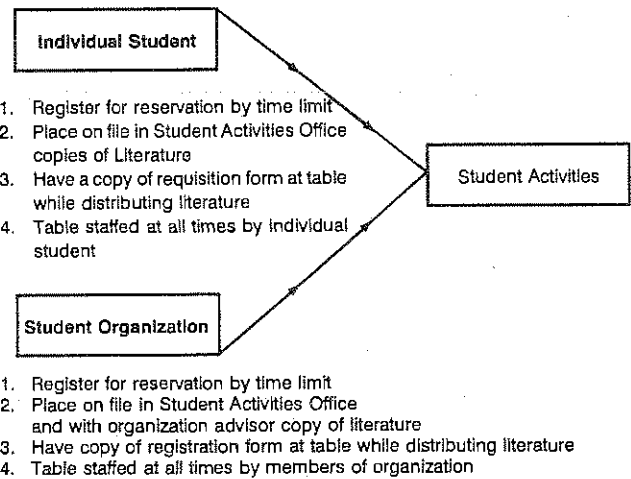
The following statements are designed to facilitate student distribution of literature within the College facilities, while providing students and College personnel and property reasonable protection from commercial exploitation and legal actions. Court rulings have determined that College buildings 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
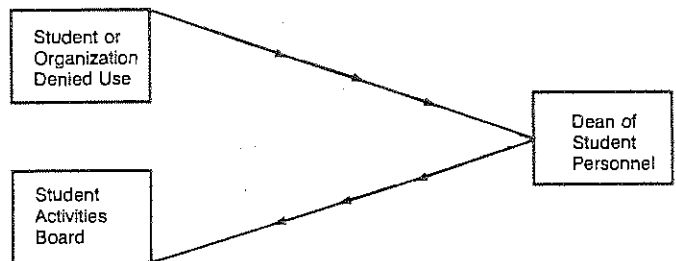
will be required to give up the multiple use of tables and locations to provide for the new request.
5. A copy of the completed registration form obtained from the Student Activities Office must be available at the student literature table while distribution is taking place.
6. In order to determine 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

Individual Student

1. Register for reservation by time limit
2. Place on file in Student Activities Office copies of Literature
3. Have a copy of requisition form at table while distributing literature
4. Table staffed at all times by individual student

Student Activities

Student Organization

1. Register for reservation by time limit
2. Place on file in Student Activities Office and with organization advisor copy of literature
3. Have copy of registration form at table while distributing literature
4. Table staffed at all times by members of organization

FLOW CHART FOR APPEAL OF DENIAL OF USE OF LITERATURE TABLE

Student or Organization Denied Use

Dean of Student Personnel

Student Activities Board

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 Lansing Community College Student 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:

1. 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 enrollment being delayed.
2. The student shall be notified by an appropriate College official that he/she is accused of violating a regulation;
3. The student shall be notified that he/she may elect one of three courses of action:
   a. The student may admit the alleged violation and request, in writing, that the administrative officer take whatever action seems appropriate;
   b. The student may admit the alleged violation and request a hearing before the Judicial Board;
   c. The student may deny the alleged violation, in which case the administrative officer shall refer him/her to the Judicial Board;
4. Prior to the hearing, the student shall be entitled to the following:
   a. Written notification of the time and place of the hearing;
   b. A written statement of the charges of sufficient particularity so that the student may prepare his/her defense;
   c. Written notification of the names of the witnesses who are directly responsible for having reported the alleged violation or, if there are no such witnesses, written notification of how the alleged violation came to the Board's attention.
5. 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;
6. The student shall be entitled to be accompanied by counsel;
7. The student or his/her counsel shall be entitled to ask questions of the Judicial Board or of any witnesses;
8. The student shall not be required to testify against himself/herself;
9. The student shall be entitled to an expeditious hearing of his/her case;
10. The student shall be entitled to an explanation of the reasons for any decision rendered against him/her;
11. 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; and
12. The standard of proof to be followed by the Judicial Board of Lansing Community College is the standard of "clear and convincing evidence."

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:

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

4. Two faculty members appointed by the dean of the division in which the concerned student is enrolled or matriculating, with one alternate faculty member appointed in the same way, to serve in the absence of any faculty member.
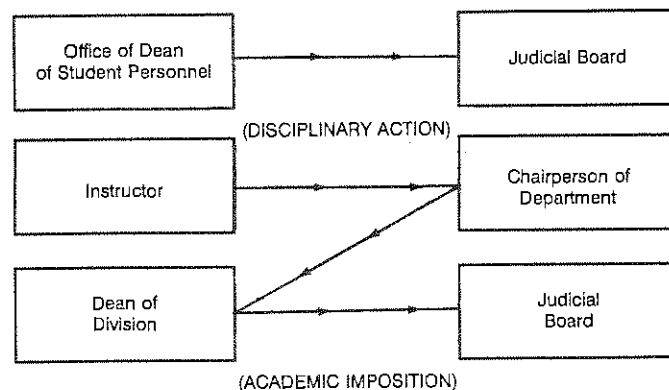
The line of appeal to the Judicial Board of the College and the instructional division membership of the Judicial Board shall be explicit, depending on the type of case being presented:

1. When the case involves a disciplinary action based on an alleged violation of the general rules and regulations of the College (for example: explosives, alcoholic beverages, treatment of College property), the line of appeal shall be:
   a. The Office of the Dean of Student Personnel Services Division;
   b. The Judicial Board of the College.

The instructional division membership of the Judicial Board shall be 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;

2. When the case involves an academic imposition, based on alleged violation of the academic rules and regulations (for example: plagiarism and cheating) or alleged mistreatment of students by faculty, the line of appeal shall be:
   a. The faculty member involved;
   b. The chairperson of the instructional department involved;
   c. The dean of the division involved, and
   d. The Judicial Board of the College.

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

3. 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

(DISCIPLINARY ACTION)

| Office of Dean of Student Personnel | → | Judicial Board |

| Instructor | → | Chairperson of Department |

| Dean of Division | | Judicial Board |

(ACADEMIC IMPOSITION)

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, date, 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 maintaining clear and thorough records of student progress and keeps students informed throughout the course;
G. Encourages intelligent, independent though by students, where appropriate; and
H. Uses instructional media, learning materials, and equipment effectively.

The complementary responsibilities of instructional staff are to assist students 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 with 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 DESCRIPTION

Each course description has seven (7) categories of information as follows:
1. Course Code and number
2. Course title
3. Number of credit hours
4. Number of lecture-discussion hours per week
5. Number of laboratory hours per week
6. Prerequisite: WRI 121. Continuation of WRI 121 and an alternative to ENG 122 in many programs.
7. Course description

For example:

Course Code	Course Title	Credits Hours	Lecture Hours	Lab Hours
WRI 122	Composition II	4	4	0

Prerequisite: WRI 121
Course Description:

LANSING COMMUNITY COLLEGE

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

CENTER FOR AGING EDUCATION
GER   Gerontology

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/Aerobic Exercise
PEJ   Outdoor Activities

MILITARY SCIENCE, ARMY R.O.T.C.
MS   Military Science

AEROSPACE STUDIES, AIR FORCE ROTC
AS   Aerospace Studies

DIVISION OF ARTS AND SCIENCES

DEPARTMENT OF ACADEMIC ENRICHMENT SERVICES
ESL   English as a Second Language
ENR   Enrichment
HON   Honors
PHN   Phonics
RDG   Reading
SPL   Spelling
VCB   Vocabulary
WRI   Writing*

DEPARTMENT OF COMMUNICATION
COM   Communication
JRN   Journalism
SGN   Sign Language
SPH   Speech
WRI   Writing*

DEPARTMENT OF HUMANITIES
CHN   Chinese
ENG   English
FRN   French
GRM   German
HST   History
HUM   Humanities
JPN   Japanese
PHL   Philosophy
REL   Religion
SPN   Spanish

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   Meterology
MIC   Microbiology
NS   Natural Science
OCN   Oceanology
PGY   Physiology
PHY   Physics
SC   Science Seminars and Independent Study

DEPARTMENT OF SOCIAL SCIENCE
CD   Child Development
ED   Education
GEO   Geography
HUS   Human Services
PLS   Political Science
PSY   Psychology
SA   Sociology/Anthropology
SS   Social Science
SW   Social Work

*Courses with these codes are offered by the Department of Academic Enrichment Services and the Department of Communication.

DIVISION OF BUSINESS

ACCOUNTING AND COMPUTER ACADEMIC PROGRAMS
ACC   Accounting CAB Computer Applications for Business
CAS   Computer Applications Systems
CLU   Certified Life Underwriter
CU   Credit Union
INS   Insurance

CRIMINAL JUSTICE AND LAW
CJ   Criminal Justice (Formerly COR, LE, SEC)
LAW   Business Law/Legal Assistant

HOSPITALITY, TOURISM AND TRAVEL
HMF   Hotel-Motel-Food Management
TA   Tourism and Travel Agency

MANAGEMENT, MARKETING AND ECONOMICS
AIB   American Institute of Banking
BUS   Business
CUM   Credit Union Management
EC   Economics
LR   Labor Relations
MGT   Management
MKT   Marketing
RE   Real Estate
SL   Savings and Loan

OFFICE ADMINISTRATION
BUS   Business
CCR   Court and Conference Reporting
DE   Data Entry
WP   Word Processing

BUSINESS AND INDUSTRY INSTITUTE

MANAGEMENT DEVELOPMENT CENTER
MDC   Management Development Seminars
SBM   Small Business Management

INTERNATIONAL PROGRAMS

DIVISION OF TECHNOLOGY AND APPLIED SCIENCES

AUTOMOTIVE TECHNOLOGY
ATS   Automotive Seminars
AUT   Automotive Technology
TDT   Truck Driver Training
THE   Truck and Heavy Equipment

AVIATION TECHNOLOGY
AFG   General Maintenance
AFM   Airframe Maintenance AFP Powerplant Maintenance
AFT   Flight Technology
AV   Avionics Technology

CONSTRUCTION AND ENGINEERING TECHNOLOGY
AT   Architectural Technology
ATG   Applied Technology General
ATM   Applied Technology Mathematics
BR   Building Related
BT   Building Trades
BTA   Building Trades Related (Apprentice)
BTJ   Building Trades Related (Journeyman)
CG   Computer Graphics
CIM   Computer Integrated Manufacturing
CT   Civil Technology
DT   Industrial Drafting Technology
EQU   Equine
FST   Fire Science Technology
IAD   Interior Architecture Design
LAT   Landscape Architectural Technology
TEC   Technology General

HEALTH CAREERS TECHNOLOGY
AHC   Allied Health Careers

LANSING COMMUNITY COLLEGE

CHC	Continuing Health Careers
CHS	Community Health Services
DA	Dental Assistant
DH	Dental Hygiene
DHA	Dental Assistant and Dental Hygiene
DMS	Diagnostic Medical Sonography
DSC	Dental Service Courses
EMS	Emergency Medical Services
EMT	Emergency Medical Services Technology
ER	Emergency Care ESA Advanced Emergency Medical Technology
HF	Health and Fitness
HFC	Health Fitness/Cardiac
MA	Medical Assistant
NUR	Nursing (Career Ladder L.P.N.-R.N.)
RAD	Radiation Therapy Technology RT Respiratory Therapy
RTA	Respiratory Therapy-Advanced RXT Radiology Technology
ST	Surgical Technology

INDUSTRIAL OPERATIONS TECHNOLOGY

CIM	Computer Integrated Manufacturing
EM	Electrical Courses
ET	Electronics
IA	Industrial Automation
LMS	Labor Management Studies
PIM	Production and Inventory Management
QC	Quality Control and Reliability

MANUFACTURING TECHNOLOGY

ATR	Machine Trades
CED	Cooperative Education
CNC	Computerized Numerical Control
HAC	Heating and Air Conditioning
SAF	Safety Courses
WLD	Welding

DIVISION OF TELECOMMUNICATION AND THE ARTS

DEPARTMENT OF MEDIA

ART	Art
ARW	Art Workshops
MRT	Media Technology
PHO	Photography

DEPARTMENT OF PERFORMING ARTS

DNC	Dance
DNR	Dance Workshops and Seminars
MUS	Music
THR	Theatre
THW	Theatre Seminars and Workshops
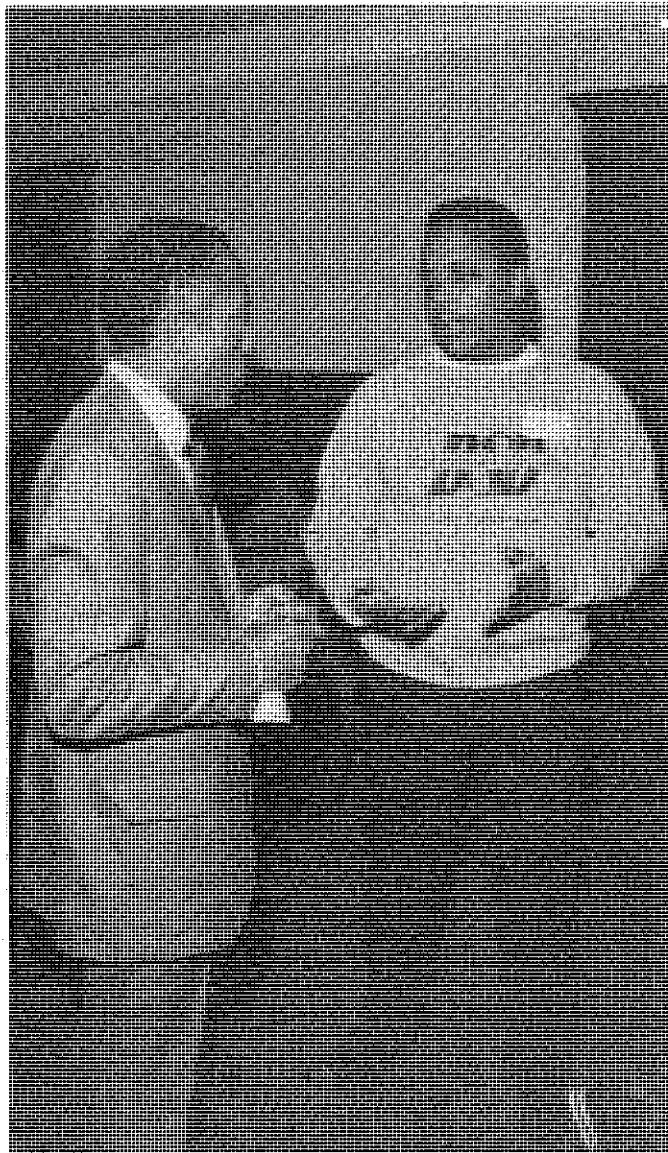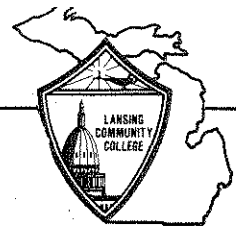
Lansing
Community
College

Dean William G. Schaar

DIVISION OF STUDENT PERSONNEL SERVICES

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

DIVISION OF STUDENT PERSONNEL SERVICES

Dean: Dr. William Schaar
217 Student Personnel Services Building

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

Student personnel services are designed to support the College goals listed earlier in this catalog. Some services provide direct support for several of the College's goals while all of the services provide indirect support for all goals listed.

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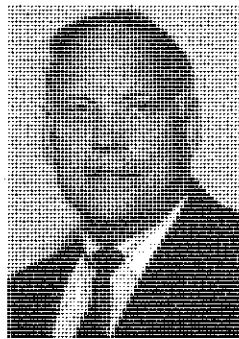
The function of Student Personnel Services is to provide support services for the student as a learner in an instructional environment. The program and service objectives of the Division are:

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 services, 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 offer courses designed to help students acquire adjustments, activity and informational 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 studies.

Organization of Resources

In order to carry out the functions above, the Division of Student Personnel Services employs both trained professional and support staff in each service area. The service functions are designed to meet the special needs of students. Staffing and housing of these services are designed to have maximum impact on "student success."

It should be noted that the Division of Student Personnel Services provides both support and instructional programs for students. The facilities for the division are placed in the various buildings on campus with a concentration of several services in the Student Personnel Services Building.

Major Programs and Services

The major service areas are:
1. The Office of Admissions
2. The Registrar, Student Records and Cashier
3. The Office of Veterans' Services
4. The Office of Student Financial Services
5. The Office of Student Activities
6. The Employment Placement Services
7. The Student Development Department
   A. The Women's Resource Center
   B. The Career Exploration and Assessment Center
   C. The Center for Student Support
8. The Center for Aging Education
9. The Physical Education and Athletics Department
10. Michigan Occupational Training Program

EMPLOYMENT PLACEMENT SERVICES

Director: Stephen A. McEnaney
211 Gannon Vocational Technical Building

Informative handouts, a quarterly newsletter, "Accept the Challenge" job search guide, employer information and several career magazines are available to LCC students.

Employment Placement

Placement services are available to all students for either part-time or full-time positions. Positions at the College and within the service area of Lansing Community College are posted. Information on on-campus and off-campus College Work Study jobs is available in the placement office. Applications for College Work Study eligibility must be processed through the Student Financial Services Office. The job board is located outside the Employment Placement Center, Room 211, Gannon Vocational-Technical Building.

Student Employment Guidelines

All student employees must be enrolled for at least six term credits, excluding audited courses, and be pursuing an academic program of study during fall, winter and spring terms. All student employees must be enrolled for at least one course during summer term.

A student employee who has received a Federal College Work Study award for Summer Term must have on file a signed Letter of Intent form for Fall Term enrollment or carry at least six term credits during the Summer Term. The signed Letter of Intent form must be on file in the Employment Placement Services office prior to being employed. The Letter of Intent forms can be secured from the Employment Placement Services office.

A student employee must have graduated from high school or the student employee must be 18 years of age and the student employee's high school class must have graduated.

To be consistent with the student employment philosophy, student employees may not work more than 20 hours per week during the scheduled terms. Student employees may work up to 40 hours per week during the term breaks.

A student employee may be employed in only one student job unless prior approval in received from the Coordinator of Student Employment or the Director of Placement Services. If approved to work in two jobs, the student may not exceed a total of 20 hours in a work week for the combined two employment positions during the scheduled term.

Students who have been assigned a student number may begin work during the term break preceding the term of enrollment at Lansing Community College.

Interviews

Employers may interview on campus. Students and LCC graduates seeking full-time employment 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 Employment Placement Center.

Services and Special Events

Employment Placement Services offers assistance with job placement. Services include:
- credential file system for graduates and alumni
- Computer Assisted Placement System (job-applicant matching)
- resume and interview preparation assistance
- employment assistance for both full and part-time positions
- Summer Job Fair (February) for summer job opportunities
- Part-Time Placement File (for currently enrolled and incoming students)
- Student Employment Application File (for currently enrolled and incoming students)
- Health Care Employer Day (Fall and Spring term)

Employability Skills Center

Materials and instruction on increasing employability and success skills available to LCC students. Includes video tapes on job search preparation (resume development, interviewing, marketing job skills) and a limited collection on company information.

Mock interviews can be videotaped. Placement staff or a friend can conduct the interview.

CENTER FOR AGING EDUCATION

Director: Ellen N. Sullivan
207 Old Central Building

Gerontology Program

The Center for Aging Education provides aging education, training and consultation to agencies, businesses, community organizations and individuals. Its 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
- customized training and in-house seminar development
- consultation on aging education issues
- audio-visual programs on high-interest topics

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 faculty.

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 will also advise older adults seeking information on educational opportunities. Gerontology advising supplements the regular general advising program of the College.

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.

Audio-visual programs on special topics in aging are available through the Center. "Aging Family Members and You: Solving the Puzzle Together," identifies emotional and practical concerns involved in family caregiving and presents a step-by-step plan for decision-making. "Older People and You: Skills for Helping," welcomes viewers to the field of gerontology by identifying the range of positions and responsibilities for beginning workers. More information is available on these and other programs.

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.

The Older Wiser Learners (OWLS) group is sponsored by the Center to promote informal learning opportunities for mature adults. Through regular meetings and special activities, the OWLS share ideas, exchange information and participate in continuing education activities.

The Gerontology Club, for gerontology students and graduates, is advised by Center staff. Through club activities, students initiate programs to provide supportive services to themselves while working to increase community awareness and understanding of aging issues.

COURSE DESCRIPTIONS

Gerontology (GER)
Center for Aging Education
Division of Student Personnel Services

GER 100   Introduction to Human Aging   3(3-0)
Prerequisite: Reading and writing assessment. 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 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 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, use of individual personal resources (emotional, physical, mental and social) and exploration of meaningful roles for older adults.

GER 113   Investments and Financial Management in Retirement   .5(.5-0)
An overview of money management strategies and investments, especially as applied to fixed incomes in retirement. Topics include determining net worth, types of investments, yield, stocks, bonds, mutual funds and money management tips and legalities.

GER 114   Estate Planning for Retirement   .5(.5-0)
Provides practical information on estate planning and the alternatives available for a variety of family situations. Includes techniques used to plan an estate, preserve and transfer property during lifetime and at death, avoid probate and minimize death taxes and legal expenses.

GER 115   Memory Improvement Techniques   .5(.5-0)
Designed for older adults who seek to improve their ability to remember. Examines myths and facts about memory and aging, reviews factors which influence memory and introduces specific techniques for improving recall.

GER 121   Senior Group Program Planning   .5(.5-0)
Overview for those planning senior adult programs: basic principles of programs and leadership; ideas and resources for activities for older adults; motivating older adults to participate; and scheduling activities.

GER 122   Working with Older Adults: The Aging Process   .5(.5-0)
Presents an overview of issues and skills critical in working with older adults. Includes an overview of facts and myths associated with older adults, normal physical changes and their implications; social/emotional aspects of aging, including communication issues; and federal, state and local resources for the older adult.

GER 123   Counseling Outreach Skills: Aging Populations   3(3-0)
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   .5(.5-0)
An examination of aging in the family context, with emphasis on information useful to the individual's own family situation. Topics include the normal aging 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 125   Volunteers—The Three R's:
Recruiting, Retaining, Rewarding   .5(.5-0)
Designed to assist supervisors and administrators as they recruit and work with volunteers. The focus is on the process of volunteer management. Included are techniques for assessing current and future volunteer utilization; innovative methods for recruitment, retention and recognition of volunteers.

GER 126   Volunteers Part II: Interviewing and Placement   .5(.5-0)
Focuses on conducting an effective interview, proper volunteer placement and legal restrictions to the interview process and volunteer termination or reassignment.

GER 130   Respite Care Training for Volunteers   1(1-0)
Designed for volunteers who wish to provide respite care. Prepares participants to serve as companions and substitute care providers for functionally impaired older adults.

GER 131   Planning For Older Adults With Developmental
Disabilities   1(1-0)
Presents an overview of the older adult with developmental disabilities including characteristics, demographics, public policy issues, and functional assessment. A panel will discuss Michigan program initiatives; case studies will be presented.

GER 132   Activities: Older Adults with Developmental Disabilities   .5(.5-)
Provides an opportunity for participants to gain knowledge of and practice in designing meaningful activities for older adults with developmental disabilities.

GER 150   Information Sources for Gerontology   1(1-0)
Provides an overview of the literature in gerontology, especially general sources — handbooks, indexes, guides and government sources — and databases in print and electronic formats. Topics include special subject sources, resources available from national aging organizations and government agencies, newsletters in aging, search terms and designing an effective database search.

GER 155   Identifying Community Programs for Older Adults   .5(.5-0)
Presents an overview of federal, state and local health and human services programs for older adults, including referral, legal and mental health services and geriatric assessment; and nursing home advocacy.

GER 158   Long-Term Care Options .5(5-0)
Presents an overview of long-term care options from home care and retirement centers to adult foster care and nursing homes. Appropriate placement, financial aspects and quality care issues are discussed.

GER 161   Issues of Aging: Sexuality   .5(.5-0)

Issues relating to sexuality and older persons: societal attitudes, sexual behavior patterns, physiological changes, psychological responses and special situations such as institutional settings.

GER 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   Dementia I: Concepts and Causes   1(1-0)

An introduction to current concepts of confusion ("senility," dementia and 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 166   Legal Rights: Housing Options and Issues
for Older Adults   .5(.5-0)

Presents the pros and cons of various housing options for older adults with the legal implications of each.

GER 167   Issues of Aging/Nursing Homes: The Choice,
Realities and Alternatives   .5(.5-0)

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   .5(.5-0)

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   Legal Rights of Older People — Disability and Consent   .5(.5-0)

Procedures such as guardianship, conservatorship, power of attorney, the living will, joint tenancy, nursing home residency and civil commitment will be addressed. Explores the actual and perceived choices an individual has as aging and illness occur, the legal procedure through which a person gains the right to make decisions over another's life and the role the state has in protecting a person against him or herself.

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   Dementia II: Techniques for Intervention   1(1-0)

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   Increasing Communication Through Sign
Language Phrases   .5(.5-0)

Introduces understanding and use of American Sign Language (ASL) through expressive and receptive manual skills, including use of the manual alphabet and sign language phrases.

GER 173   Activities: Older Adults with
Alzheimer's/Related Disorders   .5(.5-0)

Provides an opportunity for participants to gain knowledge of and practice in designing meaningful activities for older adults with Alzheimer's and related disorders.

GER 174   Working with Older Adults: Minority Aging   1(1-0)

Focuses on the special needs of African American, Native American and Hispanic elderly. Includes demographic aspects of minority aging, special conditions of physical health, psychological aspects, social problems and federal policies concerning minority aging.

GER 176   Hearing Loss and Aging: Maintaining Communication   .5(.5-0)

An overview of causes, effects and practical methods of compensation for hearing loss in older adults. Topics include: description of the ear and how it functions, the effects of normal and abnormal changes on hearing ability as one ages, the implications for hearing impaired individuals and their families and ways of maintaining communication flow with one who has a hearing loss.

GER 177   Vision Adaptation in Middle/Later Years   .5(.5-0)

An overview of vision changes in middle/later years and ways to assist older persons experiencing these changes. Includes normal changes of aging, common diseases and conditions of the eye, treatment approaches and adaptations to maintain independence. Community resources to assist those with visual adaptation needs are included.

GER 178   Adapting Your Surroundings: Easier Living in Later Life   .5(.5-0)

Overview of changes one can make in home surroundings to accommodate gradual or sudden physical or mental, normal or illness related changes in later years. Includes special emphasis on room and cupboard arrangement, hearing and visual aids, building access through entrance/exit and community resources to assist those in need of making adaptations.

GER 179   Legal Rights: Medicare, Medicaid and Supplements   .5(.5-0)

Provides information on rules and regulations of Medicare, Medicaid and supplemental health insurance programs for older persons. Reviews recent and proposed changes in federal and state programs as well as existing and proposed alternatives to meeting catastrophic health care needs. Includes chronic vs. acute care issues, effects of Diagnostic Related Groupings (DRG's) and ways for service providers to assist older persons in dealing with public and private health insurance matters.

GER 194   Psychological Aspects of Pain Management
in the Elderly   .5(.5-0)

Examines the relationship between pain and quality of life. Introduces psychological techniques for pain management and the hospice concept of a "therapeutic window" in relation to pain management in long-term care.

GER 197   Advanced Grief and Loss Counseling:
Strategies for Practitioners   .5(.5-0)

Overview of specific counseling techniques and their application by practitioners when helping older adults deal with grief and loss. Topics include the professional "helpers" and their attitudes on grief and loss, the effect of the practitioner's attitude on the process of helping the grieving person, specific counseling techniques and identification of community resources.

GER 198   Working with Older Adults: Grief and Loss   .5(.5-0)

Focuses on how to help the grieving older adult. Topics include attitudes toward death and dying; stages and symptoms of grief; abnormal grief reactions; multiple losses of older persons; and community resources.

GER 199   Working with Older Adults: Dying and Death   .5(.5-0)

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, GER 101, admission to field placement, and departmental 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, 13 program credits and departmental 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, 23 program credits and departmental 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.

MILITARY SCIENCE

Division of Student Personnel Services
217 Student Personnel Services Building

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 10 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. 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 of Military Science 113 Demonstration Hall, phone (517) 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
		MS 104
FALL	WINTER	SPRING
MS 201	MS 202	MS 203

Advanced Course

(Refer to applicable four-year college catalog)

Military Science (MS)
U. S. Army ROTC Program
Division of Student Personnel Services

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

Fall, Winter, Spring. 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. 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. The leader's 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 104   Intro to Camp Challenge   1(1-1)

Spring. Preparation for a six-week officer training camp which is conducted at Fort Knox, Kentucky. (Students will be paid approximately $640 plus room and board while at camp.) Successful completion qualifies entry into the advanced Reserve Officers' Training Corps. Lab includes rifle marksmanship, land navigation, rappelling and application of military leadership skills.

MS 201   Military First Aid   1(1-1)

Fall. 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. 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. 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 Reserve Officers' Training Corps (AFROTC) program consists of either a two-year program or four-year program. The four-year program is comprised of the General Military Course (GMC) and the Professional Officer Course (POC), both of which are taken on campus, and attendance at a four-week field training encampment. The two-year program is made up of the equivalent of the

GMC, which consists of attendance at a six-week field training encampment, and the POC taken on campus. Students who successfully complete the requirements of the POC and their degree programs will be comissioned as Second Lieutenants in the United States Air Force and will enter active duty within one year.

A student may complete the GMC portion of the AFROTC program while enrolled at Lansing Community College. The Aerospace Study credits earned here may then be transferred to any of approximately 150 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 Study courses incur no military obligation. 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. All applicants for the POC two-year program should contact the AFROTC office at Michigan State University in October prior to their expected fall term enrollment.

Scholarships

The AFROTC program offers to qualified students four-year scholarships, as well as scholarships for periods ranging from two to three-and-one-half years. These scholarships pay for tuition, fees, a book allowance, and a subsistence allowance of $100 for each month of the academic year. Students must apply for the four-year scholarship by Dec. 1 of their senior year in high school. Applicants for scholarships covering periods less than four years should apply prior to the end of fall term of the school year preceding the one in which the scholarship would become effective.

General Military Course

The GMC consists of six one-credit courses. Ideally, the six courses are completed during the freshman and sophomore years, but they may be taken concurrently during the sophomore year or in some other combination designed to meet the needs of the individual student. The 100-level portion of the GMC deals with the Air Force in the contemporary world through a study of the total force structure, strategic offensive and defensive forces, general purpose forces, aerospace support forces, professionalism and officership and an assessment of oral and written communication skills. The 200-level portion of the GMC is a study of air power from balloons and dirigibles through the jet age, a historical review of air power employment in military and nonmilitary operations in support of national objectives, a look at the evolution of air power concepts and doctrine, an assessment of written communication skills, and continued emphasis on the development of oral communication skills. Portions of the GMC may be waived for students which prior military experience or for students who transfer from another reserve officer training program.

Leadership Laboratory

As part of the GMC, the student is a member of an organized cadet corps which conducts a leadership laboratory lasting approximately one hour once per week during each term. Instruction is conducted within the framework of the cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical, supervised laboratory that typically includes field trips to Air Force installations throughout the United States.

Uniforms and Textbooks

Air Force uniforms and necessary texts are furnished on a loan basis by the Department of the Air Force.

Aerospace Studies (AS)
U.S. Air Force ROTC Program
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(1-1)
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(1-1)
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(1-1)
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(1-1)
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(1-1)
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(1-1)
Development of flight from the first efforts to the present and the employment of aerospace forces in war and peace.

PHYSICAL EDUCATION AND ATHLETICS DEPARTMENT

Chairperson: Dr. Walter Lingo
354 Gannon Health Careers/Physical Education Bldg

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.

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:

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

COURSE DESCRIPTIONS

Professional Physical Education & Athletics (PEA)
Department of Physical Education and Athletics
Division of Student Personnel Services

PEA 100　Professional Orientation　　　　　　　　1(1-1)
Overview of Physical Education field for prospective Physical Education majors.

PEA 102　Athletic Training　　　　　　　　　　3(3-0)
Athletic injury prevention and care techniques; duties and responsibilities of athletic trainers.

PEA 103　Athletic Training II　　　　　　　　　3(3-0)
The course will compliment the skills, knowledge acquired in Athletic Training. Focus will be continued education, further evaluation, modality and rehabilitations skill to specific athletic-related injuries. Practical experience.

PEA 104　IM Athletics　　　　　　　　　　　　3(3-0)
Offers an introduction to IM athletic administration and competitive event supervision.

PEA 109　Officiating Basketball　　　　　　　　2(2-0)
Instruction and testing to provide opportunity for official certification.

PEA 110　Officiating Volleyball　　　　　　　　2(2-0)
Instruction and testing in preparation for officiating at the high school level. College officiating will also be discussed.

PEA 114　Coaching Soccer I　　　　　　　　　3(2-1)
Coaching Soccer I will place emphasis on teaching the proper execution of the fundamental skills and components of soccer.

PEA 115　Coaching Basketball　　　　　　　　2(2-0)
Designed to develop coaching skills. Focuses on defensive and offensive strategies as well as teaching fundamental skills.

PEA 116　Coaching Volleyball　　　　　　　　2(2-0)
This course is designed to develop coaching skills in the areas of basic through advanced individual skills and team strategies. Teaching progressions and practice planning will be covered.

PEA 201　Independent Study　　　　　　　　　1(0-2)

PEA 202　Independent Study　　　　　　　　　2(0-4)

PEA 203　Independent Study　　　　　　　　　3(0-6)

PEA 204   Independent Study   4(0-8)
Individual study on a prescribed topic in coordination with an assigned faculty member.

PEA 205   Professional Perspectives   1(1-0)
This course is designed to provide student-athletes with a professional perspective of the problems confronting community college student-athletes.

Fitness (PEB)
Department of Physical Education and Athletics
Division of Student Personnel Services

PEB 100   Adopted Lifetime Personal Health Activities (ALPHA)   1(0-2)
The nature of health, physical education and recreation and their place in general education. PEB 101, 102, 103, 104 Individual Fitness-A-B-C-D 2(1-2). Four sequential courses to acquaint students with the principles of training. Provides individual conditioning programs.

PEB 105   Jogging   1(0-2)
Introduces jogging as physical fitness and covers foot care, equipment, clothing and safety.

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

PEB 108   Aerobic Walking   1(0-2)
Improving one's fitness level through vigorous walking outdoors. Students will also develop a personalized healthy lifestyle plan which integrates exercise, diet and stress management.

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

PEB 110   Fitness Maintenance   2(1-2)
A fitness class for students with prior experience and knowledge in physical fitness related activities and a desire to continue with it. These activities should center around aerobics, resistance training, movements to reduce and flexibility exercises.

PEB 112   Racewalking Technique   1(1-0)
Designed to build basic walking skills into a racewalking stride for fitness as well as racing. It is recommended that this class be concurrent with Aerobic Walking for fitness and practice time.

PEB 125   Body Flexibility   1(0-2)
Learning proper stretching techniques to increase body flexibility and applying these techniques to increase muscle and joint flexibility.

PEB 130   Tone & Stretch   1(0-2)
This class combines isometric, partner calistenics, stretching and light (1/2-1 lb.) weight exercises.

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

PEB 225-228   Total Fitness - A,B,C,D   2(1-2)
Total fitness is a comprehensive fitness course with a total view of the person. Students will be tested in: aerobic capacity, body composition, flexibility, and strength.

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

PEC 106   Pool   1(0-2)
History, rules, fundamentals, practice drill, positioning of cue ball and variations of the game of pocket billiards.

PEC 107   Pool-Intermediate   1(0-2)
Refinement and improvement of skills.

PEC 108   Pool-Advanced   2(2-0)
Further refinement and improvement of skills.

PEC 111   Racquetball-Advanced   2(2-0)
Court strategy and tournament play.

PEC 112   Table Tennis-Beginning   1(0-2)
Basic skills, including the serve, forehand and backhand strokes.

PEC 113   Table Tennis-Intermediate   1(0-2)
Continuation of skills.

PEC 114   Competitive Table Tennis   2(2-0)
Refinement of skills and introduction of game strategy.

PEC 115   Tennis-Beginning   1(0-2)
Basic skills of tennis: serve, forehand, and backhand stroke, rules and strategy of the game.

PEC 116   Tennis-Intermediate   1(0-2)
Continuation of skills.

PEC 117   Tennis-Advanced   2(2-0)
Refines skills of service, forehand and backhand strokes and game strategy.

PEC 127   Bowling-Beginning   1(0-2)
Basic skills and scoring of bowling.

PEC 128   Bowling-Intermediate   1(0-2)
Refines skills.

PEC 129   Bowling-Advanced   2(2-0)
Class competition involved.

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

PED 104   Bicycling/Touring   1(0-2)
Minor bicycle repair, maintenance, cold weather riding and increased cycling distances. Short tours and planned longer rides on some weekends.

PED 105   Bicycling-Camping/Touring   2(0-4)
Combines camping and touring: outfitting the camping cyclist, long distance riding, planning for long bike camping trips.

PED 106   Cross Country-Beginning   1(0-2)
Instruction in jogging or running, dependent upon the physical fitness of the individual.

PED 108   Cross Country-Advanced   2(2-0)
Emphasis on competition.

PED 109   Cross Country Skiing-Beginning   1(0-2)
Basic skills of cross country skiing: flat, uphill and downhill techniques, equipment, waxing, touring and basic safety.

PED 110   Cross Country Skiing-Intermediate   1(0-2)
Refinement and improvement of skills.

PED 111   Cross Country Skiing-Advanced   2(2-0)
Advanced skills plus overnight camping trip.

PED 115   Golf-Beginning   1(0-2)
Golf strokes, rules, and golf etiquette; experience on the driving range and golf course.

PED 116   Golf-Intermediate   1(0-2)
Refinement and improvement of skills with emphasis on individual problems.

PED 117   Golf-Advanced   2(2-0)
A study of the U.S.G.A. Rules of Golf.

PED 127   Yoga-Beginning   1(0-2)
Introduction to the philosophy and positions of yoga.

PED 128   Yoga-Intermediate   1(0-2)
Refinement and continuation of skills.

PED 130   Yoga-Special   1(0-2)
Postures and asanas are modified to meet the individual needs of the handicapped.

PED 131 Ice Skating   1(0-2)
Designed to teach the fundamental skills needed to enjoy recreational figure skating.

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

PEE 109 Basketball-Beginning   1(0-2)
Beginning techniques and skill development.

PEE 110 Basketball-Intermediate   1(0-2)
Team offenses and team defenses.

PEE 111 Basketball-Advanced   2(2-0)
Team competition and preparation.

PEE 114 Indoor Soccer   1(0-2)
Basic soccer skills with focus on indoor rules and play.

PEE 115 Soccer-Beginning   1(0-2)
Beginning techniques; rules, strategy and competitive play.

PEE 116 Soccer-Intermediate   1(0-2)
Team defenses and team offenses.

PEE 117 Soccer-Advanced   2(2-0)
Team playing and advanced strategy in game situations.

PEE 118 Softball-Beginning   1(0-2)
Fundamental skills.

PEE 119 Softball-Intermediate   1(0-2)
Techniques and rules.

PEE 120 Softball-Advanced   2(2-0)
Team strategy and competitive play.

PEE 124 Volleyball-Beginning   1(0-2)
Skills, game strategy, history, rules and values of volleyball.

PEE 125 Volleyball-Intermediate   1(0-2)
Refinement and improvement of skills.

PEE 126 Volleyball-Advanced   2(2-0)
Team concepts, strategy and competition.

PEE 127 Water Polo-Beginning   1(0-2)
Introduction of basic skills used in team play.

PEE 129 Water Polo-Advanced   2(2-0)
Team concepts, strategy and competition.

PEE 130 Competitive Volleyball   2(2-0)
Individual and team strategies, offensive and defensive play, fitness, reaction and movement drills.

PEE 214 Indoor Soccer II   1(0-2)
Continuation of Indoor Soccer Beginning. Emphasis on team play. Warm-up with basic drills.

Aquatics (PEF)
Department of Physical Education & Athletics
Division of Student Personnel Services

PEF 100 Swimming-Beginning   1(0-2)
Fundamentals and techniques, with emphasis on water adjustment, basic strokes, breathing, survival and diving skills.

PEF 101 Swimming-Adv/Beginning   1(0-2)
Refinement and further development of skills specifically in rhythmic breathing.

PEF 102 Swimming-Intermediate   1(0-2)
Strokes and skills required to become a competent swimmer; review of basic fundamentals with endurance work. Introduction to breaststroke.

PEF 103 Advanced Swimming   2(2-0)
Preparation programs for competitive swimming.

PEF 105 Water Safety Instructor   3(2-2)
Red Cross Certificate program.

PEF 106 Lifeguard Training   3(2-2)
Teach requisite lifeguarding skills and responsibilities.

PEF 109 SCUBA   3(2-2)
National certification.

PEF 110 Hydro-Fit/Deep Water Exercise   1(0-2)
Designed to give you an overall workout with little impact to joints or back. Students will use hydro-fit buoyancy and resistance equipment. This class is held in deep water and participants must be comfortable in deep water.

PEF 112 Hydro-Fit Plus   2(0-2)
A continuation of exercises with a demanding workout of legs and upper body.

PEF 113 Water Walking/Toning   1(0-2)
A variety of walking moves done in shallow water for 30 minutes. Toning exercises and stretches.

PEF 114 Advanced SCUBA   3(2-2)
Prerequisite: PEF 109   For certified divers who wish to increase understanding and enjoyment of diving. Application of basic SCUBA techniques. Two scheduled weekend dives.

PEF 115 Parent/Infant Water Adjustment   1(0-2)
Parent/child water safety, adjustment and fun; water adjustment for the nonswimming child and improvement of motor skills and coordination.

PEF 116 Water Fitness-A   1(0-2)
Stationary water exericses and water games to improve cardio-vascular fitness and flexibility.

PEF 117 Water Fitness-B   1(0-2)
Emphasis on more rigorous water exercises with increased work intensity; designing an individual fitness program.

PEF 118 Water Fitness-C   1(0-2)
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.

PEF 119 Water Fitness-D   1(0-2)
Should be able to swim 500 yards in eight minutes. Fitness for the competitive swimmer: stroke drills, stroke mechanics and analysis, dry land exercises and weight training.

PEF 120 Water Fitness-Plus   2(0-2)
A water fitness class that will meet three times a weak. Emphasis will be on swimming techniques to design an individual fitness program. Also, stationary water exercises and water games to improve cardio-vascular fitness and flexibility.

PEF 121 Parent/Toddler Water Adjustment   1(0-2)
Water adjustment for parent/toddler. Child must be 2-4 years of age.

Combatives/Weight Training (PEG)
Department of Physical Education and Athletics Division of Student Personnel Services

PEG 103 Fencing-Beginning   1(0-2)
Instruction in fundamental techniques. Care of equipment.

PEG 104 Fencing-Intermediate   1(0-2)
Emphasis on rules and competitive preparation.

PEG 105 Fencing-Advanced   2(2-0)
Individual competition.

PEG 106 Judo-Beginning   1(0-2)
Rules, theory and application of judo both for sport and self-defense.

PEG 108 Judo-Advanced   2(2-0)
Competition on an intraclass level.

PEG 109 Karate-Beginning   1(0-2)
Develops skills in punching with fists and hands, kicking (with feet and knees and essential body movement in combat.

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PEG 111   Karate-Advanced   2(2-0)
Designed for the highly skilled.

PEG 115   Weight Training-Beginning   1(0-2)
Various training methods, principles and program designs.

PEG 116   Weight Training-Intermediate   1(0-2)
Emphasis on progressive lifting in training regimen.

PEG 117   Weight Training-Advanced   2(2-0)
Refinement and improvement of skills.

PEG 120   Tai Chi   2(1-2)
Tai Chi is designed to help students understand Chinese traditional cultural her-
itages. It is designed to introduce fundamental movements and compulsory forms
of simplified Tai Chi and muscular art along with traditional art.

PEG 126   Aikido-Beginning   1(0-2)
Aikido—"The Way of Harmony"—focuses on physical discipline and harmony
with self, partner and potential combatants.

PEG 127   Aikido-Intermediate   1(0-2)
Further development toward harmony. Focuses on new defensive strategies and
movements.

PEG 128   Body Building-Introduction   1(0-2)
This course is designed to introduce body building and proper lifting techniques.
Primary emphasis will be on isolation of muscle groups through the use of
machines and free weights.

PEG 129   Body Building-Beginning   1(0-2)
Focuses on proper lifting techniques to isolate and strengthen muscle groups.

PEG 130   Body Building-Intermediate   2(1-2)
Continuation of PEG 129 with more rigorous lifting regimens included.

Gymnastics/Dance (PEH)
Department of Physical Education and Athletics
Division of Student Personnel Services

PEH 103   Parent/Child Gymnastic Tumbling   1(0-2)
Development of motor skills with child and parent participating. Basic tumbling
skills and elementary gymnastic movements.

PEH 104   Parent/Child Gymnastic Tumbling-II   1(0-2)
Continuation of PEH 103 to increase and further develop motor skills, gymnastic
movement and parent bonding are emphasized.

PEH 105   Aerobic Exercise-Beginning   1(0-2)
A progressive fitness course using dance as a vehicle toward fitness. Some
weight training included.

PEH 107   Aerobic Exercise-Advanced   2(0-2)
Continuation of PEH 105 using more aerobic dance time as a vehicle toward
fitness to improve cardiovascular conditioning.

Outdoor Activities (PEJ)
Department of Physical Education & Athletics
Division of Student Personnel Services

PEJ 100   Angling-Beginning   1(0-2)
Covers fish structure, habits and habitats, tackle and techniques for fly, bait, spin
and ice fishing.

PEJ 101   Angling-Intermediate   1(0-2)
A lab class with emphasis on different types of baiting procedures.

PEJ 102   Angling-Advanced   2(0-4)
Fishing trips with emphasis on special castings and recognizing different fishing
habits.

PEJ 109   Canoeing-Beginning   1(1-0)
Prerequisite: Students must know how to swim. Fundamentals of recreational
canoeing and handling, care of equipment, safety strokes and canoe tipping.

PEJ 111   Canoeing-Advanced   2(2-0)
Class trips are planned and taken.

PEJ 124   Sailing-Beginning   2(1-2)
Introduction to sailing theory, terminology and rigging.

PEJ 138   Windsurfing-Beginning   2(1-2)
Introduction to sailing theory, rigging procedure, maintenance and selection of
equipment and sailboarding techniques.

PEJ 143   Basic Sailing/Cruising   3(0-3)
Students will gain first hand experience in the art of sailing and seamanship. They
will attain the confidence necessary to handle a cruising sailing vessel under
various conditions which present themselves on the Great Lakes.

PEJ 144   Advanced Cruising   3(0-3)
Student will experience a major voyage on the Great Lakes applying the terms
covered in PEJ 143. Major emphasis will be placed on advanced piloting and
helmsmanship.

STUDENT ACTIVITIES

Director: William Zuhl
201 Student Personnel Services

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 con-
stantly 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 Theatre and others. Many students and fac-
ulty members perform in community theatre productions and assist behind the
scenes.

A number of trips are sponsored by Student Activities, including theatre 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 theatre, 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 impor-
tance 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.

Student Organizations

Constitutions of student organizations at Lansing Community College are ap-
proved and passed by the Student Government and by the College administration
before adoption. A list of current official student organizations appears in The
Student's Guidebook.

Campus Newspaper

The Lookout is the bi-weekly College newspaper. Paid student editors, under
the supervision of a media 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.

STUDENT DEVELOPMENT SERVICES (SD)

Chairperson: Dr. John H. Cansfield
Room 228 Student Personnel Services Bldg.

The Department develops and maintains programs aimed at the personal and
academic growth of students. Departmental services include counseling,
academic advising, testing, tutoring, community outreach, student orientation
(START) and support for special needs students including women, the handi-
capped, and those for whom English is not their native language. A number of
student development classes and seminars are offered through the Department.

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 qualified 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 special counseling and support program called Project STAY serves students having academic problems. 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.

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

Director: Velma Lohmann
218 Student Personnel Services Building

The theme for the Center for Student Support is **MAKING EDUCATION ACCESSIBLE.** To this end, the Center maintains a wide range of supportive programs and services which are directed at improving the academic and personal success of special populations and special needs students. These students are identified as disadvantaged, handicapped, minority, and limited English proficient students and students in need of tutorial assistance are specifically provided with services to meet their needs.

Disadvantaged/Tuition Incentive Program (TIP)

This program provides supportive services to academically and economically disadvantaged students. This counseling and monitoring component is specifically designed to meet the needs of these students. The Tuition Incentive Program is designed to meet the financial and academic needs of recent high school graduates.

Limited English Proficiency Program

The LEP Program provides counseling, academic advising, registration assistance, financial aid assistance and intensive English training for students with limited English skills.

Special assistance is available to help refugees and immigrants return to school in order to help them adapt to their new culture and find employment. The program assists them in developing awareness skills, self-confidence and job skills using their academic strengths and past experience.

Instructional Resources and Tutorial Services

The theme of the Tutorial Program is **SHARING LEARNING.** Lansing Community College students work with peer tutors and professional Tutorial Technicians to develop classroom competencies and study skills. A supportive atmosphere promoting learning is emphasized.

Handicapper Support Services

The staff of Handicapper Support Services works to provide the assistance that will most fully allow each student to participate in the educational opportunities at Lansing Community College.

The following are the special services provided:

- *Academic advising and support counseling
- *Course registration
- *Reader Services
- *books and course materials on audio tape
- *reading and wiritng assistance for test taking and hands-on classroom activities
- *brailled materials
- *Interpreter services for the hearing impaired
- *Special equipment, adaptive devices and learning station alterations
- *Referrals to other campus services; i.e. career counseling and academic skills assessment
- *Fall orientation to the Handicapper program, LCC's campus and buildings
- *Contacts with and referrals to community agencies and support services
- *Literature on campus and community handicapper services
- *Contact with instructors and program administrators

*Special activities that promote the understanding of handicapp individuals, their needs and interests

CAREER EXPLORATION AND ASSESSMENT CENTER

Director: James C. Osborn
450 Gannon Physical Education Building

The Center offers extensive career assessment activities, career counselin computerized assistance guidance systems and career information to assist st dents and members of the community in organizing and prioritizing informatic enabling them to make appropriate career decisions.

Services are provided to business, industry and government on a contractu basis and consist of assisting employers in appropriate employee selection ar upgrading, pre-training assessment, management effectiveness, team develo ment and outplacement activities. Services are tailored to meet company ar employee needs.

Various testing services are provided to the College, as well as the communi through the College testing service. This testing includes career testing, GE exams for high school completion, correspondence course exams, professior certification exams and testing for apprenticeship programs. Assessment testir for business and industry is done upon request, on a contractual basis.

For more information call (517)483-1221.

WOMEN'S RESOURCE CENTER

Director: Mary D. Laing
212 Student Personnel Services Building

The Women's Resource Center is a service center for people at Lansing Cor munity College and in the community who may be exploring career option considering returning to school, needing support in life-transition periods, lookir for new directions or developing personal and professional growth skills.

The Center offers a variety of classes and seminars for career exploratio personal growth and awareness, skill training and dealing with changes one's life.

The Women's Resource Center provides an opportunity for individuals to di cuss concerns with staff; a community outreach program including a speakei bureau and ongoing scholarship and child care financial aid programs. Refer services and scholarships are available through the Center as well as spec services and funding for displaced homemakers and single parents. A suppc group and numerous programs are offered throughout the year and are free ar open to the public.

COURSE DESCRIPTIONS

Women's Resource Center
Student Development (SD)
Student Development Services Department
Division of Student Personnel Services

SD 103   Preventing Parent Burnout   2(2-
This course is designed to facilitate an understanding of parent burnout and i impact on mental and physical function. The class will address causes, stag and symptoms, family and relationship dynamics and problem solving. Th course will provide multiple skills and mechanisms to cope with stress ar prevent parent burnout.

SD 118   Stretching Your Dollars   2(2-
Assistance is given in very basic money management, budget procedures, reco keeping, wise shopping practices, low-cost entertainment and recreation, effe tive debt payment methods, and financial goal-setting and planning.

SD 119   Mid-Career Planning   2(2-
Designed for people who wish to evaluate their present career situation in tern of their personal development. The class will enable students to identify prese skills, interests, values, motivations, and plan some next step goals designed promote career development. The course is equally appropriate for those co sidering a career change as well as those who would like to plan for continue growth and development within their present job situation.

SD 121   Exploring Your Potential   2(2-
Designed to help each person identify past and present achievements whic 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-
Develops effective study habits by examining behaviors that interfere with su cessful classroom performance. A valuable aid for beginning and advanced st dents. Weekly discussions focus on: how to take examinations, note-takin writing papers, reading improvement, and use of the library.

SD 125   Career Planning   2(2-0)

This course is designed to teach students a process they can use in gathering information and making decisions related to career exploration. The course will help individuals relate their values, life goals, interests, and skills to job areas. Participants 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, learn 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. Class participants work independently on their own personal insights.

SD 127   Job Search Readiness   2(2-0)

This course aids individuals 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 137   Financial Management   2(2-0)

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. (See SD 118 if interested in a more basic course)

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 participants 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. Individuals 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 setting where communication skills, assertiveness training skills, self-confidence, self-care and a positive approach to problem-solving and decision-making will be utilized.

SD 150   Divorce Adjustment   2(2-0)

Designed for those who are experiencing or who have recently completed a divorce, the 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 156   I'm OK—You're OK   2(2-0)

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 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)

This course is designed to help individuals become more effective and productive. A variety of approaches and techniques will be used to provide participants 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 resulting in more of what one wants in life.

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, emencipate themselves from the boundaries they have set for themselves, end become more authentic and self-actualizing.

SD 171   Start Living Rationally   2(2-0)

Designed to help students become more effective and productive using the philosophical teachings of Rational Emotive Therapy. 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 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 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 195   Relationships: Friendship, Intimacy and Love   2(2-0)

Designed for those who wish to explore attitudes, values and beliefs about their own relationships. Learn ways to build and maintain friendship, intimacy and love relationships using techniques of open communication.

SD 202   Teach Yourself A New Way To Think   2(2-0)

Designed to break traditional mind patterns and experience a variety of creative thinking strategies to assist in the change process. Through different approaches, including dimensional visualization, imagination and even humor, students learn new and creative approaches to thinking. This course is general in its approach and is not intended to be specific to any one academic discipline.

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 205   Self-Defense and Women II*   1(1-0)

Prerequisite: SD 204. This seminar is both a review and expansion of the techniques and skills taught in "Women and Self-Defense I" (SD 204). Self-defense techniques taught in this class will focus on responses to armed attacks, multiple attackers and special assaultive situations.

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, pre-schoolers, school-age, and older children.

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

In a small group setting, the class will emphasize the process of 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 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 sexual assault as well as legal, medical and psychological aspects of this and other violent crimes against women.

SD 237   Black Women's Awareness   2(2-0)

This class is an exploration of concerns and issues confronting the African-American woman in America today. Students will have the opportunity to share their viewpoints and life experiences in response to such questions as: Who is the African-American woman? What are her needs? How can those needs be met and how can class participants grow together?

SD 240   Empathy Training: Listening Skills   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 and others.

SD 241   Math Anxiety   2(2-0)

Many people find themselves excluded from certain career choices because they are afraid to take mathematics classes. This course will explore the origins of "math anxiety," 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 health and behavior. The goal is to aid participants in identifying lifetime skills which promote good mental and physical health. Topics include symptoms, personality, dietary influences, communication, balancing roles, goal-setting and wellness.

SD 243   Advanced Empathy: Facilitating Decisions   2(2-0)

Prerequisite: SD 240 or Concurrently. This course will teach the participant 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 behavior of others, acknowledging expectations of others, communication of needs, identification of potential problems, and problem-solving techniques. Participants will engage in structured self-exploration through personal inventories and group participation.

SD 248   Women's Re-entry 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 one's life. Within each of us is a child, an adult, and a parent reacting to the world around us. Increased personal awareness about oneself can help one to become 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 will be shared to increase self-awareness, develop skills and create a support system to futher the goal of Living Alone Creatively.

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

Explore concerns and issues confronting the African-American 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 African-American 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 293   Advanced Elimination of Self-Defeating Behavior   1(1-0)

Prerequisite: SD 126. 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.

Courses starred (*), as well as all others listed, are open to all students who feel they might benefit from these courses.

STUDENT FINANCIAL SERVICES

Director: Neil G. Shriner
Student Personnel Services Building

The Student Financial Services Program at Lansing Community College assists students who demonstrate need in meeting some of the college costs that can not be met by personal or family resources. An objective method of need determination approved by the Federal government is used to evaluate the 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 GED or they have ability to benefit by testing or counseling. They must be enrolled in collegiate programs of study leading to a one-year certificate, two-year degree, or four-year transfer program 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 services are scholarships, grants, loans and employment. 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 are residents of the district 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 sport.
- 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.
- Foundation Scholarships are provided through the Lansing Community College Foundation Office.

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.
- Michigan Educational Opportunity Grants are awarded to needy students who have been Michigan residents for at least 12 consecutive months.
- Michigan Adult Part-time Grants are awarded to self-supporting, part-time (3-11 credits), needy students who have been out of a high school program for at least two years, who have been Michigan residents for the past 12 months.
- Tuition Incentive Program (TIP) pays community college tuition and fees for students from low-income families. Eligible students must be under 20 years of age and have graduated from high school or obtained a GED (General Education Development Certificate) after April 1988 and who meet the low income financial guidelines.
- Women's Resources 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.

LANSING COMMUNITY COLLEGE

– 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 207 O.C. Bldg. or call (517) 483-1179.

Loans: Money that must be repaid beginning six to nine months after graduation or enrollment of less than six (6) credits with the exception of the SLS/PLUS loans which must be repaid immediately.

– Perkins Loans, formerly the 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.
– Stafford Guaranteed Student Loans (GSL) are for students that have need which cannot be met with other types of financial aid. Students apply following the same procedure outlined for the Perkins loans plus they complete a Stafford Student Loan Application which is available from their bank, savings and loan association or credit union. Students must apply two (2) months or more before funds are needed.
– 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. Pre-Approved Lender (PAL) applications are also available at the school for students who have been refused a loan. At least two months is required to process the State Direct Loan.
– Supplemental Loans for students (SLS) are higher interest loans for self supporting adult students who do not qualify for other types of financial aid, or need additional aid. The applications are available from banks, savings and loan associations or credit unions. The application procedure is the same for the GSL, SLS and PLUS.
– Parent Loans for Undergraduate Students (PLUS) are loans for parents to help their dependents pay college costs not covered by other financial aid. Applications are available at the bank, credit union or savings and loan association. If the parent is refused an application or loan, PLUS forms are available at the Student Financial Services Office.
– Short-Term Loans are available on a limited basis through the Student Financial Services Office for tuition, books and emergency expenses.

Employment: Job 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.
– Michigan Work Study is awarded to needy students to help meet expenses while attending college. Students may be employed by the College, public non-profit organizations, private business and industry.
  Student Aide positions are available to students at the College based upon skills and abilities and not necessarily upon need.
– The College Placement Office at LCC posts Federal Work Study jobs, Student Aide jobs, and off-campus part-time and full-time jobs. 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 and Business Scholarships
– LCC Emergency Fund
– Michigan Commission on Indian Affairs
– 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, 25-Admissions Office, 422 N. Washington Square, 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)

Stafford Student Loans, Supplemental Loans and Parent Loans for Undergraduate Students are available by completing the above forms and the loan application. Loan applications are available at banks, savings and loan associations and credit unions. Also, a loan information sheet must be completed. This form is available at the Student Financial Services Office.

LCC Board of Trustees Scholarships are available through district high school's counseling office.

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 school 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.

Processing of the student's application for financial assistance will be completed and the student will be notified 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, Financial Aid Transcripts to the Office of Student Financial Services, and any additional documents required by the Office of Student Financial Services.

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 students' 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 verify 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 to 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 to 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 6 credit hours per term, the student will not be eligible for most federal and state financial assistance. Students with 3 to 11 credits may be eligible for a Michigan Adult Part-time Grant.

Audited courses for non-credit do not count when determining financial aid eligibility and can not 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 who have a high "Pell Grant Index" enroll for less than 12 credit hours and are no longer eligible to receive Pell funds.

LANSING COMMUNITY COLLEGE

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 percent refund period. The student must be prepared to meet his/her living expenses during the period prior to check distribution.

Financial Assistance Advance Check

CHECK DISTRIBUTION: Checks are issued two times each term at cashiers if financial aid awards exceed the amount of tuition and fee charges. Students use this money for books, supplies, transportation, room and board. Advance checks are printed one time each term at the end of on-campus registration. Final checks are printed two weeks later at the end of 50 percent refund period. Student who receive an advance check normally receive a final check.

ADVANCE CHECKS: Advance checks are automatically calculated for financial aid students if their awards are complete and if they are registered by the last day of on-campus registration. The financial assistance advance check will be calculated by subtracting the amount of tuition and fees owed for the term from the adjusted amount based on credit enrollment and writing a check for one-half the difference (rounded to the nearest $10), up to a maximum of $150, if:

as a resident the difference is greater than $30,
as a non-resident the difference is greater than $40 or
as out-of-state the difference is greater than $50.

College Work Study

If a student has been offered College Work Study 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.

Tuition Refund

If the student paid tuition and/or fees entirely out of personal funds, and received no financial funds, any refund will go directly to the student.

If tuition and fees are paid from financial aid funds, refunds will be allocated to the programs from which the student received aid. The amount refunded to any program may not be greater than the amount the student actually received from that fund.

Tuition Refunds for financial aid students are returned to accounts in the following order: Tuition waiver awards, Scholarships, Perkins Loan (formerly NDSL), SEOG, MEOG, PELL, GSL.

Funds may be released to students only if repayment is not required.

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 Warning Range as defined elsewhere in the catalog.
2. Completing 60 percent or more of the credits attempted each term.
3. After six terms of enrollment students are required to have a cumulative grade point average (G.P.A.) of 2.00 or above and have completed a minimum of 60 percent of credits attempted. If a student is suspended because of unsatisfactory progress, with more than one term but less the six terms of enrollment, the student may be readmitted and allowed to re-enroll under a learning contract with a "Student Success Program" 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 warning range, and completes 60 percent or more of the credits attempted each term.

Students who do not successfully complete the terms of their educational contract with a "Student Success Program" will be cancelled from financial assistance.

After six terms, students with G.P.A.'s lower than 2.00 or students who have completed less than 60 percent of credits attempted will have their aid eligibility cancelled. When they have improved their academic standing, they may be reconsidered for financial aid.

Stafford, SLS, and PLUS borrowers must complete the two terms prior to the beginning of the loan period and the terms within the loan period with a minimum grade point average (GPA) of 2.00 for each term, and must successfully complete

at least 60 percent of the courses attempted in each of the two terms prior to the beginning of the loan period.

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 LCC or another 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 180 credits or a Bachelor's Degree may be recommended for a Stafford Student Loan to complete a degree or certificate program for the purpose of obtaining employment.
2. Special Circumstances beyond the student's control on a documented, written appeal basis.

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 in writing or in person 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 written 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 instructional divisions to be appointed by the appropriate deans.
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.

MICHIGAN OCCUPATIONAL TRAINING PROGRAM

Program Director: Jennifer Bramer
211 Gannon Vocational-Technical Building

The Michigan Occupational Training Program provides scholarship assistance to retrain dislocated workers through MJOB-Retrain funds from the State of Michigan.

Recruitment

The program solicits applications to its program from people who are unemployed or underemployed due to layoff or plant or business closing. Applicants must exhibit a good work history (preferably have been employed in the same business or industry for three years or more). They must also be residents of Michigan and citizens or nationals of the United States.

Assessment

Applicants to the program complete a written application and take appropriate placement testing. Placement testing is provided to the applicants through various other departments on campus: Academic Enrichment Services, Mathematics,

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Office Administration. Some applicants are referred to the Career Exploration and Assessment Center for career counseling and testing. Qualified applicants are interviewed and selected to participate in this program of retraining.

Training

Short training programs (no longer than three to four academic terms) are provided for participants to train them for new careers where labor market need exists. Students are provided academic advising and monitoring as they go through the program. They are encouraged to utilize existing student support services, and other support services are designed to fit the special needs of given groups.
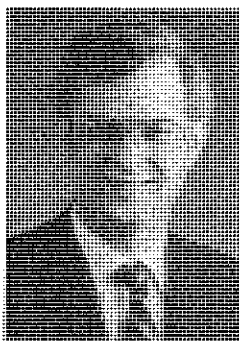
Placement

The goal of the Michigan Occupational Training Program is to place participants in jobs. The program establishes direct contact with employers and also has the assistance of Employment Placement Services. Participants receive editing and clerical assistance for their resumes and other job search correspondence.
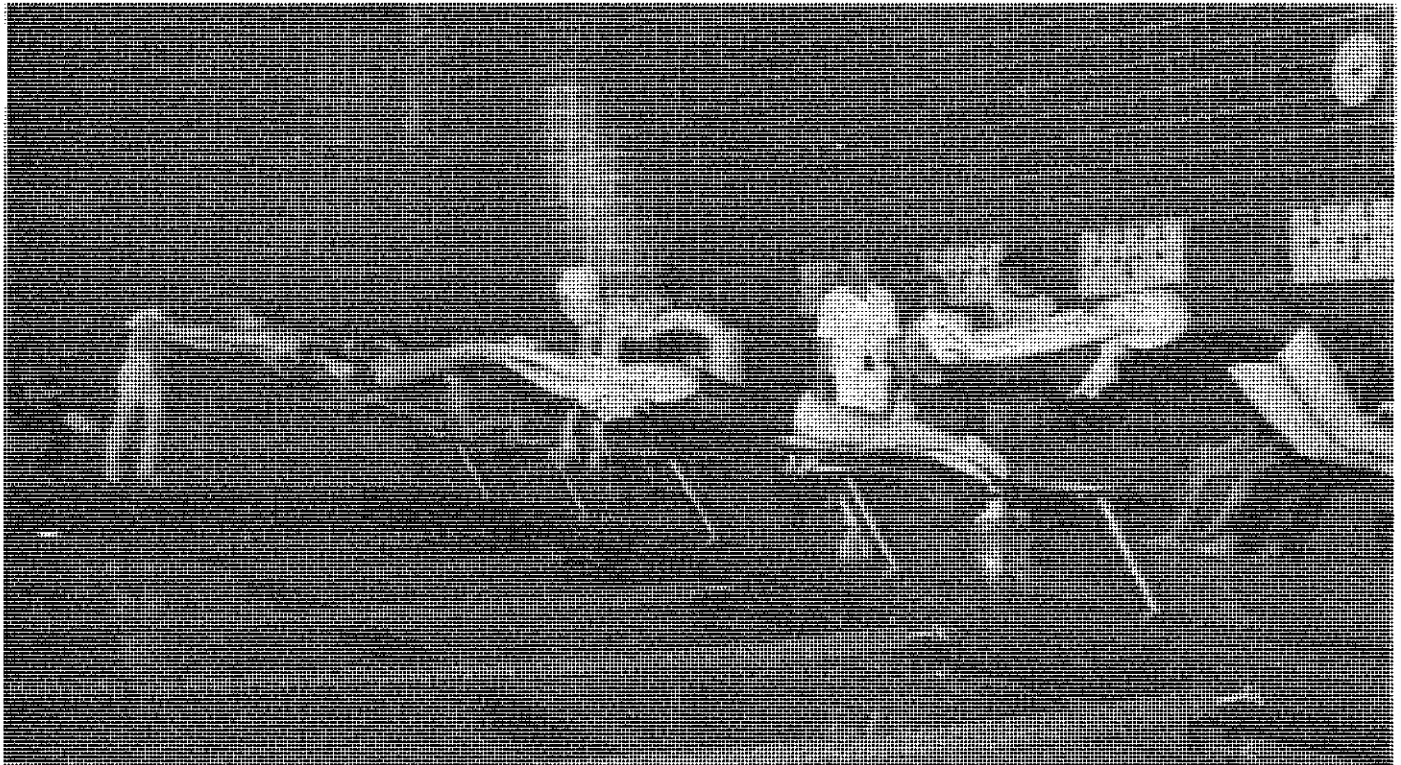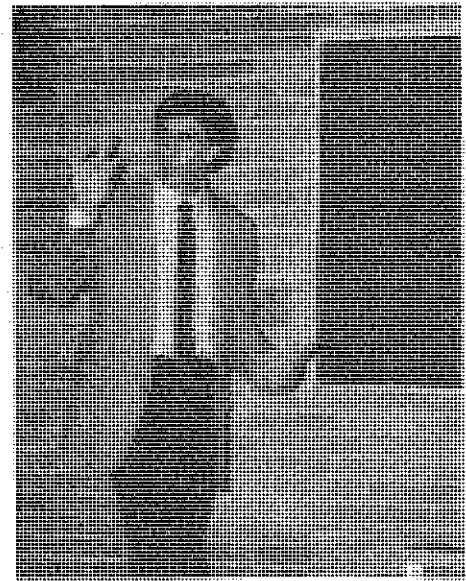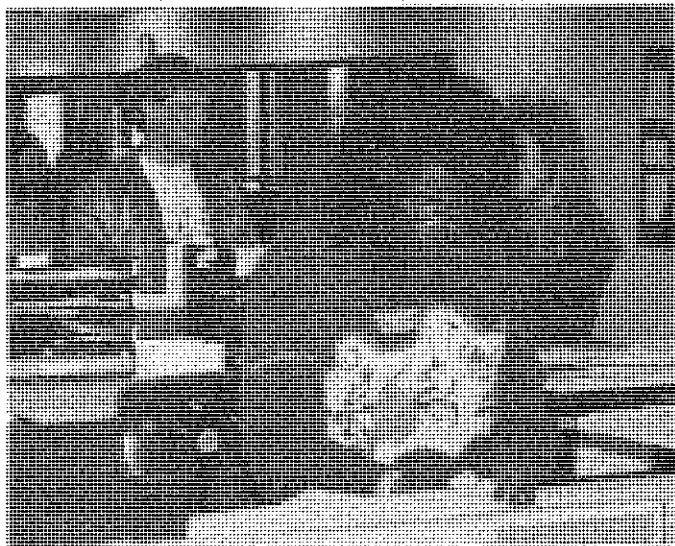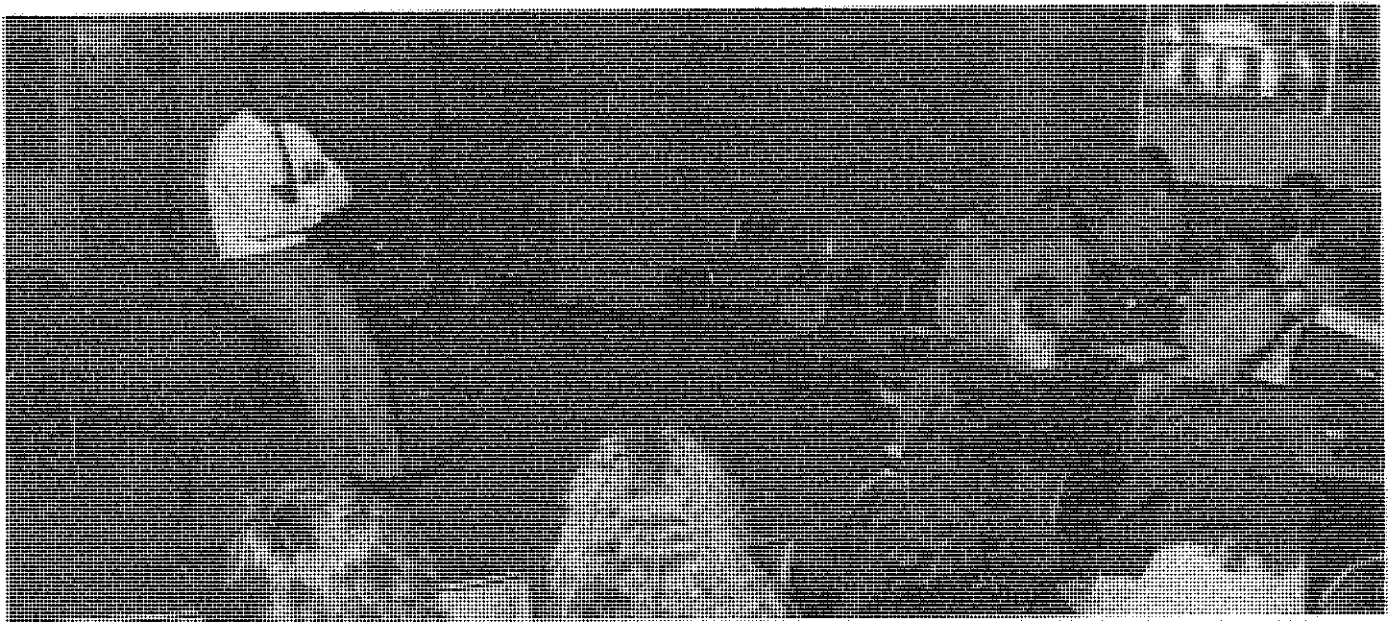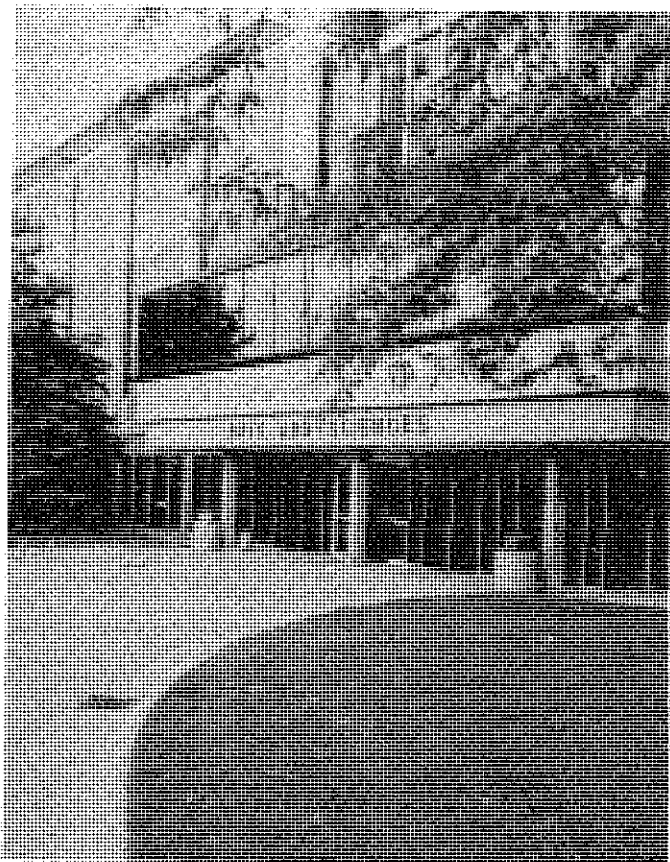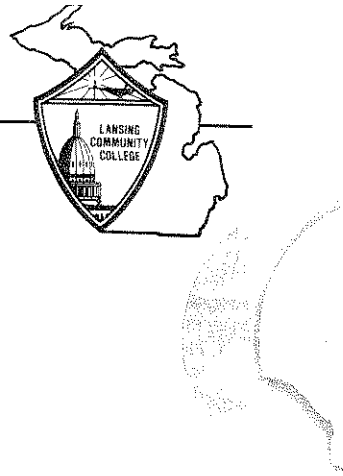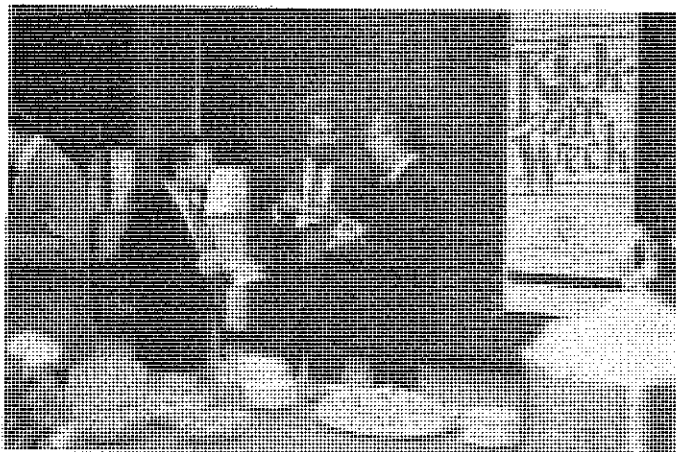
Lansing
Community
College

Interim Dean Thomas L. Franke

DIVISION OF ARTS AND SCIENCES

Department of Academic Enrichment Services
Department of Communication
Department of Humanities
Department of Mathematics and Computer Science
Department of Science
Department of Social Science

LANSING
COMMUNITY
COLLEGE

DIVISION OF ARTS AND SCIENCES

Interim Dean: Dr. Thomas L. Franke
111 Arts and Sciences Building

The Division of Arts and Sciences offers developmental, transfer and general education in support of the College's mission and goals for learning. The Division helps the College meet its goals by:

1. Providing academic enrichment studies and programs to help assure the validity of the open door policy of the College.
2. Providing general education for all students.
3. Offering freshman and sophomore liberal arts and science courses paralleling the first two years of university education.
4. Awarding 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.
5. Offering pre-professional curricula enabling students to transfer after two years of study to advance their education at four-year colleges and universities.
6. Providing a program of study through which the student is assisted in developing an awareness of self and building a foundation for the choice of a value system.
7. Encouraging the student to search for knowledge in the heritages of all civilizations and to become aware of the depth and range of human achievement.
8. Providing support courses for vocational programs for other divisions of the College.
9. Offering seminars in special subjects as part of a lifelong learning program for the community.
10. Offering career programs providing training for entry level positions in human service agencies in the fields of social welfare, mental health, hearing impairment, child development and education.

Divisional Objectives

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

1. To deliver instruction to students through a variety of formats: lecture-discussion, individualized and self-paced learning, audio-visual-tutorial, laboratory and seminar, computer-assisted instruction and independent study.
2. To provide a sufficient selection of courses during the day and evening, both on and off campus, so that the entire community can participate regardless of other commitments.
3. To recognize that understanding the issues of concern in the closing decade of the twentieth century will require the ability to read, write, and speak with clarity and organized purpose. To accomplish this, the Division provides courses for all students that will assist them to read with comprehension and to write and speak effectively.
4. To establish honors courses, invite guest speakers, and hold special workshops and seminars that will enrich public understanding of important issues through the perspectives of the liberal arts and sciences.
5. To promote student success through developmental courses in reading, writing and mathematics and through placement testing services in these areas.

Students are encouraged to select courses and programs so as to acquire a broad base of understanding and abilities which will lead to the development of analytical 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, mathematics, humanities, science and social science will fulfill general education requirements for the Associate Degree in Arts or 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.

Organization of Resources

The six departments of the Division of Arts and Sciences are staffed by faculty who hold master's degrees or doctorates within their academic disciplines. The faculty and staff of the departments strongly support the College's open access commitment. Students are able to meet their learning objectives by studying with faculty members experienced in meeting the needs of a diverse population. The Division also offers a wide range of computer-assisted instruction to assure flexibility in meeting student learning styles, needs and schedules. Computer-based education used as an adjunct to classroom learning permits students to progress at their own rate. The Division is proud to offer instruction in small classes to assure positive interaction among students and teachers and to encourage recognition of individual needs and abilities. The Division also provides for ability assessment and counseling in basic skill areas to direct students toward success regardless of their entry level.

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 college credit toward a pre-professional or associate degree program while they complete their high school education.

Seminar Series

The Arts and Sciences seminar series provides opportunities to explore topics of special interest that may not be covered in depth within the Division's other courses. Seminars are often scheduled for the convenience of working adults and frequently focus on areas of study suggested by individuals or groups within the community.

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.

A maximum of 21 awards covering full tuition and fees are presented each year to new students of superior academic ability who intend to study in the Arts and Sciences Division.

DEPARTMENT OF ACADEMIC ENRICHMENT SERVICES

Interim Chairperson: Trudy Carpenter
309-F Arts & Sciences Building

The Department of Academic Enrichment Services offers instruction in the following areas, under the codes indicated:

Code	Description
ESL:	English as a Second Language
ENR:	Enrichment
HON:	Honors
PHN:	Phonics
RDG:	Reading
SPL:	Spelling
VCB:	Vocabulary
WRI:	Writing*

*Courses with this code are also offered by the Department of Communication.

The Department of Academic Enrichment Services (DAES) is student-centered. Emphasis is on identification of student needs and development of an instructional continuum that will encourage success. The Department offers courses in such areas as reading improvement, basic writing and English as a second language.

Special Services

The Department of Academic Enrichment Services (DAES) provides a variety of student services, including reading and writing assessment and placement advising. The Department offers testing services to help students select appropriate courses in writing, reading, spelling and English as a second language. Students are urged to inquire in the Academic Enrichment Center (309 Arts & Sciences) 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 Academic Enrichment Center.

The DAES administers the Honors Program for the Division of Arts and Sciences; and it coordinates divisional dual enrollment, advanced placement and special enrollment programs.

COURSE DESCRIPTIONS

Enrichment (ENR)
Department of Academic Enrichment Services
Division of Arts and Sciences

ENR 133   Individualized English   3(0-6)

Prerequisite: Department approval. Individualized instruction in one or several of these areas: writing sentences, paragraphs or essays; and improving in punctuation, grammar, spelling or vocabulary. Students choose their own study materials, set their own schedules, work at their own pace and receive professional tutorial assistance whenever they are working in the laboratory. (P-Z grading system)

ENR 150   Success Seminar   .5(.5-0)

A mini-workshop intended to introduce and/or review reading-related techniques essential for academic survival. Covers time management, establishing frame of reference, scientific skimming, main idea identification, organized study procedures, enhancing comprehension, note-taking through mapping, and keys to improving objective test scores. Includes much practical, hands-on activity. (P-Z grading system)

ENR 152   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. (P-Z grading system)

ENR 162   Orientation Workship in College Writing Skills   2(2-0)

Designed for new and returning students, as well as others from the community. Develops writing skills, including study of writing for various disciplines, the writing process, and the basics of grammar, sentence style and punctuation. Helps prepare students for college composition. (P-Z grading system)

English As A Second Language (ESL)
Department of Academic Enrichment Services
Division of Arts and Sciences

ESL 116   English as A Second Language I   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. (P-Z grading system)

ESL 117   English as A Second Language II   5(5-0)

Prerequisite: ESL 116 or placement test. Reinforces the instruction of ESL 116, introduces new verb forms and complex sentence patterns and gives increased attention to writing. Tapes provide supplementary aural-oral experience.

ESL 118   English as A Second Language III   5(5-0)

Prerequisite: ESL 117 or placement test. Emphasizes advanced grammatical structures with some preparation for taking college classes. Tapes provide supplementary aural-oral experience.

ESL 119   English as A Second Language IV   5(5-0)

Prerequisite: ESL 118 or placement test. Fourth of a four-term sequence in American English as a second language. Emphasizes oral-aural skills, college-level writing and reading skills.

ESL 120   English as A Second Language V   5(5-0)

Prerequisite: ESL 119 or placement test. An advanced course in English as a second language. Emphasizes writing, reading and oral communication. Students will write and revise weekly compositions, keep weekly journals, participate in a variety of speaking and listening activities, and read selected literary articles weekly.

Honors (HON)
Department of Academic Enrichment Services
Division of Arts and Sciences

HON 151   Honors Colloquy I   2(2-0)

Prerequisite: Department approval. An interdisciplinary forum for students and faculty of the Arts and Sciences Honors Program. Consists of weekly presentations by recognized experts in such fields as science, humanities, mathematics and computer science, communication, education and social science, followed by probing discussions and a free interchange of ideas. Requires weekly written reports.

HON 152   Honors Colloquy II   2(2-0)

Prerequisite: Department approval. An interdisciplinary forum for students and faculty of the Arts and Sciences Honors Program. Consists of weekly presentations by recognized experts in such fields as science, humanities, mathematics and computer science, communication, education and social sciences. Requires research writing using methodologies of the Arts and Sciences disciplines.

Phonics (PHN)
Department of Academic Enrichment Services
Division of Arts and Sciences

PHN 110   Introduction to Phonics   4(4-0)

Familiarizes students with the relationship of English language sounds to their corresponding printed alphabetical letters and letter combinations. Examines rules governing variations in these sounds, the process of syllabication, accent, the dictionary pronunciation system, structural analysis of words and the relationship of phonics to reading and spelling.

Reading (RDG)
Department of Academic Enrichment Services
Division of Arts and Sciences

For additional reading-related courses, see SPL 150, 151, VCB 131 and 132.

RDG 006   Reading Laboratory   No credit

The Reading Laboratory arranges the days and times when students will attend Reading Clinic courses. Students must register for both a Reading Clinic course, such as RDG 136, and a section of RDG 006.

RDG 110   Reading Skills I   4(0-8)

Intended for industrial workers who wish to develop basic reading skills. An individual program will be developed for each student. (P-Z grading system)

RDG 111   Reading Skills II   4(0-8)

Continuation of RDG 110. (P-Z grading system)

RDG 112   Reading Skills III   4(0-8)

Continuation of RDG 111. (P-Z grading system)

RDG 113   Reading Skills IV   4(0-8)

Continuation of RDG 112. (P-Z grading system)

RDG 121   Personal Reading I   1(0-2)

Prerequisite: Department approval. Same content and approach as RDG 136, 137 and 138. May be taken concurrently with RDG 136, 137 or 138 to provide extra instruction and practice.

RDG 122   Personal Reading II   2(0-4)

Prerequisite: Department approval. Same content and approach as RDG 136, 137 and 138. May be taken concurrently with RDG 136, 137 or 138 to provide extra instruction and practice.

RDG 123   Personal Reading III   3(0-6)

Prerequisite: Department approval. Same content and approach as RDG 136, 137 and 138. May be taken concurrently with RDG 136, 137 or 138 to provide extra instruction and practice.

RDG 136   Reading Clinic I   4(0-8)

Teaches basic reading skills and improves confidence. Provides a personal reading program which combines private tutoring with directed practice in the reading lab. At the time of registration, a student must register for both a specific course — such as RDG 136 — and a RDG 006 section. The RDG 006 section arranges the times for the student's attendance in the Academic Enrichment Center.

RDG 137   Reading Clinic II   4(0-8)

Continuation of RDG 136.

RDG 138   Reading Clinic III   4(0-8)

Continuation of RDG 137.

RDG 143   Individualized Reading   3(0-6)

A program for average readers, especially adults in the working community, who wish to improve their reading skills in a laboratory environment. Skill building is totally personalized through private consultation, tutorial conferences and specialized programmed materials.

RDG 144   Individualized Reading Alternate   4(0-8)

Same as RDG 143, but offers four credits for a more intensive program.

RDG 150   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 162   Concentrated Speed Reading   2(2-0)

Designed for the average or better-than-average reader. Emphasis is on improving rate of reading through practicing good reading habits, developing flexibility in reading various kinds of materials and studying vocabulary. Students should experience improvement in their reading rate, comprehension and vocabulary. (P-Z grading system)

RDG 164   Speed Reading   4(4-0)

Prerequisite: Placement test. 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 174   Critical Reading   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.

Spelling (SPL)
Department of Academic Enrichment Services
Division of Arts and Sciences

SPL 150   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.

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SPL 151 Spelling Improvement II 2(2-0)

Prerequisite: SPL 150 or placement test. 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.

Vocabulary (VCB)
Department of Academic Enrichment Services
Division of Arts and Sciences

VCB 131 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.

VCB 132 Vocabulary Improvement II 2(2-0)

Builds on the work of Vocabulary Improvement I, offering activities for expanding the student's ability to recognize and use words in various contexts.

Writing (WRI)
Department of Academic Enrichment Services
Division of Arts and Sciences

For additional writing-related courses, see Department of Communication.

Placement testing is required before registration for all students in WRI 112, WRI 116 and WRI 119. 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. Testing is in the Academic Enrichment Center, 309 A&S, phone (517) 483-1061.

WRI 006 Writing Laboratory No credit

WRI 006 arranges the days and times when students will attend writing lab courses. Students must register for both a writing lab course, such as WRI 112 and a section of WRI 006.

WRI 110 Confidence in Writing 4 (4-0)

Designed to help students understand the writing process, reduce writing anxiety and develop basic writing skills. Emphasizes planning, composing and revising strategies for experiential writing. Provides frequent writing practice in a supportive workshop environment.

WRI 112 Fundamentals of Writing 4(2-4)

Prerequisite: Placement test. An individualized course 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. Includes laboratory activities with professional tutorial assistance and group work in weekly class meetings. Requires enrollment in WRI 006 to schedule lab attendance.

WRI 116 Grammar and Mechanics in Writing 4(4-0)

Prerequisite: Placement test. Designed to help students master, in their own writing, the major grammatical and mechanical skills expected of students entering WRI 121. Also includes work on content development, organization and reading skills.

WRI 119 Business Writing: Grammar and Mechanics 4(1-6)

Prerequisite: WRI 116 or placement test. Designed to meet the demands of business writing. Course components include study of grammar, punctuation and style of business prose. Revision and proof-reading skills necessary for appropriate business correspondence are emphasized through practice and testing. Requires enrollment in WRI 006 to schedule lab attendance.

DEPARTMENT OF COMMUNICATION

Chairperson: Dr. George R. Bramer
Room 211, Arts & Sciences Building

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

COM:	Communication
JRN:	Journalism
SGN:	Sign Language
SPH:	Speech
WRI:	Writing*

*Courses with this code are also offered by the Department of Academic Enrichment Services.

The goal of the Department of Communication is to develop students' communication skills. The department serves a diverse student population. It provides general education service courses for the Arts and Sciences Division and the College, transfer-level courses, career preparation and training courses and lifelong learning seminars for the College and community. The department attempts to offer instruction appropriate for each student's personal needs, instructional level and educational goals.

The department has three distinct programs: Writing, Speech and Sign Language/Interpreter Training. The Writing Program offers transfer-level general education courses and specialized instruction in creative and practical writing, including journalism. The Speech Program has a range of offerings in general and specialized speech communication, and offers a pre-major curriculum. The Sign Language/Interpreter Training Program offers certificate and degree curricula in manual communication and in interpreting, as well as more limited instruction for personal enrichment.

All of the three programs can arrange special instruction and related services for business, industry, government and other organizations.

Seminars

The Department of Communication offers seminars in creative and functional writing, speech 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

Prerequisite: Department approval. Individual projects in communication, writing, journalism, speech and sign language. Students will spend at least two hours a week for each credit in Independent Study.

COURSE DESCRIPTIONS

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

COM 209 Mass Communication 4(4-0)

Introductory course acquainting the student with the major mass media and their impact on American society. Students 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.

COM 260 Intercultural Communication 4(4-0)

Intended for students whose work or lifestyle brings them in contact with people from other cultures. Students investigate the concepts of communication and culture and learn how variables such as perception, self-concept, religion, world view, language and nonverbal systems influence interactions between people of different cultural backgrounds. Class discussions, exercises, simulations and assignments help students enhance their intercultural communication skills.

COM 280 Seminar: The Story of English 3(3-0)

A telecourse that traces the growth and development of English from its Germanic tribal origins to its present status as an international language.

Journalism (JRN)
Department of Communication
Division of Arts and Sciences

For additional journalism-related courses, see VCB 131, 132; SPL 150 and 151; COM 209 and 230.

JRN 150 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.

JRN 151 Newswriting 4(4-0)

Considers what is of news interest and how to turn news facts into a publishable news story. Students learn news terminology, the importance of news style, objectivity, attribution and accuracy.

JRN 152 Reporting 4(4-0)

Prerequisite: JRN 151 or department approval. 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 or department approval. A course in how to write effective editorials and concentrated study of editorial concept, structure and style. The student analyzes editorial models, learns methods of research and writes editorials and articles on important issues.

JRN 256   Newsletter Writing and Production 4(4-0)

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

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

Students who apply for the Sign Language Interpreter Training Program, which begins with SGN 200, must pass a screening test before being admitted. The interpreting Program can be entered only in the Fall Term.

SGN 160   Orientation to Deafness 2(2-0)

This course is designed to introduce the student to deafness and its implications through class discussions, lectures, audio-visual presentations and guest speakers.

SGN 161   Sign Language I 4(3-2)

Prerequisite: SGN 160 or concurrent enrollment. Designed for students who wish to develop basic knowledge of American Sign Language vocabulary and grammatical elements.

SGN 162   Sign Language II 4(3-2)

Prerequisite: SGN 161 or department approval. Designed to increase the student's expressive and receptive sign language skills and vocabulary. The student will develop a better understanding of the manual alphabet and number system used in American Sign Language (ASL or Ameslan). Study areas include use of facial expression, eye contact and body language, as well as accurate translation of idiomatic phrases from English to ASL.

SGN 163   Sign Language III 4(3-3)

Prerequisite: SGN 162 and SGN 164 or concurrent. Third course in a sequence; for students completing SGN II or comparable course. Students will demonstrate mastery in additional sign language vocabulary and basic knowledge of American Sign Language (ASL) syntax and grammatical rules. Study areas covered will include expressive and receptive use of conversational sign language, idioms and creative signing techniques.

SGN 164   Fingerspelling I 3(2.5-1)

Prerequisite: SGN 162 or concurrent enrollment. To provide the student with concentrated instruction and practice in fingerspelling, emphasizing the development of both receptive and expressive skills. This course will include an introduction to the 26 hand positions of fingerspelling, instruction of correct fingerspelling and instruction and practice in both expressive and receptive fingerspelling.

SGN 165   Receptive Manual Communication 4(3-2)

Prerequisite: SGN 163 or concurrent enrollment. Designed to increase the student's receptive skills in conversational sign language focusing on the comprehension of the various manual communication systems utilized by hearing-impaired persons. Voicing techniques and practice will be introduced through use of prepared videotapes and teacher prepared stories. American Sign Language (ASL) mode is emphasized.

SGN 166   Fingerspelling II 3(2.5-1)

Prerequisite: SGN 164, and SGN 163 or concurrent. Provides the student with concentrated instruction and practice in both expressive and receptive fingerspelling.

SGN 167   Sign Language IV 4(3-1)

Prerequisite: SGN 163 or department approval. This course contains key components of this advanced level in sign language. Therefore, the students will comprehend vocabulary, phrases, stories and paragraphs while increasing their skills in signing. They will further increase their knowledge of communication in the deaf communities.

SGN 168   Expressive Manual Communication 3(3-0)

Prerequisite: SGN 163 or concurrent. This course focuses on synthesizing grammatical elements of American Sign Language and using them in an expressive mode. It creates awareness of conversational behaviors used by the deaf community and provides practice of those behaviors in classroom and outside settings.

SGN 170   Creative Arts Signing 3(3-0)

Prerequisite: SGN 163 or department approval. This class explores uses, considerations and techniques for signing elements of the creative arts including poetry, song and storytelling. There is also emphasis in the use of pantomime as a method for visualization and clarification in creative arts signing.

SGN 250   Deaf Culture and History 3(3-0)

Prerequisite: SGN 160 or department approval. This course builds on SGN 160, looking more closely at the unique experiences of those in the deaf community. Examines the history of the deaf community in America, the sociology of the hearing impaired (both deaf and the hard-of-hearing) and the psychological ramifications of deafness.

SGN 251   Psychosocial Aspects of Hearing Loss 3(3-0)

Prerequisite: SGN 160 or department approval. Provides the student with a more advanced understanding of the effects of hearing impairment on the development of individuals and families. Several different models of human development are explored as they relate to hearing impaired children and adults as well as their families and social systems.

SGN 260   Linguistic Principles of American Sign Language 3(3-0)

Prerequisite: SGN 163 or department approval. An overview of the linguistic organization of ASL, including a linguistic perspective on how ASL is learned and how it is (and is not) influenced by English. Topics relevant to interpreting, such as language variation and translation, will be emphasized.

SGN 261   Principles of Interpreting I 4(3-2)

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

SGN 262   Principles of Interpreting II 4(3-2)

Prerequisite: SGN 261 and SGN 263 or 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 minimal-language skills individuals. Provides sign language acquisition with emphasis upon specific vocabularies through laboratory experiences. Provides knowledge of current laws and agencies related to deafness.

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

Prerequisite: SGN 261 or department approval. 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 264   Sign to Voice Interpreting II 3(3-0)

Prerequisite: SGN 263. A continuation of SGN 263. An advanced course which develops skill and fluency in receiving and expressing all levels of communication of deaf individuals.

SGN 265   Advanced Interpretation/Transliteration Techniques 3(3-0)

Prerequisite: SGN 262 or department approval. The purpose of this class is to instruct students in more advanced techniques of expressive/receptive and interactive interpreting and transliterating. Class time will be divided into lectures, lab (video), panel discussion with deaf guests and student participation in all class activities and assignments.

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   Advanced Practicum I 4(2-4)

Prerequisite: SGN 263/267 or department approval. Designed to provide interpreting experience through placement in various settings. Includes weekly seminars and weekly conferences between interpreter trainee and practicum supervisor. Students will spend four hours each week in their placement setting.

SGN 269   Advanced Practicum II 5(2-6)

Prerequisite: SGN 263/267 or department approval. Designed to provide interpreting experience through placement in various settings. Includes weekly seminars and weekly conferences between interpreter trainee and practicum supervisor. Students will spend six hours each week in their placement setting.

SGN 270   Advanced Practicum III 5(2-8)

Prerequisite: SGN 263/267 or department approval. Designed to provide interpreting experience through placement in various settings. Includes weekly seminars and individual bi-weekly conferences between interpreter trainee and practicum supervisor. Students will spend eight hours each week in their placement setting.

LANSING COMMUNITY COLLEGE

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

For additional speech-related courses, see VCB 131, 132; COM 209, 230 and 260.

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

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 talks.

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 195   Seminar: Listening Skills   2(2-0)
Helps students develop the skills needed to listen effectively in the home, workplace, and classroom. Topics include the nature of listening, types of listening, verbal and nonverbal dimensions of listening and barriers to effective listening. Diagnostic tests, exercises and assignments help students improve their abilities to comprehend, judge and empathize while listening.

SPH 204   Public Speaking in Business   4(4-0)
Helps students gain the theoretical knowledge, skills and experience necessary to speak effectively to small, technically knowledgeable audiences in business settings. Through readings, lectures, videotaped oral presentations, impromptu speeches and critiques of their speaking, students learn effective techniques for preparing and delivering informative and persuasive speeches.

SPH 206   Nonverbal Communication   4(4-0)
Provides students with an understanding of the many ways in which people communicate without words. Students will learn the messages that gestures, facial expressions, vocal cues, physical appearance, dress, touch, space and time convey in American culture and in foreign cultures. Students' skills as nonverbal communicators will be increased through in-class activities.

Writing (WRI)
Department of Communication
Division of Arts and Sciences

For additional related courses, see VCB 131, 132; SPL 150, 151; COM 230, 280; WRI 112, 116 and 119.

Placement testing is conducted during the first week of each term for all students in WRI 121. Some students are advised to drop the course 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 first required course is WRI 121. 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 12 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 121   Composition I   4(4-0)
Designed to help students develop writing ability. Emphasizes the organization and development of informational prose. Includes instruction in use of the dictionary and college reading skills.

WRI 122   Composition II   4(4-0)
Prerequisite: WRI 121. Builds upon the writing skills developed in WRI 121, but emphasis shifts from the expository essay to the argumentative or persuasive essay. Teaches 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.

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 143   Introduction to Research Writing   2(2-0)
Designed to introduce students to the basic concepts involved in library research. Emphasizes basic investigative techniques and library resources; provides introduction to writing accurate reports and/or papers which present the results of research in academically acceptable form, using the current MLA documentation format.

WRI 191   Seminar: Personal Writing   2(2-0)
Develops self-expression and sharpened awareness through writing about personal observations and life experiences. Emphasizes free choice in subject matter and sensitivity to the language and styles appropriate to description, story-telling and memoirs. (P-Z grading system)

WRI 195   Seminar: Writing User Documentation   3(3-0)
Designed for data processing students and professionals. Teaches students to write effective documentation for users of computer systems. Focuses on writing step-by-step procedures explaining the responsibilities and activities of users. Emphasizes the clear, precise communication necessary for successful system operation and smooth work flow.

WRI 261   Seminar: Media Literacy   3(3-0)
An analysis of form and content in film and television in order to identify, evaluate and understand these media as unique art forms.

WRI 262   Seminar: Prose Style   3(3-0)
An advanced study of non-fictional prose styles. Directed writing practice helps students make stylistic choices to improve the effectiveness of their own writing. Workshop sessions include an examination of the relationship of purpose to audience and slant and of grammar to punctuation and style. Writings are both assigned and self-chosen.

WRI 269   Seminar: Writing About the Arts   3(3-0)
This course develops criteria for evaluating the arts (the visual arts, literature, music and the performing arts) through reading, observing and writing about them. Students will be introduced to the concepts of form and content, style and medium of expression.

WRI 281   Seminar: Writing For Publication   3(3-0)
Freelance writing and marketing: 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.

WRI 282   Seminar: Forum For Authors   3(3-0)
An advanced course for writers working on manuscripts. Students meet to discuss their writing and to solve problems in a workshop setting. The study of effective writing techniques and market information is continued from WRI 281.

WRI 293   Seminar: Creative Writing I   3(3-0)
Designed to help students develop expressive abilities in writing poetry and short stories. Emphasizes narrative modes of the short story; traditional meter and free verse forms of poetry. Includes models from masters in both fiction and poetry.

WRI 294   Seminar: Creative Writing II   3(3-0)
Designed for students who have successfully completed a creative writing or a publications class. Emphasizes improving their ability to write effective poems, short stories and novellas. Students select their own subjects and receive immediate responses through group discussion.

WRI 295   Seminar: Writing Workshop   3(3-0)

Prerequisite: Department approval. Examines language and style as the most critical choices a creative writer makes in directing the reader's perception of and response to the work. Develops the writer's ability to control tone and style. Manuscripts are reproduced and discussed in a workshop setting.

WRI 296   Seminar: Persuasive Writing   3(3-0)

Designed to introduce students to the tools and techniques employed in written argument—discourse intended to convince others or to persuade them to a course of action. Students practice with the tools and techniques, and sharpen them, in written exercises.

DEPARTMENT OF HUMANITIES

Chairperson: Dr. Deanna Haney
255 Arts and Sciences Building

The Department of Humanities has a strong emphasis on encouraging students to search for a knowledge of the heritages and languages of civilizations and assisting students in developing an awareness of the self and building e foundation for choice of a value system. The Department of Humanities offers courses under the following codes:

ENG:	English	Foreign Languages	
HST:	History	CHN:	Chinese
HUM:	Humanities	FRN:	French
PHL:	Philosophy	GRM:	German
REL:	Religion	JPN:	Japanese
		SPN:	Spanish

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:

(C) Art and Music History (HUM 101, 150, 151, 152)
(C) History (HST 104-296)
(C) Literature (ENG 201-296, HUM 102 and HUM 220)
(C) Philosophy and Religion (PHL 101-296; REL 150-296 and HUM 104)

COURSE DESCRIPTIONS

Chinese (CHN)
Department of Humanities
Division of Arts and Sciences

CHN 101   Elementary Chinese I   5(5-0)

Designed to help students set a foundation of Chinese language learning. Students will develop the basic skills in the areas of speaking, listening, reading and writing. Different aspects of the Chinese culture will be introduced throughout the course.

CHN 185   Intensive Conversational Chinese I   4(4-0)

Designed for people who have little background in the Chinese language and culture but wish to ecquire conversational skills. Students will learn proper pronunciation, the four tones of Putonghua—the standard vernacular, basic sentence structures and practical vocabulary for everyday use. Selected aspects of Chinese culture will be introduced throughout the course.

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 201   The Poetic Imagination   4(4-0)

Prerequisite: WRI 121 (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 205   World Literature   4(4-0)

Prerequisite: WRI 121 (ENG 122 recommended). Provides an overview of literature outside the Anglo-European community through a sampling of genres; e.g., narrative prose fiction, poetry, drama and cinema. Explores the ethnic, aesthetic and thematic dimensions of the cultures which originated them. Emphasizes the literature of the orient, Near East, USSR, Africa and Latin America.

ENG 210   The American Novel   4(4-0)

Prerequisite: ENG 122 or WRI 122. Study of the major 19th and 20th century American novels from James Fenimore Cooper to Jack London to Ernest Hemingway and John Steinbeck. Emphasis is on the 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 are given, 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.

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 end analyzing 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   African American Literature   4(4-0)

Prerequisite: WRI 121 (ENG 122 recommended). A survey of African American literature from the seventeenth century to the twentieth century. Introduces the various genres in the literature of African Americans.

ENG 265   Japanese Literature   4(4-0)

Prerequisite: WRI 121 (ENG 122 recommended). An 11-week survey of Japanese Literature starting with the "Ancient Period" and proceeding through the "Modern Period" (Donald Keene's classification).

ENG 266   British Literature I   4(4-0)

Prerequisite: WRI 121 (ENG 122 recommended). British Literature I surveys the poetry, prose and drama of the major British writers from Chaucer (14th Century) to Milton (17th Century).

ENG 270   Literature by Women   4(4-0)

Prerequisite: WRI 121 (ENG 122 recommended). A study of the works of 19th and 20th century English and 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.

French (FRN)
Department of Humanities
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   Elementary French I   5(5-0)

First course of a three-term sequence in elementary French. Students explore topics of current interest in Francophone cultures as a vehicle of learning the basic four communication skills of listening, speaking, reading and writing. Emphasis is placed on practical, contemporary vocabulary, essentials of grammar and pronunciation for expressing oneself in French in order to be understood by native speakers. Students become familiar with contemporary Francophone countries, peoples and cultures. Class is taught mostly in French.

FRN 102   Elementary French II   5(5-0)

Prerequisite: FRN 101 or equivalent. Second course of a three-term sequence in elementary French. Students explore topics of current interest in Francophone cultures as a vehicle of learning the basic four communication skills of listening, speaking, reading and writing. Emphasis is placed on practical contemporary vocabulary and essentials of grammar and pronunciation for expressing oneself in French in order to be understood by native speakers. Students become familiar with Francophone countries, peoples and cultures. Class is taught entirely in French.

FRN 103   Elementary French III   5(5-0)

Prerequisite: FRN 102 or equivalent. Final course of a three-term sequence in elementary French. Students explore topics of current interest in Francophone cultures as a vehicle of learning the basic four communication skills of listening, speaking, reading and writing. Emphasis is placed on practical, contemporary vocabulary, essentials of grammar and pronunciation for expressing oneself in French in order to be understood by native speakers. Students become familiar with contemporary Francophone countries, peoples and cultures. Class taught entirely in French and participation is essential.

FRN 185   Seminar: Intensive Conversational French I   4(4-0)

Designed for people with little or no knowledge of French who wish to acquire conversational skills. Students learn how to communicate orally in everyday life situations and in travel abroad. Emphasis is on the development of ability to understand spoken French as well as to speak it in order to convey one's thoughts to French-speaking people. Pronunciation and vocabulary are developed through class discussions. French culture is explored.

FRN 186   Seminar: Intensive Conversational French II   4(4-0)

Prerequisite: FRN 185 or equivalent strongly recommended. Continuation of FRN185. Designed for advanced beginners who wish to improve their speaking ability in the context of daily living. Emphasis is placed on contemporary vocabulary, essentials of grammar and pronunciation through class discussions in French in order to be understood by native speakers. Students expand their knowledge of Francophone cultures. Class taught entirely in French.

FRN 201   Intermediate French I   5(5-0)

Prerequisite: FRN 103 or equivalent. First course of a three-term sequence in intermediate French. Sequence provides a thorough review of grammar presented in the elementary French sequence, intensive vocabulary building, group discussions, writing compositions and lectures on cultural and literary topics. Homework assignments involve intensive reading and writing assignments. Class taught entirely in French.

FRN 202   Intermediate French II   5(5-0)

Prerequisite: FRN 201 or equivalent. Second course of a three-term sequence in intermediate contemporary French. Sequence provides a thorough review of grammar presented in the elementary French sequence, intensive vocabulary building, group discussions, writing compositions and lectures on cultural and literary topics. Homework assignments involve intensive reading and writing assignments. Class taught entirely in French.

FRN 203   Intermediate French III   5(5-0)

Prerequisite: FRN 202 or equivalent. Third course of a three-term sequence in intermediate French. Sequence provides a thorough review of grammar presented in the elementary French sequence, intensive vocabulary building, group discussions, writing compositions and lectures on cultural and literary topics. Homework assignments involve intensive reading and writing assignments. Class taught entirely in French.

German (GRM)
Department of Humanities
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   Elementary German I   5(5-0)

First course of a three-term sequence in elementary German. Sequence provides students with a sound basis for learning German as it is spoken and written today. This course offers systematic practice in the four basic language skills of listening, speaking, reading and writing, along with materials geared to give a firm foundation of German grammar and familiarization with contemporary life and culture in the four-primary German-speaking countries. Class taught mostly in German.

GRM 102   Elementary German II   5(5-0)

Prerequisite: GRM 101 or equivalent. Second course of a three-term sequence in elementary German. Sequence provides students with a sound basis for learning German as it is spoken and written today. This course offers systematic practice in the four basic language skills of listening, speaking, reading and writing, along with materials geared to give a firm foundation of German grammar and familiarization with contemporary life and culture in the four-primary German-speaking countries. Class taught mostly in German.

GRM 103   Elementary German III   (5-0)

Prerequisite: GRM 102 or equivalent. Third course of a three-term sequence in elementary German. Sequence provides students with a sound basis for learning German as it is spoken and written today. This course offers systematic practice in the four basic language skills of listening, speaking, reading and writing, along with materials geared to give a firm foundation of German grammar and familiarization with contemporary life and culture in the four-primary German-speaking countries. Class taught entirely in German.

GRM 161   Seminar: Elementary Business German   2(2-0)

Introduction to German language and to German business culture. Students will learn basic vocabulary, phrases and gestures to function while in Germany. They will also acquire knowledge of how to conduct business affairs in a German-speaking country.

GRM 185   Seminar: Intensive Conversational German I   4(4-0)

The first course in a two-term sequence for persons with little or no knowledge of German who wish to develop some conversational skills. Students learn correct pronunciation, essential language structures and a practical vocabulary which is applied in conversational exchanges. Selected aspects of German culture are introduced through multi-media presentations.

GRM 186   Seminar: Intensive Conversational German II   4(4-0)

The second course in a two-term sequence for persons with little or no knowledge of German who wish to develop some conversational skills. Students learn correct pronunciation, essential language structures and a practical vocabulary which is applied in conversational exchanges. Selected aspects of German culture are introduced through multi-media presentations.

GRM 201   Intermediate German I   5(5-0)

Prerequisite: GRM 103 or equivalent. GRM 201 is the first course of a three-term sequence in intermediate contemporary German. Students receive advanced training and practice in the four basic skills — speaking, listening comprehension, reading and writing. The course includes a thorough review of basic German grammar, intensive vocabulary building, small-group discussions, writing compositions and student presentations on German culture. The class is taught entirely in German.

LANSING COMMUNITY COLLEGE

GRM 202   Intermediate German II   5(5-0)

Prerequisite: GRM 201 or equivalent. GRM 202 is the second course of a three-term sequence in intermediate contemporary German. Students receive advanced training and practice in the four basic skills—speaking, listening comprehension, reading and writing. The course includes a thorough review of basic German grammar, intensive vocabulary building, small-group discussions, writing compositions and student presentations on German culture. The class is taught entirely in German.

GRM 203   Intermediate German II   5(5-0)

Prerequisite: GRM 202 or equivalent. GRM 203 is the third course of a three-term sequence in intermediate contemporary German. Students receive advanced training and practice in the four basic skills—speaking, listening comprehension, reading and writing. The course includes a thorough review of basic German grammar, intensive vocabulary building, small-group discussions, writing compositions and student presentations on German culture. The class is taught entirely in German.

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 20th 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   African American 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 African American 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 20th 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   African American Michigan History   4(4-0)

A study of the history of African American people in the state of Michigan. An effort will be made to relate local African American 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 17th 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 17th century to the present with particular emphasis on the 19th and 20th centuries.

HST 232   History of Modern Ireland   4(4-0)

Nineteenth and 20th 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: Precolonial Africa, the scramble for Africa, the rise of African nationalism and independence and Africa's internal and external relations.

HST 260   Conflict and Revolution in Southern Africa   4(4-0)

A study of representative social institutions and value systems of Southern Africa designed to acquaint students with the workings of European colonialism in Southern Africa. Focus is on Zimbabwe as a case study of the triumph of African nationalism over competing European colonial interests.

HST 270   The Modern Middle East   4(4-0)

An 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.

HST 285   Seminar: Soviet Union Today   4(4-0)

A survey of the Soviet Union and its people with special emphasis on the ideological roots and origins of the Soviet regime and system from the Russian Revolutions of 1917 to present. Also examined and analyzed will be the multi-national character of the Soviet Union and the different forces that have shaped Soviet history, society and politics from 1917 to the present, including U.S.-Soviet relations.

HST 290   Seminar: Vietnam - A Television History   4(4-0)

The purpose of VIETNAM: A TELEVISION HISTORY is to provide—through the medium of television and classroom discussion—a balanced, loosely chronological study of the war in Vietnam, beginning with events leading up to the August revolution of 1945, when the Vietminh first declared the independence of Vietnam, and ending with the surrender of South Vietnam and the departure from Saigon of the American mission in April 1975. By way of conclusion and summary, the course will go beyond the climactic events of 1975 to assess the long-term effects of the war, particularly on Vietnam and the United States.

HST 294   Seminar: The American Legal Tradition   4(4-0)

This course is a chronological and thematic approach to the history of American law, legal-constitutional institutions and important personalities who were instrumental in its development.

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 culture through language. Emphasis will be placed on historical development of the English language, language change, and cultural aspects based on sociolinguistic considerations such as slang, sexist language, superstitions, customs and habits.

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

First of a series of three courses that introduce the student to the history of painting, sculpture and architecture in world civilizations. The course focuses on art from the ancient world, Byzantium, Asia and early Christianity. Visual materials are used to illustrate each lecture.

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

Second of a series of three courses that introduce the student to the history of painting, sculpture and architecture of world cultures. The course focuses on European, Islamic and Asian art from the Early Middle Ages to the late Renaissance. Visual materials are used to illustrate each lecture.

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

Third of a series of three courses that introduce the student to the history of painting, sculpture and architecture of world cultures. The course focuses on Europe, Asia and America from the Baroque period to the present. Visual materials are used to illustrate each lecture.

HUM 164   Seminar: Stratford Theater Trip   1(1-0)

A "cultural practicum" providing students with the opportunity to experience exemplary theatrical productions. Cultural breadth and historical perspective are achieved by attending performances and lectures, and interacting with professionals in the field. Skills of critical analysis are also exercised through exposure to some of the world's finest classical writing and assessment of both oral interpretation and text.

HUM 165   Seminar: New Frontiers in Europe: Hungary   2(2-0)

This interdisciplinary course focuses on recent Central/Eastern European developments, with special emphasis on Hungary and it's role in these changes. Through lectures, library research and audio-visual presentations students are introduced to the Hungarian language, the cultural and historical heritage, and to the present, political, social and economic realities of this dynamically transforming country. Hungarian language lessons emphasize the building of a basic, practical vocabulary of approximately 300 words, and teach students simple conversational phrases and techniques. The class devotes equal time to current events, culture and language studies, and offers additional learning opportunities through recommended readings and an optional study tour to Hungary at the end of the term.

HUM 166   Seminar: New Frontiers in Europe: Hungary/Study Tour   1(1-0)

Tour program combines studies with educational group activities, and offers participants unique, on-sight learning experience and travels in Hungary. Two seminars in Budapest survey targeted, key areas of the changing Hungarian scene, i.e.: 1. The Restructured Economy; New Business Opportunities for Foreign Enterprises. 2. Constitutional and Legal Reforms; Civil Rights and Liberties. Visits to museums, theaters, concerts and other cultural or historic sights, as well as excursions to the countryside, are planned exclusively to enhance the study tour program. Frequent encounters with native speakers in Budapest facilitate increased practice and improvement of Hungarian language skills.

HUM 171   Seminar: Basic Judaism   2(2-0)

An introduction to the basic teachings of Judaism from a developmental point of view.

HUM 178   Seminar: 20th Century Dictators   2(2-0)

This course will compare and contrast Mussolini, Hitler and Stalin in their personalities, objectives and careers; and it will examine the general historical conditions surrounding these men.

HUM 179   Seminar: Introduction to Archaeology   2(2-0)

This course examines the history and methods of archaeology, especially that of the ancient Mediterranean region. The great discoveries and their discoverers will be highlighted; and the use of evidence such as coins, pottery and inscriptions will be examined. Slide-tape presentations will provide colorful insights into Tutankhamun's tomb, the rescue of Abu Simbel and the recovery of buried Pompeii. New areas, including underwater archaeology and recent controversies, such as that surrounding the City of Ebla, will be probed as well.

HUM 185   Seminar: Egypt Today   2(2-0)

Experience Egypt's magnificent past through a close inspection of its remaining monuments. This course will emphasize the culture of Pharaonic Egypt, but Islamic contributions and the relationships between modern and former Egyptian ways of life will also be considered. Color slides, artifacts and the instructor's personal reminiscences are featured.

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 needs, beliefs and values 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 211 or 201. 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 17th centuries. Emphasizes the relationship of man's creative works to his needs, beliefs and values 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 212 or 202. 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 needs, beliefs and values 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 selected 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.

HUM 220   Japanese Civilization   4(4-0)

This course traces and develops Japan's cultural tradition with strong emphasis on the history, religion and ritual and arts. Further, this course will show that modern Japan can best be understood in the light of her distinctive cultural traditions.

HUM 260   Seminar: Ancient Egypt   4(4-0)

Explores the history and cultures of one of the earliest and most successful of world civilizations. This course emphasizes Egyptian achievements in art, architecture and literature and will consider the roles played by religion, geography and climate in the Egyptian way of life. The great discoveries and discoverers of Egyptian archaeology will also be featured. Multi-media presentations.

HUM 265   Seminar: Ethical Issues in Medicine   3(3-0)

The purpose of this course is to present some of the ethical problems which arise in relation to health and health care, and to develop a framework for decision making with which to approach these and other related problems. Some of the topics that will be discussed are: nature of health counseling, withholding and withdrawing treatment, autonomy, confidentiality and informed consent. This course is open to all interested persons. Although ethical considerations will involve some philosophical principles, the necessary background will be provided in class so no prior philosophy is required.

HUM 294   Seminar: The Apostle Paul   4(4-0)

A study of the religious figure Paul, both as a product of his time and a shaper of those times as revealed in his writings.

Japanese (JPN)
Department of Humanities
Division of Arts and Sciences

JPN 101   Elementary Japanese I   5(5-0)

Designed to provide students with basic knowledge of the Japanese language for practical communication and skill in speaking, reading, writing and listening. Also provides information concerning the everyday life and culture of Japan. Practical vocabulary and topics of conversation are emphasized. Cassette tapes accompany the textbook to aid listening comprehension.

JPN 102   Elementary Japanese II   5(5-0)

Prerequisite: JPN 101 or equivalent. Continuation of JPN 101. Designed to provide students with basic knowledge of the Japanese language for practical communication and skill in speaking, reading, writing and listening. Also provides information concerning the everyday life and culture of Japan. Sixty (60) Chinese characters, Kanji, are introduced. Students learn additional, more advanced grammatical structures and expressions. Practical vocabulary and topics of conversation are emphasized. Cassette tapes accompany the textbooks to aid listening comprehension.

JPN 103   Elementary Japanese III   5(5-0)

Prerequisite: JPN 102 or equivalent. Continuation of JPN 102. Designed to provide students with basic knowledge of the Japanese language for practical communication. Develops skill in speaking, reading, writing and listening. Also provides information about culture and everyday life of Japan. Previously acquired knowledge and skills are refined and ability to communicate in Japanese is increased. Ninety (90) additional Chinese characters, Kanji, are introduced. Cassette tapes accompany the textbook to aid listening comprehension.

JPN 185   Intensive Conversational Japanese I   4(4-0)

Designed for people with little or no knowledge of the Japanese language who wish to acquire conversational skills. Students will learn correct pronunciation, basic sentence structures and practical vocabulary for everyday use and traveling. Selected features of Japanese culture will be introduced throughout the course via audio-visual presentations and informal lectures.

JPN 186   Intensive Conversational Japanese II   4(4-0)

Prerequisite: JPN 185 or equivalent. Continuation of Intensive Conversational Japanese I. Designed for persons who have some prior knowledge of Japanese and wish to improve their conversational skills. Students learn practical vocabulary and essential grammar to converse in Japanese. Selected features of Japanese culture will be introduced throughout the course via audio-visual presentations and informal lectures.

JPN 187   Intensive Conversational Japanese III   4(4-0)

Prerequisite: JPN 186 or equivalent. Continuation of Intensive Conversational Japanese II. Designed for persons who have some prior knowledge of Japanese and wish to improve their conversational skills. Students learn practical vocabulary and essential grammar to converse in Japanese. Selected features of Japanese culture will be introduced via audio-visual presentations and informal lectures.

JPN 121   Japanese Language and Culture Summer Institute   8(8-0)

An intensive five-week Japanese course. Designed to provide students who have little or no knowledge of Japanese with functional knowledge of the Japanese language and basic information about Japanese culture. Listening comprehension and oral proficiency will be emphasized. Students will also learn Hiragana, Katakana and some Kanji (Chinese characters).

JPN 201   Intermediate Japanese I   5(5-0)

Prerequisite: JPN 103 or equivalent. Designed to give students advanced training and practice in the four language skills—speaking, listening, reading and writing. Includes a thorough review of basic Japanese grammar and vocabulary, the introduction of intermediate grammar, intensive vocabulary building, paragraph writing and small group discussions. Students learn to read and write 120 additional Kanji (Chinese characters).

JPN 202   Intermediate Japanese II   5(5-0)

Prerequisite: JPN 201 or equivalent. Designed to give students advanced training and practice in speaking, listening comprehension, reading and writing. Includes intermediate level grammar, intensive vocabulary building, composition, group discussion and student presentations on topics related to Japan and Japanese. Students learn 120 additional Kanji (Chinese characters).

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 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, Russel 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.

PHL 215   Modern Formal Logic: An Introduction   4(4-0)

A survey of modern logic as a tool for analysis of reasoning expressed in any language. Using a standard logical shorthand, useful methods are applied to determining the consistency, inconsistency, or equivalence of statements and the validity or invalidity of deductive arguments. Practical applications for analysis of technical language (regardless of subject matter) are emphasized.

PHL 260   Philosophy of Science   4(4-0)

Prerequisite: One PHL and one NS course. 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.

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.

Spanish (SPN)
Department of Humanities
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   Elementary Spanish I   5(5-0)

First course of a three-term sequence in elementary Spanish. Designed for persons who want a solid foundation in the essentials of the Spanish language and Hispanic culture. Provides practice in listening comprehension, speaking, reading comprehension and writing, and provides useful information about Hispanic culture. Emphasizes pronunciation of Spanish sounds, practical vocabulary and essential grammar for expressing oneself in Spanish and for understanding native speakers of the language. Students become familiar with many aspects of Hispanic culture through readings, informal lectures and audio-visual presentations. Class is taught largely in Spanish.

SPN 102   Elementary Spanish II   5(5-0)

Prerequisite: SPN 101 or equivalent. Second course of a three-term sequence in elementary Spanish. Designed for persons who want a solid foundation in the essentials of the Spanish language and Hispanic culture. Provides practice in listening comprehension, speaking, reading comprehension, and writing and provides useful information about Hispanic culture. Emphasizes pronunciation of Spanish sounds, practical vocabulary and essential grammar for expressing oneself in Spanish and for understanding native speakers of the language. Students become familiar with many aspects of Hispanic culture through readings, informal lectures and audio-visual presentations. Class is taught largely in Spanish.

SPN 103   Elementary Spanish III   5(5-0)

Prerequisite: SPN 102 or equivalent. Third course of a three-term sequence in elementary Spanish. Designed for persons who want a solid foundation in the Spanish language and Hispanic culture. Provides practice in listening comprehension, speaking, reading comprehension, and writing and provides useful information about Hispanic culture. Emphasizes pronunciation of Spanish sounds, practical vocabulary and essential grammar for expressing oneself in Spanish and for understanding native speakers of the language. Students become familiar with many aspects of Hispanic culture through readings, informal lectures and audio-visual presentations. Class is taught largely in Spanish.

SPN 185   Seminar: Intensive Conversational Spanish I   4(4-0)

First course of a three-term sequence in intensive conversational Spanish. Designed for persons who have no knowledge of Spanish, and who wish to develop very basic conversational skills in the language. Students learn the pronunciation of some Spanish sounds, practical vocabulary and essential grammar for expressing themselves in simple Spanish. They become familiar with different aspects of Hispanic culture through readings in English, informal lectures and audio-visual presentations.

SPN 186   Seminar: Intensive Conversational Spanish II   4(4-0)

Prerequisite: SPN 185 or equivalent strongly recommended. Second course of a three-term sequence in intensive conversational Spanish. Designed for persons who have no knowledge of Spanish, and who wish to develop very basic conversational skills in the language. Students learn practical vocabulary, and essential grammar for expressing themselves in simple Spanish. They become familiar with different aspects of Hispanic culture through readings in English, informal lectures and audio-visual presentations.

SPN 187　Seminar: Intensive Conversational Spanish III　　　4(4-0)

Prerequisite: SPN 186 or equivalent strongly recommended. Third course of a three-term sequence in intensive conversational Spanish. Designed for persons who have some knowledge of Spanish, and who wish to continue developing basic conversational skills in the language. Students learn practical vocabulary and essential grammar for expressing themselves in simple Spanish. They become familiar with different aspects of Hispanic culture through readings in English, informal lectures and audio-visual presentations.

SPN 188　Spanish for Hermandad I　　　8(8-0)

Prerequisite: Some fluency in Spanish. First course of a two-term sequence in intensive Spanish. Designed for persons who have some knowledge of Spanish, and who wish to develop rapid and intensive skills in the language. Students learn the pronunciation of Spanish sounds, practical vocabulary and grammar usage for expressing themselves in Spanish. They become familiar with different aspects of the Hispanic culture through readings, informal lectures and audio-visual presentations.

SPN 189　Spanish for Hermandad II　　　4(4-0)

Prerequisite: SPN 185 and SPN 186 are recommended or successful score on Spanish Assessment Test. Second course of a two-term sequence in intensive Spanish. Designed for persons who have knowledge of Spanish, and who wish to develop conversational as well as reading skills in the language. Students learn practical vocabulary and essential grammar for expressing themselves in Spanish. They become familiar with different aspects of the Hispanic culture through readings, informal lectures and audio-visual presentations.

SPN 201　Intermediate Spanish I　　　5(5-0)

Prerequisite: SPN 103 or equivalent. First course of a three-term sequence in intermediate Spanish. Sequence provides a thorough review of grammar presented in the elementary Spanish sequence, intensive vocabulary building, extensive small-group discussion, writing compositions and lectures on Hispanic culture. Classwork emphasizes practice in listening comprehension, explanations and discussions of Spanish grammar and abundant conversation in Spanish. Homework assignments focus on developing reading and writing skills. Class is taught entirely in Spanish.

SPN 202　Intermediate Spanish II　　　5(5-0)

Prerequisite: SPN 201 or equivalent. Second course of a three-term sequence in intermediate Spanish. Sequence provides a thorough review of grammar presented in the elementary Spanish sequence, intensive vocabulary building, extensive small-group discussion, writing compositions and lectures on Hispanic culture. Classwork emphasizes practice in pronunciation, listening comprehension, explanations and discussions of Spanish grammar and vocabulary, and conversation in Spanish. Homework assignments focus on developing reading and writing skills. Class is taught entirely in Spanish.

SPN 203　Intermediate Spanish III　　　5(5-0)

Prerequisite: SPN 202 or equivalent. Third course of a three-term sequence in intermediate Spanish. Sequence provides a thorough review of grammar presented in the elementary Spanish sequence, intensive vocabulary building, extensive small-group discussion, writing compositions and lectures on Hispanic culture. Classwork emphasizes practice in listening comprehension, Spanish grammar and vocabulary, and conversation in Spanish. Homework assignments focus on developing reading and writing skills. Class is taught entirely in Spanish.

Seminars

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 an increased challenge.

Independent Study　　　**Credits variable, one or two**

Prerequisite: Arrangement with an instructor and approval by the department chairperson before registration. Special research projects and/or individual readings in English, history, humanities, or philosophy. 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
165 Arts and Sciences Building

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

CPS:　　Computer Science
MTH:　　Mathematics/Statistics

The Department of Mathematics and Computer Science 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, geometry 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 a flexible 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, three developmental courses, MTH 009, MTH 012 and MTH 102, are also offered using the traditional lecture method of presentation.

To determine the proper entry level course, students are required to participate in 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.

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.

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　BASIC for Arts and Sciences　　　4(4-0)

Prerequisite: MTH 012 or Placement Test and experience in BASIC. 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.

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 and their associated formatting and arrays.

CPS 220　Introduction to Graphics　　　4(4-0)

Prerequisite: MTH 165 and one language. This course is designed to develop concepts and skills in the use of computer graphics. The focus is on the elements of developing a graphics system for a hands-on approach to graphics applications. A review of currently available graphics systems is included.

LANSING COMMUNITY COLLEGE

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, chi-square and normal distributions, 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, string processing and algorithm efficiency.

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 Nassi-Shneiderman designs, stepwise refinement outlines, control structures, functions, procedures, recursion, 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 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, C, and Computer Organization   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. The language C and VAX-11 Macro assembly language are studied to illustrate the principles behind machine-oriented language features. Macro facilities are emphasized, especially those for input-output operations, and sub-program linkage, particularly using C.

CPS 290   Seminar: C as a Second Language   2(2-0)
Prerequisite: CPS 250 or CPS 255 or departmental approval. This course is designed for students majoring in computer science, mathematics or engineering. The basics of the language will be covered with a special emphasis on program efficiency.

CPS 296   Seminar: System Support   3(3-0)
Prerequisite: Departmental approval. An introduction to the Digital VAX computer system. Software systems covered include the Digital Command Language, the Course Authoring System, Computer Managed Learning, the Digital Editor and the Digital accounting structure. Spreadsheets, graphics software, and operating systems are considered. Students also do production programming.

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 determines 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, MTH 013 and MTH 102. MTH 009, MTH 012 and MTH 102 are also available in a lecture format which is conducted in a traditional classroom environment.

MTH 005   Seminar: Math Minus Anxiety   .5(.5-0)
This workshop is designed for students who feel insecure about doing math and who need help and encouragement to succeed in doing the math required for their goals. Materials and exercises are aimed at reducing math anxiety, improving math study skills and practicing problem-solving techniques. Students at any level of math may enroll.

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 geometry and 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 and inequalities, polynomials, factoring, rational expressions, radicals, systems of equations, graphing and applications.

MTH 013   Basic Geometry   2(0-2)
Prerequisite: A grade of 2.0 or higher in MTH 012 or Placement Test. An intuitive course for students with little or no geometry background and those who wish to review or experience an introduction to this area of mathematics. It provides the basic geometry needed for further study in mathematics. Topics from both plane and solid geometry are covered, including similar figures, congruent triangles and properties of the circle. Proofs and constructions are not considered.

MTH 102   Intermediate Algebra   5(0-5)
Prerequisite: A grade of 2.0 or higher in 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: A grade of 2.0 or higher in MTH 102 or Placement Test. Topics include exponents and radicals, linear equations and inequalities, quadratic equations and inequalities, logarithmic and exponential functions, matrices, systems of linear equations, complex numbers, synthetic division and theory of equations. Graphing concepts are emphasized.

MTH 165   College Algebra and Trigonometry II   5(5-0)
Prerequisite: A grade of 2.0 or higher in MTH 164 or Placement Test. A continuation of MTH 164. Topics include trigonometric functions, trigonometric identities, applications, DeMoivre's Theorem, sequences, mathematical induction, combinatorics and linear programming.

MTH 166   Finite Mathematics   5(5-0)
Prerequisite: A grade of 2.0 or higher in MTH 164 or Placement Test. An alternate course to MTH 165 for students whose program does not require the study of trigonometry. It is an introduction to those topics in mathematics which have principal application in management, science, the life sciences and the social sciences. These topics include linear systems of equations and matrices, linear inequalities and linear programming, probability and statistics and decision theory.

MTH 200   Arithmetical Foundations   5(5-0)
Prerequisite: MTH 102 proficiency. 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 213   Analytic Geometry and Calculus I   5(5-0)
Prerequisite: A grade of 2.0 or higher in 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, an introduction to vectors in two and three-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: A grade of 2.0 or higher in 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 239, 240   Honors Seminars in Mathematics   2(2-0)

Prerequisite: By departmental invitation. The student will maintain an individualized program in problem-solving at a level higher than usually encountered in an introductory course.

MTH 251   Introductory Numerical Analysis   5(5-0)

Prerequisite: MTH 215 and CPS 150. An introduction to the use of computing algorithms and their FORTRAN implementations for solving the typical problems that arise in science, engineering and technology. Topics include: Approximations to roots of equations, polynomial interpolation, curve fitting, numerical differentiation and integrations and numerical solutions of ordinary differential equations.

Statistics (MTH)
Department of Mathematics and Computer Science
Division of Arts and Sciences

MTH 170   Introduction to Statistics   5(5-0)

Prerequisite: MTH 164 or Placement Test. Topics include descriptive statistics, elementary probability, estimation, confidence intervals and hypothesis testing. 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   5(5-0)

Prerequisite: MTH 165 or MTH 166 or Placement Test. 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.

DEPARTMENT OF SCIENCE

Chairperson: Dr. Allan Saaf
408 Arts and Sciences Building

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

The mission of the Science Department is to provide educational programs which meet three basic curricular needs. 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.

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.

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 145   Introductory Anatomy and Physiology   4(3-2)

A one-term course in human anatomy and physiology. Course combines three hours of lecture and two hours of laboratory to teach body systems and their functions. It is designed for non-science majors who would like a basic understanding of the parts of the human body and how they work.

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: A grade of 2.0 or higher in ANT 151. The course covers the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. The second of a two-term sequence designed for students pursuing certain vocational programs such as medical secretaries, psychology majors, dental assistants and other programs requiring a basic understanding of human systems.

ANT 211   Human Anatomy   5(3-3)

Prerequisite: A grade of 2.0 or higher in BIO 101 or pass the BIO 101 waiver exam. A study of the anatomy of the human body that includes the structures of the skeletal, muscular, nervous, sensory, circulatory, respiratory, digestive, excretory, endocrine and reproductive systems. It is designed to meet the needs of students in biology or related applied fields such as nursing, physical education and mortuary science.

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: astronomical instruments and measurements, solar system, stellar evolution, quasars, black holes, cosmology and the expanding universe. The LCC Planetarium will be used to simulate the night sky. Laboratory activities are designed to illustrate major astronomical concepts and may include astronomical observations.

Biology (BIO)
Department of Science
Division of Arts and Sciences

BIO 101   Biology   4(3-3)

Prerequisite: CEM 110 or HS Chemistry within past two years. A course that deals with basic chemical, physical and biological concepts which are essential to the understanding of further studies in biology, including physiology and microbiology. Topics include: the metric system, basic atomic structure, chemical bonds, carbohydrates, lipids, proteins, nucleic acids, diffusion, osmosis, filtration, the light microscope, cell structure and function, mitosis and meiosis, and genetics.

BIO 107   Cell Biology I   4(3-3)

Prerequisite: CEM 110 or HS Chemistry within past two years. First course in a three-term biology sequence for science majors. Lecture topics include: atomic structure and bonding; chemistry of carbohydrates, lipids and proteins; structure and function of all eukaryotic cell organelles; biochemistry of respiration and photosynthesis; mammalian nerve cell; and the human immune system. Laboratory emphasizes techniques used in cell and molecular biology.

BIO 108   Cell Biology II   4(3-3)

Prerequisite: A grade of 2.0 or higher in BIO 107. Second course in the biology sequence. This course stresses the flow of genetic information in cells and in populations of living organisms. Lecture topics include: general principles of Mendelian heredity; mitosis and meiosis, structure and function of DNA, RNA and genes; chromosome structure and function; linkage and sex; regulation of gene expression; and some aspects of modern gene splicing technology. Laboratory stresses techniques used in genetics and molecular biology. An important component of the lab involves studying the genetics of the bacterium Escherichia coli and the fruit fly Drosophila.

BIO 109   Principles of Ecology   4(3-3)

Lectures center on the theories of ecology at the population, community and ecosystem levels. Laboratory work includes population sampling, a class field project, computer and statistical analysis of data and physical and chemical analysis of aquatic ecosystems. A day-long trip to Gull Lake is usually included.

BIO 140   Evolution   4(3-3)

The evolution of life on Earth as it is presently understood is the content of this course. 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 scientific treatment of theories and evidence are emphasized.

BIO 201 Zoology I 4(3-3)

First of two courses designed to survey the field of animal biology and serve as a foundation for advanced courses. Deals with the characteristics of life, cellular structures and their functions, cell division, chemical and physical aspects of life, an introduction to histology and a study of the integumentary, skeletal, muscular, digestive, respiratory, urinary, circulatory, nervous, endocrine and reproductive systems. Emphasis is on the vertebrates, principally the mammals.

BIO 202 Zoology II 4(3-3)

Prerequisite: A grade of 2.0 or higher in 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. An introduction to ecology and the ways in which various animals interact is included.

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 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(2-4)

Prerequisite: One term of biology recommended. A morphological study of plants. The course addresses plant structures and life cycles, with consideration of ontological and evolutionary development.

BIO 270 Human Genetics 4(4-0)

Prerequisite: BIO 101 or BIO 107. Presents general principles of genetics with specific application to the human species. 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 274 Principles of Molecular Biology 3(3-0)

Prerequisite: BIO 108 or equivalent. This introductory lecture course summarizes the history of the recombinant DNA revolution and surveys the principles of, and experiments in, genetic engineering. BIO 274 must be taken prior to BIO 275 and BIO 276.

BIO 275 Molecular Biology I 4(2-4)

Prerequisite: BIO 274. As the first of two courses, the main objective will be to introduce students to the principles of molecular biology. Laboratory experiments will include growing bacterial colonies, using restriction enzymes, gel electrophoresis, DNA purification, and cloning and manipulating recombinant genes, with both plasmid and lambda bacteriophage DNA.

BIO 276 Molecular Biology II 4(2-4)

Prerequisite: BIO 275. The second course in the molecular biology series introduces students to more sophisticated aspects of molecular biology research. Experiments will include M13 bacteriophage cloning, DNA sequence analysis, and Southern and Northern blotting techniques. Field trips to research labs will be arranged.

BIO 280 Histology 4(1-4)

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.

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 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 105 Environmental Issues of Japan 4(3-2)

The course will include a discussion of several global environmental problems as they relate to Japan. Specific topics include air pollution, water pollution, solid waste management, the ozone layer, the greenhouse effect, nuclear energy and disposal of radioactive wastes.

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 requiring one year of chemistry or 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, chemical equations, stoichiometry, the gas laws, an introduction to solution chemistry and acid-base ionic equilibria.

CEM 111 Fundamentals of Chemistry II 4(4-0)

Prerequisite: A grade of 2.0 or higher in 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: A grade of 2.0 or higher in 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)

Prerequisite: A grade of 2.0 or higher in 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)

Prerequisite: High school chemistry within past two years or a grade of 2.0 or higher in both CEM 110 and BIO 101. 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, biochemical genetics, blood and respiratory chemistry, urine, electrolytes, acid-base balance, hormones and vitamins. Physiological and pathological applications are incorporated into the topics. Required for students pursuing nursing, other Health Career Technology programs and the Biotechnology program.

CEM 170 Introduction to Chemistry 2(2-0)

Prerequisite: High school chemistry, concurrent enrollment or completion of MTH 102 or equivalent. CEM 170 is a "refresher course" for students who have had high school chemistry. Students whose curriculum lists the CEM 171 sequence may be advised, depending upon a placement test score, to take CEM 110 or CEM 170 before beginning CEM 171.

CEM 171 General Chemistry Lecture I 4(4-0)

Prerequisite: 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 with 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)

Prerequisite: A grade of 2.0 or higher in 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 and basic thermodynamics.

CEM 173 General Chemistry Lecture III 3(3-0)

Prerequisite: A grade of 2.0 or higher in CEM 172. CEM 173 is the third course in the 170's lecture series. Topics include ionic equilibria and solubility product constants and introduction to coordination chemistry, descriptive inorganic chemistry, nuclear chemistry and fundamental particles.

CEM 181 General Chemistry Laboratory I 1(0-3)

Prerequisite: Credit or concurrent enrollment in CEM 111 or CEM 171. CEM 181 is the first in a series of three general chemistry laboratory courses which is designed to accompany the CEM 170s lecture sequence. It stresses techniques and includes a treatment of density determination, synthesis, gas laws and freezing point depression.

CEM 182   General Chemistry Laboratory II   3(1-6)

Prerequisite: Credit or concurrent enrollment in CEM 172 and a grade of 2.0 or higher 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 a grade of 2.0 or higher 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 261   Organic Chemistry I   4(4-0)

Prerequisite: CEM 172 and CEM 182 or equivalent. CEM 261 is the first lecture course of a three-term sequence in Organic Chemistry designed primarily for chemistry majors and for those students wishing a rigorous preparation for advanced courses in chemistry, biochemistry, pharmacy or other fields related to the biological or physical sciences. Topics presented include structure and bonding, hybridization, nomenclature, sterochemistry, thermodynamics and kinetics of organic reactions, and functional groups, including many reactions and their mechanisms.

CEM 262   Organic Chemistry II   4(4-0)

Prerequisite: CEM 261. CEM 262 is a continuation of Chemistry 261. Topics include free radical reactions, aromatic compounds, spectroscopy, organometallic compounds, aldehydes and ketones. Nomenclature, preparations and reactions are stressed with emphasis on synthetic and analytical applications of the reactions studied.

CEM 263   Organic Chemistry III   4(4-0)

Prerequisite: CEM 262. CEM 263 is a continuation of Chemistry 262. Topics include carboxylic acids and their derivatives, B-dicarbonyl compounds, amines, amino acids, carbohydrates, lipids including fats and oils and nucleic acids.

CEM 264   Organic Chemistry I Laboratory   2(0-6)

Prerequisite: CEM 261. CEM 264 is the first course of a two-term organic laboratory sequence that usually is taken concurrently with CEM 262 Lecture. 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 261 and 262.

CEM 265   Organic Chemistry II Laboratory   2(0-6)

Prerequisite: CEM 262 and CEM 264. CEM 265 is the second course of a two-term organic laboratory sequence. Laboratory exercises are synthesis experiments chosen to reinforce the reactions and mechanisms discussed in CEM 261 and 262.

Geology (GE)
Department of Science
Division of Arts and Sciences

GE 201, 202, 203   Geology Field Studies   1 to 3 credits

Prerequisite: Geology or geology concurrently. These courses emphasize techniques used to interpret geologic conditions in a field environment. Student must be concurrently enrolled in GE 221, 222, 223 and 224 or have previously completed an equivalent geology course. Numerous field trips required.

GE 210   Michigan Field Geology   2(0-4)

This course explores the geologic agents which have shaped the face of the Southern Peninsula of Mid-Michigan (glaciers, streams, wind and man) through field investigations. Each class period will consist of a visit to an area of geologic significance. Included will be the study of glacial landforms, stream valleys, shorelines, dunes, quarries, rocks and fossils. Appropriate for teachers, environmentalists, rock and fossil collectors or anyone interested in the geologic heritage of Michigan.

GE 221   Geology I   4(3-3)

Minerals and rocks of the earth's crust; constructive and destructive forces, including: erosion by water, ice, gravity, wind and waves and volcanism. Laboratory activities include study and identification of minerals and rocks and the introduction to topographic and geologic maps to illustrate geologic features and concepts. Field activities may be included as part of the laboratory.

GE 222   Geology II   4(3-3)

Applies the principles of Historical Geology to the study of the development of the earth from its inception to the present. Topics included are: absolute and relative age dating, correlation, uniformitarianism, actualism, fossils and their interpretation, chemical and organic evolution, environments of deposition, geologic time and methods of dating geologic features. Laboratory activities include fossil study, physical stratigraphy, and interpretation of geologic maps and cross sections. Field activities may be included as part of the laboratory.

GE 223   Geology III   4(3-3)

Applies the modern geological concepts developed over the past three decades to the interpretation of the earth's behavior. Topics include: sea floor spreading, plate tectonics, nature and role of volcanoes and earthquakes, mountain building and solar system geology. Laboratory activities include: the interpretation and construction of several type of geological maps and other graphic representations that summarize geologic data.

GE 224   Michigan Geology   4(3-3)

A general survey of the geology of Michigan and its immediate environs. Topics include: the Canadian Shield areas of the northern peninsula, development and nature of the Michigan Basin, the Pleistocene Epoch in Michigan. Emphasis is placed on economic, environmental and special interest aspects of the Michigan's geologic past. Laboratory includes: study of the minerals and rocks that are found in Michigan, economic resources and the interpretation of maps or other geologic information representing areas of interest. Field activities may be included as part of the laboratory.

GE 245   Physical Geology/Economic Geography of Japan   4(4-2)

A course to investigate the physical geography and geology of the Japanese islands and how these features relate to the economic strength of that country. Basic geological concepts, geotectonics, and volcanic geology theory will be introduced to enhance understanding of the geographical and geological setting of the Japanese islands. Introductory geological and geographic lab activities may be used, including such topics as minerals and rock familarization, map reading, common land forms, water resources, land use, agriculture, environment, and transportation systems. Topics may be supplemented by field investigations to appropriate geologic areas.

GE 250   Japanese Geography & Geology   4(4-2)

A course to investigate the physical geology and physiography of the Japanese islands and how these features relate to the economic geography of that country. Basic geological concepts, geotectonics and volcanic geology theory will be introduced to enhance understanding of the geological setting of the Japanese islands. Introductory geological lab activities, including minerals and rock familarization, topographic map reading and common land forms may be supplemented by field investigations to appropriate geological areas.

Meteorology (MET)
Department of Science
Division of Arts and Sciences

MET 212   Introduction to Meteorology   4(2-4)

Prerequisite: NS 121 or instructor's approval. Study and observations of the atmosphere designed to acquaint students with the elements of weather, interrelationships of elements, meteorological instruments and weather maps. General and specific weather phenomena of the United States are emphasized. Various climatic regions of the world are studied as well as natural and human induced climatic changes. Laboratory includes: observation of basic weather elements, problem solving, construction and interpretation of simple weather maps and basic forecasting.

Microbiology (MIC)
Department of Science
Division of Arts and Sciences

MIC 203   Microbiology   4(3-3)

Prerequisite: A grade of 2.0 or higher in 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

IST 211   Integrated Science for Teachers - I   4(2-4)

Prerequisite: NS 121, NS 122 and NS 123. Primarily for students seeking an elementary education certificate. Emphasis is on developing classroom activities, demonstrations, science discovery projects and experimental equipment that would be useful in the participant's classroom. Laboratory and field experiences will involve students with natural phenomena including their relationships and the application of principles studied, as appropriate for the fall season.

IST 212   Integrated Science for Teachers - II   4(2-4)

Prerequisite: NS 121, NS 122 and NS 123. Primarily for students seeking an elementary education certificate. Emphasis is on developing classroom activities, demonstrations, science discovery projects and experimental equipment that would be useful in the participant's classroom. Laboratory and field experiences will involve students with natural phenomena including their relationships and the application of principles studied, as appropriate for the winter season.

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IST 213   Integrated Science for Teachers - III   4(2-4)
Prerequisite: NS 121, NS 122 and NS 123. Primarily for students seeking an elementary education certificate. Emphasis is on developing classroom activities, demonstrations, science discovery projects and experimental equipment that would be useful in the participant's classroom. Laboratory and field experiences will involve students with natural phenomena including their relationships and the application of principles studied, as appropriate for the spring season.

NS 100   Science Discovery A Process   4(3-2)
Course emphasis is on reducing anxiety and improving those reasoning skills necessary for participation in science courses. Specific methods to identify and reduce science anxiety associated with science topics will be presented. Science reasoning skills will be assessed, including: observation, experimental techniques, critical thinking and communication techniques. Students will gain experience designed to improve their competency in these areas. NS 100 will NOT satisfy general Natural Science requirements.

NS 121   The Physical World   4(3-3)
Prerequisite: Proficiency in MTH 009 and Science Inventory passed. Introduces the fundamental laws, theories, and principles of chemistry and physics with an emphasis on real world examples. The unifying themes of each unit are energy and matter. The course emphasizes scientific processes and associated reasoning skills.

NS 122   Rocks and Stars   4(3-3)
Prerequisite: Science Inventory passed. Topics include an introduction to astronomy, the solar system, minerals, rocks, geological processes, plate tectonics and environmental geology, with an emphasis on real world environment.

NS 123   Living World   4(3-3)
Prerequisite: Science Inventory passed. Provides students with a basic understanding of the structure and function of Earth's ecosystems, the importance of preserving them and the value of the natural populations that depend upon them. Through lab exercises, tape-slide modules, computer programs, textbook readings, films and lectures, students explore the beauty and diversity of life on Earth.

NS 151   Hands-On Workshop in Science I   1(1-0)
A workshop designed to introduce elementary and middle school teachers to concepts, processes and techniques for teaching science topics using hands-on methods.

NS 152   Hands-On Workshop in Science II   2(2-0)
A workshop designed to introduce elementary and middle school teachers to concepts, processes and techniques for teaching science topics using hands-on methods.

NS 153   Hands-On Workshop in Science III   3(3-0)
A workshop designed to introduce elementary and middle school teachers to concepts, processes and techniques for teaching science topics using hands-on methods.

NS 154   Hands-On Workshop in Science IV   4(4-0)
A workshop designed to introduce elementary and middle school teachers to concepts, processes and techniques for teaching science topics using hands-on methods.

Oceanology (OCN)
Department of Science
Division of Arts and Sciences

OCN 225   Basic Limnology and Oceanology   4(4-2)
An introduction to the physical and chemical properties of natural waters, wave action, currents, geological structures and formations of the ocean and lake basins, marine and fresh water biology and man's interactions with natural waters. Laboratory activities are designed to illustrate basic concepts of aquatic science. Field activities may be included as part of the laboratory.

Physiology (PGY)
Department of Science
Division of Arts and Sciences

PGY 212   Human Physiology   5(5-0)
Prerequisite: A grade of 2.0 or higher in BIO 101 and ANT 211. The physiology of the muscular, nervous, sensory, circulatory, respiratory, digestive, urinary, endocrine and reproductive systems is studied. Other topics may include metabolism, water and electrolyte balance, acid-base balance and stress.

PGY 213   Human Physiology Laboratory   1(0-3)
Prerequisite: PGY 212 or concurrently. The course is designed to permit students to develop an understanding of basic principles in human physiology through experimentation in the laboratory. A series of laboratory exercises, chosen in sequence to complement PGY 212, will be performed by the students. Areas in which experiments are available include the physiology of sensory, motor, digestion, endocrinology, cardiovascular, renal and respiratory systems.

Physics (PHY)
Department of Science
Division of Arts and Sciences

PHY 191   Physics for the Life Sciences   5(5-0)
Prerequisite: MTH 102 or equivalent. A one-term course in general physics designed to fulfill the physics requirement for certain Life Science and Health Career Technology programs. Topics include: vector quantities, force, motion and energy; conservation laws, fluid pressures and flow; electricity 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. 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. It includes the principles of heat and thermodynamics and their relationship to the operation of engines, rotational motion and equilibrium, heat and thermodynamics.

PHY 202   Physics (Electricity, Magnetism and Wave Motion)   4(4-2)
Prerequisite: A grade of 2.0 or higher in PHY 201 or equivalent. Designed to describe the electrical and magnetic nature of matter. Electrostatics, electricity, magnetism and DC and AC circuits are investigated.

PHY 203   Physics (Optics and Modern Physics)   4(4-2)
Prerequisite: A grade of 2.0 or higher in PHY 201 or equivalent. A course in modern physics. Included are topics concerning wave phenomena, geometrical and physical optics, relativity, and atomic, molecular and nuclear structure.

PHY 215   General Physics I Lecture (Mechanics)   4(5-0)
Prerequisite: MTH 213 or equivalent. 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: A grade of 2.0 or higher in PHY 215 and MTH 214, or equivalents. Provides an introduction to the basic principles of electricity and magnetism, using calculus extensively. The second of three lecture courses designed for 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: A grade of 2.0 or higher in PHY 215 and MTH 214, or equivalents. 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)
Prerequisite: PHY 215 concurrently. Laboratory topics in mechanics, which complement the lecture course PHY 215.

PHY 226   General Physics II Lab   1(0-2)
Prerequisite: PHY 216 concurrently and a grade of 2.0 or higher in PHY 225. Laboratory topics in electricity and magnetism, which complement the lecture course PHY 216.

PHY 227   General Physics III Lab   1(0-2)
Prerequisite: PHY 217 concurrently and a grade of 2.0 or higher in PHY 225. Laboratory topics in optics and modern physics, which complement the lecture course PHY 217.

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.

BIO 100   Seminar: Nutrition   2(2-0)
An introductory course in human nutrition. Topics include the energy nutrients-carbohydrates, lipids and protein; digestion, absorption and metabolism of the nutrients; role of vitamins and minerals; and the introduction of current and controversial topics when relevant. Such current topics can include fad diets, obesity, relationship of nutrients to athletes, labeling of foods, effects of alcohol, the sugar controversy and food additives.

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GE 101 Seminar: Western National Parks   2(2-0)

This course will survey the major National Parks and National Monuments west of the Mississippi River. Since most of the Western parks were established for their geologic setting, the significant geological features will be reviewed.

GE 115 Seminar: Volcanic Geology   2(2-0)

This course is an introductory discussion of those internal earth processes which are responsible for producing volcanic mountains, such as Mt. St. Helens, and associated earth materials. Class discussions will emphasize details of these internal earth processes, their consequences observable at the earth's surface and the types of material produced by such eruptions.

GE 140 Seminar: Dinosaurs   2(2-0)

A survey of dinosaurs, their world and discoverers. Past, current and emerging controversies about their origin, evolution, behavior, habitats and extinction. Their discovery, discoverers and the history of exploration for dinosaurs.

GE 141 Seminar: Ice Ages and Ancient Climates   2(2-0)

A survey of ancient climatic conditions and their causes with special emphasis on the Pleistocene Ice Age and theories of glaciation, and on the Greenhouse Effect, its causes and consequences. Topics also include methods used to infer ancient climatic conditions from plate tectonics, rocks, fossils, and oceanic and atmospheric patterns (with three class laboratory exercises), glaciers, glacial geology (with special reference to the Great Lakes Region) and Ice Age life.

GE 142 Seminar: Fossils of Michigan   2(2-1)

The course is designed as a companion to the Michigan Geology course and concurrent enrollment is possible (but not required). It is expected that the majority of students will be elementary and middle school teachers, members of local geology/rock and mineral clubs and those with continuing interest in geology-biology. The course includes: a survey of the ancient life of Michigan and the Great Lakes region during the Paleozoic and the Pliestocene; the biology and ecology of marine invertebrates and Ice Age mammals; fossil collecting, fossil identification and fossil collecting ocalities in Michigan. Lecture and laboratory.

GE 150 Seminar: The Meaning of Evolution   3(2-1)

What is Evolutionary Theory and what does it mean? As a survey of evolutionary thought from Aristotle to the present, this course includes Darwinian Evolution, the Synthetic Theory and the New Synthesis, past and current controversies and the impact of Evolutionary Theory on society, culture, politics and science.

OER 102 Seminar: A Wilderness Survival   3(2-2)

A course designed to provide basic outdoor survival skills and techniques to campers, outdoorsmen and group leaders. Topics include shelter, fire, water, signaling and orienteering, food procurement and hot/cold stress management.

OER 103 Seminar: Wild Food Plants   2(2-0)

This course introduces 65 genera of the edible wild plants of Michigan and adjoining North America and their toxic look-alikes. The students learn to distinguish these genera on the basis of observed taxonomic plant characteristics. The material is illustrated in slides and handouts. Several outdoor experiences in recognizing, collecting and preparing wild food plants are provided. Conservation of endangered species and care of the environment is also stressed.

OER 104 Seminar: Wilderness Survival II   2(2-0)

Prerequisite: OER 102 or concurrent or equivalent. Advanced survival technique has a slightly more "world-wide" emphasis, but builds on topics from Wilderness Survival I. Topics include, survival at sea, toxic bites, general rules for approaching a primitive culture, advanced orienteering, edible plants of the world and related topics. Optional three-day field trip.

OER 105 Seminar: Wild Food Plants II   2(2-0)

Prerequisite: OER 103 or concurrent. This course presents approximately 100 genera of the common edible wild plants of Michigan and the Northeast United States, in addition to the ones covered within Wild Food Plants I. Additional herbs and food plants and their toxic look-alikes; and survival situation applications will be discussed. Recommended for youth group leaders, teachers, backpackers, survivors and sports enthusiasts.

SC 114 Seminar: Lake and Stream Ecology   2(2-0)

This course explores the abiotic and biotic components of Michigan streams. Topics include physical and chemical characteristics of moving water; the life history, adaptations, and identification of stream invertebrates; food habits, habitat and management of trout; and a study of Michigan's AuSable River system.

SC 119 Seminar: Introduction to Wildlife Ecology
for Michigan Outdoorsmen   2(1-2)

A course designed for students interested in the biology and management of Michigan wildlife. The course covers the history and development of the ecological principles utilized in sound game management practices. Techniques used by wildlife biologists will be employed by students in the laboratory and in field trips.

SC 123 Seminar: Introduction to Space Science   3(3-0)

A non-mathematical introduction to space science with emphasis on the U.S. Space Shuttle program. Topics include: basics of rocket propulsion, orbits, the space environment, satellites, remote sensing, space defense, the space shuttle and space station and colonizing the planets.

SC 124 Seminar: Sex Differences in the Human Brain   2(2-0)

This controversial topic will be explored through analysis of current research literature during class lectures and discussions. Some topics include lateralization in the brain, women's "intuition," development of gender roles and hormonal influences on behavior. Students will also develop relevant topics of their own choosing during the term.

SC 130 Seminar: Birds of Michigan   2(2-0)

This course will introduce the student to the species of birds seen in Michigan. General avian taxonomy, morphology, ecology, behavior and life history will be included. Field trips will be optional.

Independent Study (SC)
Department of Science
Division of Arts and Sciences

SC 297, 298, 299 Independent Studies   1 to 3

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. Manuel G. Diaz
353-D Arts & Sciences Building

The purpose of general education as perceived within Social Science is to prepare the individual for the responsibilities all persons have as citizens and for creative and active participation in a wide range of interpersonal activities.

The Social Science Department has three basic thrusts: transfer of credits, certification and training, and cooperation with community agencies and governmental offices in the solution and prevention of problems.

Social Science is a body of information which is gathered in an attempt to discover, understand and explain behavior patterns of individuals and groups of people in a systematic manner. Social Science is based on the following five steps of the scientific method: (1) asking the right question; (2) collecting the data necessary to answer the question; (3) analyzing the results; (4) drawing a conclusion; and (5) reformulating the question.

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
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, Politics in Society; 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, SS 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 101, 102, and 103 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

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want to upgrade their knowledge and skills. Courses with the following codes are career training courses which belong to the Human Services Program: CD, ED, HUS and SW.

Seminars

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 determined 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

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 LCC. The project must meet academic goals and must include enough supervised learning experiences to be commensurate with the amount of credit requested.

COURSE DESCRIPTIONS

Basic Social Science (SS)
Department of Social Science
Division of Arts and Sciences

SS 101   Living in Societies   4(4-0)
Survey of major concepts and methods of sociology and anthropology. Emphasis is given to selective aspects of culture, socialization, stratification, groups, social organization, population-ecology, societal and cultural history and social change.

SS 102   The Economic Condition   4(4-0)
This course involves a study of the change in economic institutions from past to present, emphasizing structure, theory and problems of economy.

SS 103   Politics in Society   4(4-0)
Examines types of political organizations, comparing similarities and differences between governments. Introduces methods of policy making and ways to become politically effective.

SS 104   American Government   4(4-0)
An analysis of the American political system. Gives emphasis to the Federal system, with special attention to American government at the national level.

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 among federal, state and local government.

SS 112   Honors Section of the Economic Condition   4(4-0)
Involves a study of the change in economic institutions from past to present, emphasizing structure, theory and problems of economy. This course is the same as SS 102 except that it is taught in a seminar mode for honor students only. Outstanding students are notified of their eligibility before registration.

SS 113   Honors Section of Politics in Society   4(4-0)
Examines types of political organizations, comparing similarities and differences between governments. Introduces methods of policy making and ways to become politically effective. This course is the same as SS 103 except that it is taught in a seminar mode for honor students only. Outstanding students are 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 2 ½ Years   2(2-0)
This course examines the growth and development patterns of children from conception to 2 ½ years of age. Includes: physical, physiological, emotional, social and cognitive areas of development; nutritional requirements; health needs, essential nurturing and caregiving skills, relative influences of genetics and environment. This course will provide the developmental context on which Child Development Associate (CDA) Infant-Toddler Competencies are based.

CD 102   Infant and Toddler Laboratory   2(0-4)
Prerequisite: CD 101 concurrently. 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 103   Developing Programs for Infants and Toddlers   2(2-0)
Prerequisite: CD 101 and CD 102 Recommended. This course explores the components of the physical and emotional environment which are necessary for quality infant and toddler child care program development. The focus is on the development of nurturing skills, providing appropriate activities and materials, managing schedules and routines and observation and record keeping. The Infant-Toddler CDA functional areas of physical, cognitive, communication, creative, learning environment and program management are primarily addressed.

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. The course will also offer assistance in beginning the credentialing process through course work and supervised field experience. Grading in this course is P/Z.

CD 121   The Preschool Child, 2 ½ - 6 Years   4(4-0)
Examines the growth and development patterns of children from 2 ½ - 6 years of age, including physical, physiological, emotional, social and cognitive areas of development. Additional topics include: play, nutrition, families, preschool experience and the acquisition of skills in recognizing and recording and interpreting child behavior. This course provides the developmental context on which CDA competencies are based.

CD 122   The School-Age Child   3(3-0)
Deals with the physiological and physical growth patterns, nutritional requirements, emotional, social and cognitive skills of children, 5-12 years old. Focuses on learning activities that promote the growth and development of school-age children. Prepares individuals for caring for the school-age child at home or in child-care settings. Emphasizes working cooperatively with parents and schools.

CD 130   Caring for Children in a Family Setting   3(3-0)
The role of the in-home caregiver as part of the family unit will be examined. An overview of families and their functioning as well as situations unique to child care in a family setting will be discussed. Other topics include: sibling relationships, health and safety in the home and international families.

CD 182   Child Care as a Family Support System   2(2-0)
The focus is on child care as a family support system; topics will include: establishing and maintaining positive and productive relationships with families in child care centers and homes; providing a professional service for parents; supporting the child's relationship with his/her family; encouraging parental involvement; and communicating with parents. This course specifically addresses the functional area of family.

CD 183   Health and Safety Issues in Child Care   2(2-0)
An in-depth look at health and safety issues in child care centers and homes. Topics covered include: understanding and preventing communicable diseases, preventing and treating accidents, dental hygiene, nutrition and health and safety education. This course specifically addresses the functional areas of safety and health.

CD 214   Child Development Associate (CDA) Practicum I   4(1-12)
Prerequisite: CD 110 or department approval. Provides supervised field experience and training to assist students working toward Child Development Associate (CDA) credentialing. Students receive on-site field supervision, develop individualized workplans, participate in group seminar discussions and receive feedback on written portfolio assignments covering the 13 CDA functional areas.

CD 215   Child Development Associate (CDA) Practicum II   4(1-12)
Prerequisite: CD 214. Provides supervised field experience and training to assist students working toward Child Development Associate (CDA) credentialing. Students receive on-site field supervision, develop individualized workplans, participate in group seminar discussions and receive feedback on written portfolio assignments covering the 13 CDA functional areas. A continuation of CDA Practicum I.

CD 216   Child Development Associate (CDA) Practicum III   4(1-12)
Prerequisite: CD 215. Provides supervised field experience and training to assist students working toward Child Development Associate (CDA) credentialing. Students receive on-site field supervision, develop individualized workplans, participate in group seminar discussions and receive feedback on written portfolio assignments covering the 13 CDA functional areas. A continuation of CDA Practicum II.

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CD 230   Programmig for In-Home Child Care Giving   4(3-4)
Prerequisite: CD 130. Focuses on preparing an environment in the home setting which provides opportunities for the children's social, emotional, physical and cognitive growth. Topics include: caring for children's personal, nutritional and educational needs; selecting materials and equipment; organizing the environment; safety; special events and community resources. This course includes field experience in a family setting.

CD 280   Preschool Administration   3(3-0)
Analysis of the administrator's role in directing an Early Childhood Center; application of philosophy, communication and business techniques necessary to operate an early childhood education program; acquisition of knowledge about safety, licensing, health and nutrition regulations. This course addresses the CDA functional areas of program management and professionalism.

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.

CD 282   Curriculum Development   4(3-4)
CD 121 Recommended. The focus of this course is on developing a curriculum which will encourage the physical, cognitive, creative and language development of children in early childhood programs. Specific activity/skill areas focus on concrete developmental experiences and play. This course specifically addresses the CDA functional areas of physical, cognitive, communication and creative.

CD 283   Preschool Learning Environment   4(3-4)
CD 121 Recommended. Focuses on environments which foster social and emotional growth for children as well as the development of skills in positive guidance and effective communication with young children. A variety of ages (infants through school-age) and settings (family day care, child's own home and center-based) will be incorporated. Topics include: group management skills, realistic expectations for children, structuring the environment, pro-social skill development and the prevention of aggressive behavior. The CDA functional areas of self, social, guidance and communication are addressed.

CD 284   Family Day Care Management   3(3-0)
Presents a systematic approach to managing a family day care home and creating a positive learning environment for young children in a home setting, including business aspects, program development, professionalism, communications skills, managing personnel and organizing the environment. The CDA functional areas of program management, professionalism and learning environment are addressed.

Education (ED)
Department of Social Science
Division of Arts and Sciences

ED 101   Curriculum Reinforcement   3(3-0)
Role orientation of the paraprofessional or education student as a significant person in the reinforcement of the school curriculum. Includes introduction to instructional media, school records, safety, discipline, permissible first aid, dramatic play and story telling and other instructional approaches.

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.

Geography (GEO)
Department of Social Science
Division of Arts and Sciences

GEO 100   Introduction to Geography   4(4-0)
As an introductory course, Geography 100 is designed to provide contemporary geographic ideas and techniques to study the interaction between people and their physical environment.

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 national subregions around the world.

GEO 202   Geography of North America   3(3-0)
A study of the human and physical resources of North America. This course will identify some of the factors that influence quality of life and give character to each of the various subregions.

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.

GEO 205   Population Geography   4(4-0)
To provide an understanding of how the size, distribution, composition and movement of populations are related to the spatial variations in the nature of places.

Human Services (HUS)
Department of Social Science
Division of Arts and Science

HUS 101   Human Services: Introduction and Interventions   4(4-0)
An overview of the basic programs and social institutions which provide human services. The course will also provide the student with methods and problem-solving skills used by human service workers in a variety of settings.

HUS 102   Introduction of Mental Health   4(4-0)
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, socio-economic, cultural and psychological factors related to domestic violence.

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 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 212   Family Treatment-Child Abuse/Neglect   4(4-0)
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 a community-based social agency or institution. A concurrent seminar, HUS 217 serves to integrate field experience with theoretical concepts and principles of human services, except for education students who should enroll in ED 101.

HUS 215   Practicum II   3(0-12)
Prerequisite: HUS 214. A continuation of HUS 214. A concurrent seminar, HUS218 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 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 identify the systems and resources that link the systems with the people and learn 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 apply for state certification.

HUS 240   Substance Abuse in Special Populations   3(3-0)

Prerequisite: SA 230. This course surveys substance abuse in various populations including the elderly, women, the hearing impaired, as well as various ethnic groups including African Americans, American Indians and Hispanics. Although many commonalities exist among the groups, each group is unique. Reasons for abuse and treatment consideration are explored with each special population.

HUS 241   Substance Abuse Prevention   4(4-0)

Prerequisite: SA 230. This course provides students with a developmental framework for a better understanding of the factors contributing to substance abuse prevention. This understanding should facilitate students' abilities to critique existing programs, identify current community needs and address the growing demand for consultation and assistance in the field of substance abuse prevention.

HUS 242   The Chemically Dependent Family   4(4-0)

Prerequisite: SA 230. Designed to provide students with a conceptual framework within which they can understand issues and effectively intervene/interact in a counseling fashion with the chemically dependent family (CDF). Specific subgroups and issues within or resulting from the chemically dependent family are explored: 1) adult children of alcoholics, 2) co-dependents and paradependents, 3) family addiction patterns, 4) acculturation of substance abuse, 5) sexual issues, 6) functional and disfunctional roles, and 7) a systems approach to treatment of the CDF.

HUS 243   Adolescent Addiction   4(4-0)

This course focuses on issues related to understanding, evaluating and treating the adolescent substance abuser, individually as well as within the family system.

Political Science (PLS)
Department of Social Science
Division of Arts and Sciences

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 actors.

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 using theoretical background and current reading to understand the ideologies, forces and interests shaping today's politics.

PLS 250   American Political Parties, Elections and Interest Groups   4(4-0)

Deals with the origins, structure and functions of political parties, examines the American political system in terms of citizens concern about community and government and serves as a guide to political action by the citizenry. Included is the role and function of interest groups in American 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. are 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.

PLS 290   Seminar: The Supreme Court and Landmark Decisions   4(4-0)

An analysis of the United States Supreme Court. Particular emphasis will be devoted to Supreme Court decision-making as the class will scrutinize constitutional caselaw established by the Court. A number of landmark Supreme Court decisions will be reviewed from historical, political, public policy, institutional and behavioral perspectives.

PLS 296   Seminar: Advanced 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.

Psychology (PSY)
Department of Social Science
Division of Arts and Sciences

PSY 151   Business Psychology   3(3-0)

This course is a general, basic introduction to the field of psychology with special emphasis on aspects of the field which are particularly useful to students preparing for careers in business.

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(3-1)

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. Each student will design and conduct an experiment.

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, or approval. 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 emphasized.

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, dascribe 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.

PSY 251   Psychology of Human Sexuality   4(4-0)

Prerequisite: PSY 200. An exploration of human sexuality, including the history of human sexuality; sexual research; the origins, development and nature of sexual response systems; sexual roles and orientations; love and intimacy; reactions to sexual diseases and disorders; and future trends in sexuality.

PSY 260   Health Psychology   3(3-0)

Prerequisite: PSY 200 or Departmental approval. Psychological factors influencing physical health and illness. Topics include stress and coping, symptom perception and reporting, compliance, pain management, personality and specific health risks, and behavioral aspects of programs for health maintenance and promotion.

PSY 275   Psychology of Death: A Preparation for Living   4(3-1)

Will examine psychological theories, concepts and research that pertain to the study of death and personal death awareness. Topics include: the dying process, suicide, death anxiety, children's concept of death, care of the dying, ethical decisions, social issues and considerations, near death experiences and the grieving process.

PSY 280   Cognitive Psychology   4(3-1)

Prerequisite: PSY 200. A survey of concepts, theories and research findings regarding cognition. Includes attention, memory, thinking and language; supplementary laboratory activities.

PSY 281   Seminar: Biofeedback   4(3-2)

Advanced study of the phenomenon of biofeedback as applied to conditioning and control of autonomic responses, gaining new understanding of the physiology of emotion and investigating the determinants of emotional change. Emphasis is on developing skills in recording observations and in relating observations to hypotheses with respect to autonomic activity.

PSY 283   Biological Psychology   4(4-0)

Prerequisite: PSY 200 and at least one science course, or PSY 201. Biological Psychology is an integration of physiology, psychology, and several other related disciplines. The course provides an in-depth exploration of the brain and the relation between it and behavior. Specific topics include: sensory processing, learning and memory, sleep and dreaming, and disorders of the brain and behavior.

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 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, and other related issues.

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 African American, Mexican American, Native American and Asian 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.

SA 288   Introduction to the Third World   4(4-0)

An interdisciplinary introduction to the history, society, economy and politics of Third World nations in Asia, Africa and Latin America, with emphasis on dilemmas of economic development, cultural and social dependency, and international sovereignty in an interdependent world. These will be explored through an analysis of specific case studies.

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 Univeristy 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)

Prerequisite: SA 230. Covers the addiction cycle of alcoholics and drug abusers, personality and interactional patterns of addiction and casework and group work techniques.
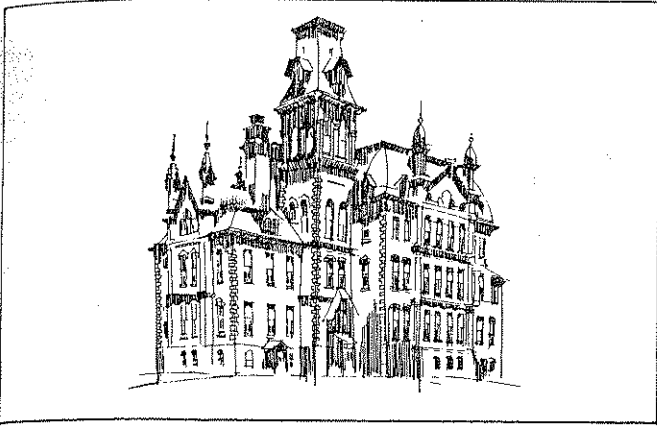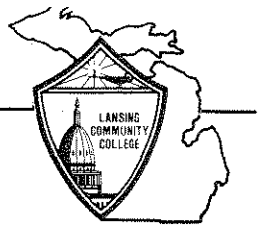
SW 231   Substance Abuse Agencies and Treatment Modalities   3(3-0)

Prerequisite: SA 230. A review and analysis of current models of treatment within programs. Includes review of inpatient, outpatient, halfway houses and occupational programs.
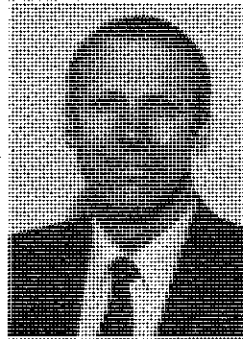
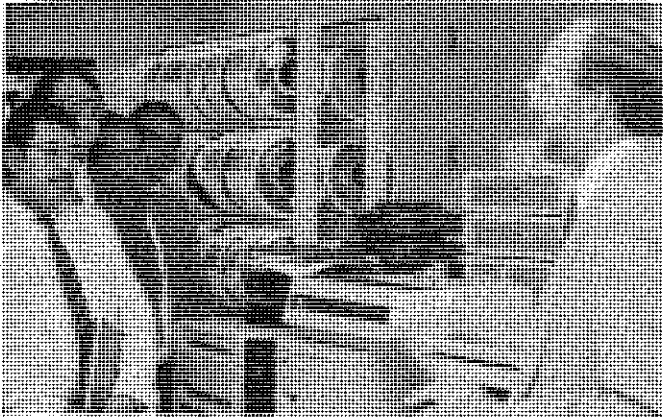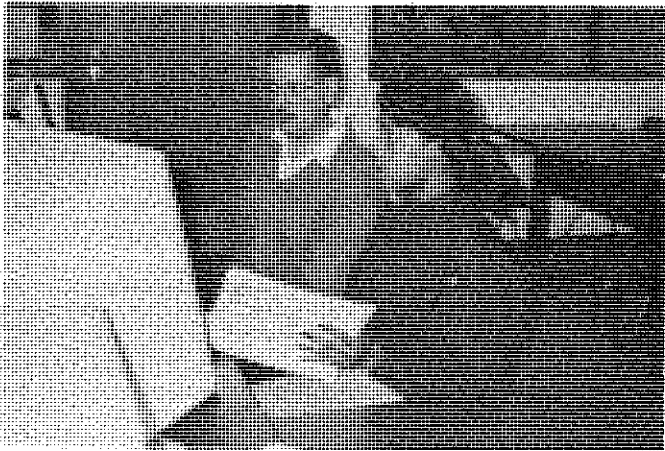**LANSING COMMUNITY COLLEGE**
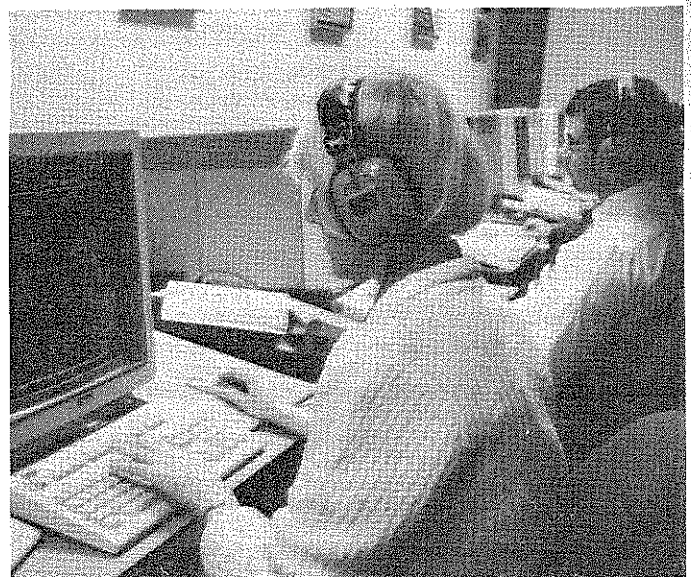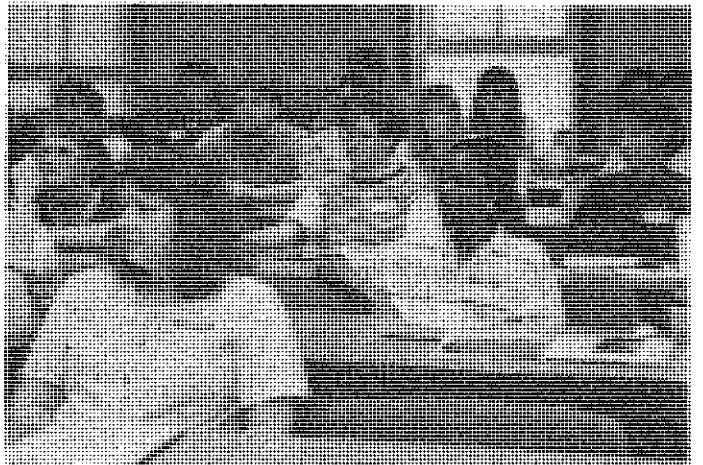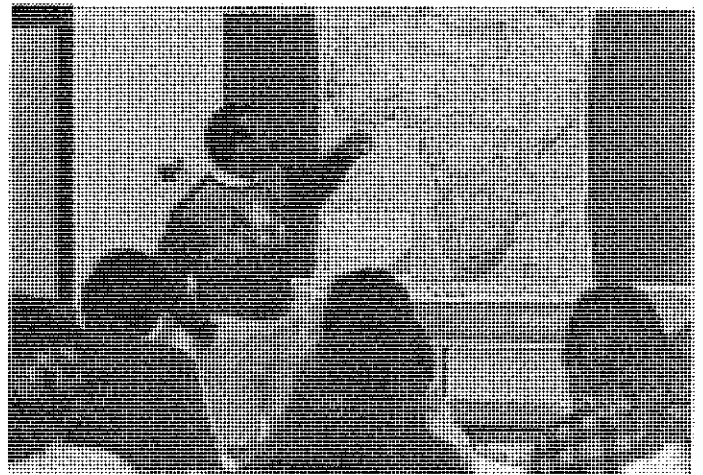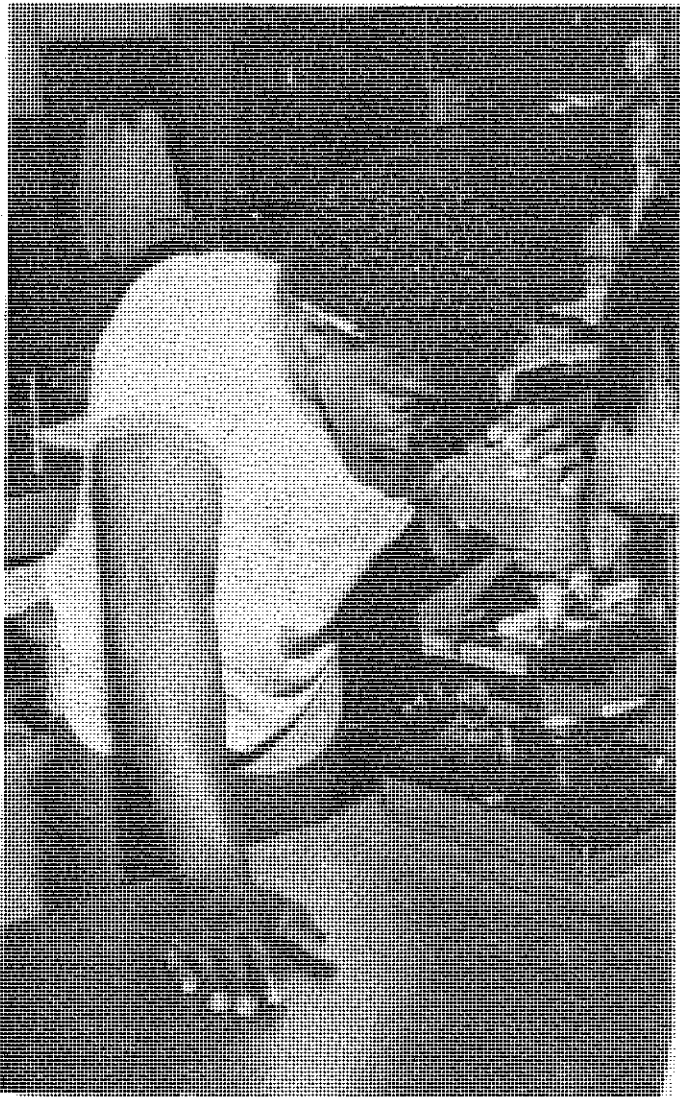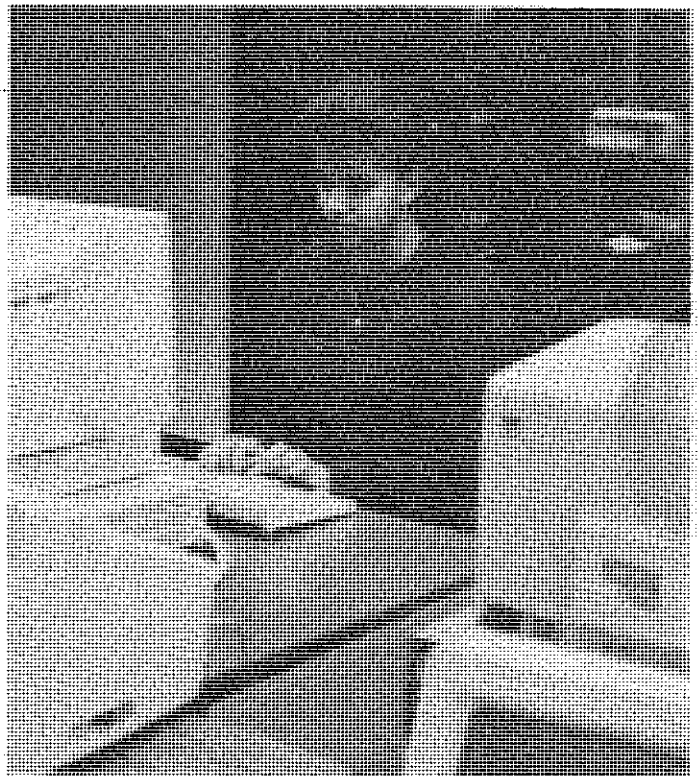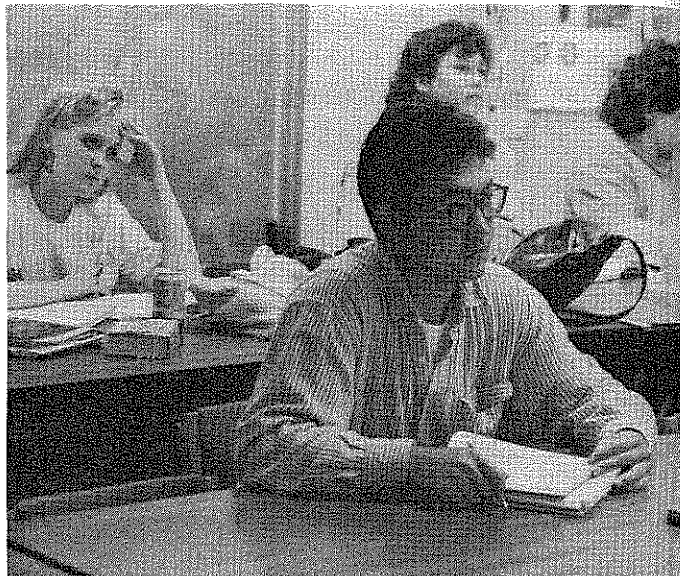
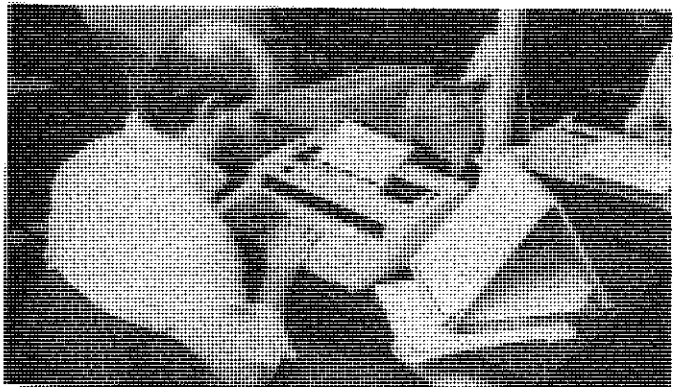## Lansing Community College

Dean James E. Person

DIVISION OF BUSINESS

Department of Accounting and
 Computer Academic Programs
Department of Criminal Justice and Law
Department of Hospitality, Tourism and Travel
Department of Management, Marketing and Economics
Department of Office Administration

DIVISION OF BUSINESS

Dean: James E. Person
210 Old Central Building

The Business Division's programs support the major goals of the College in that the faculty seek 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.

Business Division Program Objectives

To deliver quality education and training, the faculty are committed:

1. To provide pre-professional and career-oriented students with an innovative personalized process of instruction.
2. To maintain constant evaluation and assessment of themselves and their instructional methodologies in terms of student needs.
3. To 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. To 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 upgraded and updated in their chosen field of work, or to (c) prepare them for pursuing further education.
5. To 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. To provide or assure the availability to all students the guidance, counseling and instruction they need to develop self-direction, to expand occupational awareness and aspirations and to develop an understanding of the personal and social significance of work.
7. To 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.

Organization of Resources

To assure the relevancy of its programs, the Division of Business uses 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 business, industry and government, as well as educational institutions and labor organizations for the development and training of their personnel. At the heart of the Business Division programs is the faculty who are committed to new perspectives in their teaching through active partnerships with government agencies, business and industry. In the delivery of education and training the Division uses efficient, up-to-date instructional methods, applications and equipment.

Major Programs and Occupational/Career Fields in Business

The following list includes the names of representative 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	International Business
Accounting/Data Processing	Labor Relations/Personnel
Administrative Assistant	Law Enforcement
Banking	Legal Assistant
Computer Applications Systems	Legal Secretary
Computer Operations	Management
Computer Programming	Marketing and Sales
Computer Software Systems	Medical Secretary
Computer Systems Analyst	Medical Transcriptionist
Corrections	Property Assessment
Court Administrator	Real Estate
Court Reporting	Registered Chef
Credit Union Operations	Secretary
Data Entry	Security
Financial Planner	Small Business Management
Food Specialist	Stenographer
General Clerical	Transportation Management
Hotel-Motel Management	Travel Agency
Insurance	Word Processing

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 listed above, 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 customize 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 individuals to be served.

DEPARTMENT OF ACCOUNTING AND COMPUTER ACADEMIC PROGRAMS

Director: Charles F. Parker
137 Old Central Building

The Department of Accounting and Computer Academic Programs strives to provide the student with an opportunity to develop marketable 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 by students, faculty, administrators, professional organizations and industry advisory committees. Most of the faculty are full-time career professionals in the subject area they teach. This assures the student of access to an up-to-date and relevant orientation to the information and concepts under study.

The instructional methods of Accounting and Computer Academic Programs recognize the mixture of varying experience, commitment, and educational needs of students within the community. Both traditional and alternative delivery systems are available for the courses in most demand. Alternative delivery systems allow greater schedule flexibility, and utilize techniques such as Computer Assisted Instruction (CAI), Audio-Visual-Tutorial (AVT), telecourse broadcasts and self-study course materials.

Students desiring to enroll in courses offered by the Department of Accounting and Computer Academic Programs area will find the courses identified as follows:

ACC:	Accounting
CAB:	Computer Applications for Business
CAS:	Computer Applications Systems
CLU:	Certified Life Underwriter
CU:	Credit Union
INS:	Insurance

Accounting

As society grows larger and more complex, the need for qualified people in accounting and finance continues to increase in all organizations, whether private, public or governmental. Due to this reliable growth in the number of new positions in the field, the job outlook for occupations produced by the U.S. Department of Labor projects that accountants, auditors, actuaries and financial occupations will have much better-than-average prospects for employment through at least 1995. In addition, accounting and finance positions will be among the top occupations for average expected starting salaries. The Associate Degree has become a preferred job entry ticket, and Lansing Community College has curricula targeting several of these fast-growing occupations.

Many professionals realize that sound decision making often depends on proper understanding and analysis of financial reports. In addition to the preparation for the many career positions in accounting, the College provides a variety of professional development opportunities for people wanting to take occasional courses or seminars rather than following a particular curriculum. This service extends to also providing Continuing Education Units (CEU's) and assistance in preparation for professional exams, such as: Certified Public Accountant (CPA) and Accreditation Certificate in Accountancy (ACA).

Computer Academic Programs

Experts predict that the demand for computer professionals in business will expand by 4.5 to 5 percent each year through 1995. That growth means new career opportunities both for those starting their first career and for those changing careers. This growth is in a profession that provides a comfortable work environment, commensurate compensation, stimulating challenges and the opportunity for varied experience and personal growth paced by changes in technology.

The computer information systems field encompasses a variety of occupations that center around the use of computers. The goal of professionals in this field is to electronically transform raw data into usable information. Computers can now be found in the home and car, as well as in business, industry, government and education. Challenging positions are available for people who can write well, think logically, and solve problems.

Curricular Guides

General curricular guides for each curriculum offered by Department of Accounting and Computer Academic Programs are available in the counseling offices and the Director's office; however, guides can be 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 Computer Academic Programs.

LANSING COMMUNITY COLLEGE

Accounting Certificate

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. (Curriculum Code 405)

Accounting Associate Degree

The two-year (90 credit) accounting curriculum offers preparation in accounting and financial information to meet the needs of modern business and industry. Accounting is the language of business. It provides for 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 curriculum will provide the student with sufficient skill and knowledge to meet entrance requirements of business and to progress through many levels of accounting positions. (Curriculum Code 410)

Accounting/Data Processing

The accounting/data processing curriculum offers the opportunity to have two full majors, one in accounting and one in data processing. Students are encouraged to initially seek either curricula 408 or 410, then use this curriculum as a second degree for training. This provides the student with a great amount of flexibility in a rapidly changing business environment. (Curriculum Code 411)

Applications Programmer

An Associate Degree curriculum is designed for people planning to work as 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. New students are encouraged to follow the Programmer/Analyst (408) curriculum instead. (Curriculum Code 450)

Computer Operations Management

An Associate Degree curriculum designed for people who aspire to supervisory positions in the computer operations area. After earning the computer operator certificate (453), 45 additional credits are required for this Associate Degree. Ideally, a graduate from the certificate program should gain work experience as a computer operator while pursuing the Associate Degree. (Curriculum Code 486)

Computer Operator

Certificate curriculum intended for people planning to become computer operators. Included are basic data processing courses as well as some specialized topics relating specifically to computer operations. Can lead into Computer Operations Management (486) Associate Degree. (Curriculum Code 453)

Computer Security and Controls

Associate Degree curriculum which covers fundamentals and techniques in both accounting and data processing. This curriculum is designed for auditors already degreed in accounting but needing to obtain credentials in the computer area. (Curriculum Code 488)

C.P.A. Exam Preparation

An Associate Degree curriculum designed for those people who have already completed a Bachelor's degree, and who are making a career change into public accounting. This program of study prepares the student to meet the requirements of the State licensing board to sit for the C.P.A. (Certified Public Accountant) exam. It is also intended to provide adequate knowledge of the topics covered on the C.P.A. exam.

General Pre-Accounting

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. (Curriculum Code 412)

Microcomputer Systems

This Associate Degree program is useful for those who wish to become microcomputer specialists, microcomputer consultants or information center staff. (Curriculum Code 489)

Microcomputer Systems Certificate

This certificate program helps someone responsible for applications development using typical microcomputer programs. The curriculum can lead into Microcomputer System (489) Associate Degree program. It is ideal for someone who needs to acquire microcomputer skills for a current job. (Curriculum Code 454)

Programmer/Analyst

This Associate Degree curriculum combines skills in business application programming and systems analysis. In addition to the four to five business programming languages, the student will develop analytical and communication skills necessary for data processing positions. The 408 and 450 curricula are similar. The 408 is designed for students graduating in the mid 1990s who will need more analysis and communication skills. (Curriculum Code 408)

Systems Analysis

The Systems Analysis Program is 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. (Curriculum Code 487)

COURSE DESCRIPTIONS

Accounting (ACC)
Department of Accounting and Computer Academic Programs
Division of Business

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. 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 4(4-0)
Prerequisite: MTH 009 or equivalent. 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, data flow, property and equipment asset disposals, natural resources and intangible assets.

ACC 211   Principles of Accounting II (AVT Available) 4(4-0)
Prerequisite: GPA of 2.0 in ACC 210 and MTH 012 or equivalent. 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 and MTH 102 or equivalent. 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 applications 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: GPA of 2.0 in ACC 220. Topics to be covered in this course include inventories, operational assets and stockholders equity.

ACC 222   Intermediate Accounting III 4(4-0)
Prerequisite: GPA of 2.0 in ACC 221. This course is a continuation of Accounting 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 emphasize 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 usa 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 covers aspects of the federal income taxes pertaining to individuals. Topics include gross income, adjustments to 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 included are partnerships, subchapter S corporations, estates and trusts.

ACC 245   Accounting Internship   3(3-0)

Prerequisite: Department approval. Approval for an Accounting internship is based on the successful completion of basic Accounting courses. Placement in an approved training station to earn credits for satisfactory work performance and earn wages for hours of work. Occupational interest and background considered with related classes to determine employment arrangements.

ACC 250   Advanced Accounting   4(4-0)

Prerequisite: ACC 221. 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 260   Microcomputer Accounting Systems   4(4-0)

Prerequisite: ACC 211. 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 261   Accounting with Lotus/dBase   4(4-0)

Prerequisite: ACC 212. This course is designed to teach the use of microcomputers as tools in solving accounting problems. Lotus 1-2-3 and dBase III will be the primary software taught. Familiarity with computers is not necessary but students are expected to be knowledgeable of the accounting topics taught in Principles III.

ACC 266   Independent Study/Accounting   1(1-0)

Prerequisite: Department approval. Requires 20 to 30 hours to study on topics not available through regular Accounting 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 included are financial analysis, forecasting and leverage, working capital management, risk, cost of capital, capital markets, long-term debt, stocks and dividend policy, convertibles, mergers and international finance.

ACC 275   Financial Decision Simulation Game   4(4-0)

Prerequisite: ACC 212. This course is an educational game in which participants make decisions which affect their simulated company. Lectures cover various financial topics, particularly those which help the student manage the finances of his or her imaginary company.

ACC 280   Governmental Accounting   4(4-0)

Prerequisite: ACC 212 or Department 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 280. 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 Department 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. (Certified Public Accountant) review courses are offered beginning the end of August each year. These courses are designed to prepare candidates for the Uniform Certified Public Accounting Examination. Past candidates who participated in the Lansing Community College 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)

Computer Applications for Business (CAB)
Department of Accounting and Computer Academic Programs
Division of Business

CAB 010   Introduction to DOS   .75(.75-0)

A one day workshop dealing with basic and intermediate DOS commands and related DOS topics including: file naming conventions, use of globals, batch files and hard disk management.

CAB 014   WordPerfect - Formatting/Editing   .75(.75-0)

Prerequisite: Keyboard familiarity. This seminar is designed to provide basic competency in the use of the WordPerfect word processing program. This is accomplished by hands-on use of the program with instructor supervision. Basic editing and formatting capabilities are included in the topics.

CAB 023   Lotus 1-2-3 - Spreadsheet Basics   .75(.75-0)

A one day workshop designed to provide basic competency in the use of the Lotus 1-2-3 program. It deals with the basics of Lotus 1-2-3 through hands-on experience and some advanced features by means of a tutorial.

CAB 102   Business Microcomputers for Non-Majors   3(3-0)

This course surveys the concepts and uses in business of software programs. Terminology, problem-solving and acquisition factors associated with personal computers are introduced. Those with little or no computer experience enjoy this course because it starts at a basic level, progresses carefully and has a modest amount of outside work. Students learn through hands-on activity with word processing, data base and spreadsheet programs. P-Z graded.

CAB 111   WordStar   2(2-0)

Prerequisite: Keyboard familiarity. Beginner level instruction provides training on the most commonly used functions of the WordStar word processing program. The successful student will develop basic operational proficiency. Topics include editing and formatting text, blocks, print enhancements, line draw, columns and merge documents. Uses version 5.5.

CAB 113   Multimate   2(2-0)

Prerequisite: Keyboard familiarity. Beginner level instruction provides training on the most commonly used functions of the Multimate Advantage word processing program. This successful student will develop basic operational proficiency. Topics include editing and formatting text, tables, columns, library documents, merge documents, mailing lists and key procedures. Uses Multimate Advantage II.

CAB 114   WordPerfect - Beginning   2(2-0)

Prerequisite: Keyboard familiarity. Beginner level instruction provides training on the fundamental and most commonly used functions of the WordPerfect word processing program. The successful student will develop basic operational proficiency and become aware of the potential of WordPerfect's advanced word processing functions. Hands-on activity encourages developing uses for WordPerfect at work or home. Topics include creating documents, editing, printing, text formatting, manipulating text blocks, using the speller and thesaurus, managing files, preparing mail labels, creating and maintaining lists for merging and merging lists with documents. Uses version 5.1.

CAB 116   WordPerfect - Advanced   2(2-0)

Prerequisite: CAB 114 or CAS 104. This course provides hands-on experience with the advanced features of WordPerfect. Topics include math functions, macros, search, replace, advanced formatting, reference lists (index, table of contents), footnotes and endnotes, multi-column documents, boxes, graphics and desktop publishing techniques. Uses version 5.1.

CAB 117 WordPerfect Advanced Formatting and Composition 2(2-0)

Prerequisite: CAB 114 or CAS 104. This course instructs microcomputer users on how to design, edit and produce high-quality printed documents using WordPerfect 5.1. Hands-on activities will result in the production of letters, newsletters, brochures, flyers and other similar documents.

CAB 118 Microsoft Word 2(2-0)

Prerequisite: Keyboard familiarity. Beginner level instruction provides training on the fundamental and most commonly used functions of the Microsoft Word processing program. The successful student will develop basic operational proficiency and become aware of the potential of Word's advanced word processing functions. Topics include formatting and editing, search and replace, speller, thesaurus, headers and footers and print enhancements. Uses Word version 5.

CAB 121 Lotus 1-2-3 Self-Learning 2(0-4)

An introduction to using the Lotus 1-2-3 spreadsheet, graphics, and data base program. The successful student learns how to create and refine spreadsheets, produce graphs and reports and search and sort data bases by viewing videotape segments and performing exercises. This course does not have traditional classroom sessions. The student must view the tape segments in the computer lab. Uses release 2. P-Z graded.

CAB 123 Lotus 1-2-3 2(2-0)

Provides the student with a working knowledge of this spreadsheet program and enables the student to apply Lotus to routine business situations. The course topics include: spreadsheet navigation, basic functions, spreadsheet formatting, formulas and special functions, data fills, move function, copy function, ranges, cell protection, introduction to graphs, introduction to data base functions, and introduction to macros. Release 2.2 is used, but teachings also apply to release 3.0 of the program.

CAB 124 Advanced Lotus 1-2-3, Release 2.2 2(2-0)

Prerequisite: CAB 123 or equivalent. The course provides reinforcement of Lotus 1-2-3 basic skills. The focus then moves to the advanced topics which include: macros, data management, graphs and charts, data tables, user-defined menus and custom help screens. Release 2.2 is used.

CAB 125 Advanced Lotus 1-2-3, Version 3 2(2-0)

Prerequisite: CAB 123. Advanced level training in Lotus 1-2-3. The course will expand the skills learned in the basic Lotus 1-2-3 course, and introduce students to the new functions and commands found in Release 3.

CAB 126 Excel 2(2-0)

Beginner level training in the creation of spreadsheets and data bases using the Microsoft Excel program. The instruction includes the manipulation and generation of reports, tables and graphs. Also included is instruction in file handling, disk management and macro creation and use.

CAB 130 dBASE for Non-Majors - Query Mode 3(3-0)

This course is designed for the person who uses an existing dBASE program or who needs to develop a simple data base. Students learn how to create data base structures, enter and edit data, manipulate the data and prepare printed reports. The programming mode is not addressed in this course. Uses dBASE IV.

CAB 133 dBASE Systems 4(4-0)

Prerequisite: Keyboarding and DOS familiarity. This course teaches how to develop an application system using the dBASE data base management program. About one-quarter of the course is used to learn dBASE commands and functions. The remainder of the course develops and practices programming concepts needed to develop a relational data base application. Topics include creating and maintaining a data base, sorting, indexing, views, programming, multiple files, control breaks, procedures, debugging and system testing. Requires out-of-class lab work.

CAB 136 SQL - 4GL Language 2(2-0)

Prerequisite: Keyboarding and DOS familiarity. This course covers the relational data base language SQL. Topics include table definition, queries, special operators, the join operation, views, security, administration and reports.

CAB 140 Business Graphics 3(3-0)

Prerequisite: Keyboarding and DOS familiarity. This course utilizes the microcomputer system as a business tool. The instruction centers on the presentation of data sets through graphic representations. Students learn how to select, modify and create the appropriate charts and graphs. Uses Harvard Graphics program.

CAB 171 Symphony 3(3-0)

Hands-on training for Lotus Symphony spreadsheet, business graphics, data base manager and word processor. The communications feature is discussed. Knowledge of Lotus 1-2-3 is not assumed. Uses version 2.

CAB 182 Desktop Publishing Techniques 3(3-0)

Prerequisite: CAB 195 concurrently or equivalent experience; knowledge of DOS. Instruction shows how to design, edit and produce high-quality printed communications within a business setting. Hands-on activities produce near-typeset quality output at a fraction of the time and expense required by conventional document production techniques. Students learn how to use the PageMaker program.

CAB 183 Desktop Publishing Applications 3(3-0)

Prerequisite: CAB 182 or equivalent experience. Advanced instruction in how to design, edit and produce high-quality printed communications within a business setting. Hands-on activities result in the production of sophisticated document output using desktop publishing tools and techniques. PageMaker is the program used in this course.

CAB 191 Using DOS 2(2-0)

This course offers instruction in basic and intermediate DOS commands, and in DOS related topics such as: file naming conventions, wildcard file name characters, batch files, DOS device names and hard disk management.

CAB 195 Microsoft Windows 2(2-0)

This course offers instruction in the use of Microsoft Windows, version 3.0. Students will learn how to run microcomputer applications in the windows environment, and how to use the tools and desktop applications that are a part of this operating system.

CAB 311 Educational Computer Applications I 3(3-0)

Overview of educational computer potential of microcomputers. Topics include introduction to BASIC, computer literacy, software evaluation and review and interactive media in computer education. Graded on a P-Z basis only.

Computer Applications Systems (CAS)
Department of Accounting and Computer Academic Programs
Division of Business

CAS 100 Introduction to Data Processing 4(4-0)

This course surveys concepts of computer systems and their applications. Hardware concepts include computer operations, the central processing unit, auxiliary storage, and input and output. The processes of information design and development are introduced. Software applications are surveyed. Trends are examined. Hands-on computer usage is not included.

CAS 104 Microcomputers for Business 4(4-0)

Prerequisite: Keyboarding familiarity. This course examines the microcomputer system as a business tool and is aimed at students in various degree programs. The course examines five major areas: word processing, spreadsheets, data bases, communications and graphics. Application software used to learn these concepts are WordPerfect, Twin (a Lotus 1-2-3 look-alike), and dBASE III Plus. Extensive hands-on activity and lab exercises.

CAB 106 Computerized Information Systems 4(4-0)

The main goal of this course is to provide future managers with an understanding of how the computer can be used in solving management problems. The course helps students identify those within a business organization who are charged with problem-solving responsibilities. A limited amount of computer lab activities will also give the students an appreciation of problem solving tools.

CAS 111 Forms Design and Control 3(3-0)

This course covers form processing from the initial phase of recognizing that a form is needed through the utilization of the form. Includes layout of items by importance, design of margins and print spacing, grades of paper, reproduction and binding and forms processing by users.

CAS 121 Data Processing Math and Logic 5(5-0)

Prerequisite: MTH 012 or equivalent. Designed to be taken concurrently with CAS 151. Introduces many tools used by data processing professionals for problem solving and implementation. Topics include: Algorithms, flowcharts, Warnier diagrams, sorting techniques, symbolic logic, truth tables, decision tables and binary, octal and hexadecimal number systems.

CAS 131 Business Communications Technology 3(3-0)

This course presents telecommunications technology in the perspective of business use. It provides a non-technical framework to understand and effectively use the latest technology. Subject areas include telephone systems and computer communications systems. Applications explored include on-line data base, FAX systems and computer networks.

CAS 134 Documentation 4(4-0)

Prerequisite: CAS 121 and CAS 151. This course categorizes and reviews documentation tools used in the computer profession, both at the systems and programming level.

CAS 137 Introduction to Operations   4(4-0)

Prerequisite: CAS 100. The functions and responsibilities of the computer operator are covered, including machine maintenance, console response and malfunction recovery.

CAS 151 Business BASIC I   4(4-0)

Prerequisite: MTH 012 or equivalent. This course is designed to be taken concurrently with CAS 121. A first course in computer programming for computer programming majors or others wanting an intensive introduction to problem-solving techniques using the BASIC programming language. Includes topics from introduction through string functions, sequential disk data files, sorting, table searching and two-dimensional arrays.

CAS 152 Business BASIC II   4(4-0)

Prerequisite: CAS 121 and CAS 151. Completes the coverage of BASIC language, including random access disk files, graphics and machine considerations. Uses QuickBASIC.

CAS 153 Business BASIC III   4(4-0)

Prerequisite: CAS 152. Uses BASIC language to write a system of business applications programs on a microcomputer. Effective disk file usage and data structures are emphasized.

CAS 161 Beginning RPGII   4(4-0)

Prerequisite: CAS 121 and CAS 151. Students learn the RPGII language. Topics include problem definitions, card procedures, control levels and multiple-record files.

CAS 162 Advanced RPGII   4(4-0)

Prerequisite: CAS 161. Concepts and syntax from CAS 161 are reinforced with additional practice. Students learn to design and implement systems in a team environment.

CAS 171 COBOL I   4(4-0)

Prerequisite: CAS 121 and CAS 151. Basic components of the COBOL language applied to write efficient programs.

CAS 172 COBOL II   4(4-0)

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 and creating and using ISAM files.

CAS 173 COBOL III   4(4-0)

Prerequisite: CAS 172 and CAS 261. A project-oriented class in which the student analyzes and programs a complete business system. Topics include interactive programs, indexed files, file creating and updating and report generating.

CAS 181 Assembly I   4(4-0)

Prerequisite: CAS 121 and CAS 151. Introduces machine language concepts and the basic assembly language instructions for the IBM System/370.

CAS 182 Assembly II   4(4-0)

Prerequisite: CAS 181. Includes scanning records for data, extracting variable length data from records, validation of data, extended addressability, multiple base registers, subprogram communication conventions, linked lists and macro writing.

CAS 187 Micro Assembler   4(4-0)

Prerequisite: CAS 152. Inter-relationship between BASIC and the 8088 micro assembler. Includes interrupt routines and I/O routines.

CAS 189 Pascal   4(4-0)

Prerequisite: CAS 121 and CAS 151. Write structured programs in Pascal. Covers queues, stacks, linked-lists, disk files and real-time simulations.

CAS 190 C Programming Language   4(4-0)

Prerequisite: CAS 189. Students will use professional development tools, including a debugger, to become familiar with the "C" programming language by designing, implementing and testing programming projects.

CAS 201 Information System Auditing   4(4-0)

Prerequisite: CAS 100. This course is designed as an introduction to the types of security and control that can be exercised over computerized applications. This course should be most beneficial to students entering into data processing, accounting, business and management professions.

CAS 225 Artificial Intelligence with
    Expert System Development   4(4-0)

Prerequisite: CAS 121 and CAS 151. Introduction to problems and techniques of artificial intelligence. Includes problem-solving strategies, knowledge representation and hands-on development of expert systems using a expert system development tool (shell) such as Level 5 or VP-Expert.

CAS 231 Data Communications   4(4-0)

Prerequisite: CAS 121 and CAS 151. Includes general terminology, hardware and software, basic steps in designing a teleprocessing system.

CAS 241 Operating Systems   4(4-0)

Prerequisite: CAS 181. What operating systems are, why they exist, how they work and how they interface with the operators and programmers.

CAS 251 Data Base Concepts   4(4-0)

Prerequisite: CAS 172. 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.

CAS 256 Data Structures   4(4-0)

Prerequisite: CAS 189. This course will give the student the study experience of finding alternative ways to solve and implement program solutions to problems. They will learn the development of an understanding of the use of abstraction in problem solving through use of Pascal code, comparisons of algorithmic and implementation variations and generalized algorithms for traversing a data structure.

CAS 261 Systems Analysis and Design   4(4-0)

Prerequisite: CAS 171 or CAS 152 or CAS 161. This course assumes a background in general data processing concepts (CAS 100), and a programming course utilizing extensive file handling and structured programming techniques. A systems analysis life cycle is used to present detailed techniques of systems analysis and high level concepts of systems design. Verbal and written communication skills are needed by an analyst and will be emphasized by a class project and other class activities.

CAS 262 Systems Design and Implementation   4(4-0)

Prerequisite: CAS 261. This course continues the design concepts presented in CAS 261 by presenting design techniques at a detailed level. The course assumes a background of COBOL I (CAS 171) and CAS 261. Phase 3 (detailed design and implementation) of a five phase systems life cycle is emphasized. Phases 4 and 5 (installation and review) are summarized. Verbal and written communications will continua to be emphasized.

CAS 263 Business Systems Design   4(4-0)

Prerequisite: CAS 172 and CAS 262. This course relies on the concepts and techniques learned in CAS 261 and CAS 262 to complete a simulated business application project. Techniques of project management are emphasized and applied to a student project team. The project team will complete the steps in the systems development life cycle in completing the course project. Continued emphasis will be placed on verbal and written communications.

CAS 275 Microcomputer Project   4(4-0)

Prerequisite: CAS 153. Design, document, code, debug and implement microcomputer software system project.

CAS 276 Microcomputer Project Extension   4(4-0)

Prerequisite: Department approval. Extension of CAS 275 when the microcomputer project is more ambitious.

CAS 281 Operations Internship I   3(3-0)

Prerequisite: Department approval. The first of a two-term internship designed exclusively for the Computer Operator Certificate of Achievement. (curriculum 453)

CAS 282 Operations Internship II   3(3-0)

Prerequisite: Department approval. Additional experience through 100 more hours of on-the-job experience at a different data processing site.

CAS 291 Programming Internship   5(5-0)

Prerequisite: Department 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.

CAS 861 CDP Specialty Exam Review   .5(.5-0)

Review session for the Certified Data Processor (CDP) exam which concentrates on management topics.

CAS 862 CSP Specialty Exam Review   .5(.5-0)

Review session for the Certified Systems Professional (CSP) specialty exam which concentrates on systems development topics.

CAS 863 CCP Specialty Exam Review   .5(.5-0)

Review session for the Certified Computer Programmer (CCP) specialty exam which concentrates on procedural programming topics.

LANSING COMMUNITY COLLEGE

CAS 865   ICCP Core Exam Review I .5(.5-0)

Overview of the two sections covered in the Institution for Certification of Computer Professionals (ICCP) core exam for CDP, CSP, and CCP applicants which concentrates on human and organization framework and associated disciplines.

CAS 866   ICCP Core Exam Review II .5(.5-0)

Overview of the two sections covered in the Institution for Certification of Computer Professionals (ICCP) core exam for CDP, CSP, and CCP applicants which concentrates on systems concepts and systems development.

CAS 867   ICCP Core Exam Review III .5(.5-0)

Overview of the two sections covered in the Institution for Certification of Computer Professionals (ICCP) core exam for CDP, CSP, and CCP applicants which concentrates on data, information and technology.

Certified Life Underwriter (CLU)
Department of Accounting and Computer Academic Programs
Division of Business

CLU 320   Introduction to Financial Planning 3(3-0)

Prerequisite: Department approval. The course will focus on the fundamentals of "Introduction to Financial Planning." The assignments cover the needs, professions, communications, information collecting, preparing and using financial statements, the value of money, income statements, the regulation of financial service professionals and how to work with other financial professionals.

Credit Union (CU)
Department of Accounting and Computer Academic Programs
Division of Business

CU 102   Credit Union Accounting 3(3-0)

Emphasis is on those areas of financial accounting relevant to external reporting by credit unions. Topical areas include: accounting principles, basic accounting cycle and financial statements, analysis of revenue and expense, analysis of asset, liability and equity accounts, preparation of financial statements and present value concepts.

CU 202   Risk Management 3(3-0)

This course familiarizes the student with the risk management process: identification; measurement and evaluation; and control and financing. The course is designed to help participants prepare for the Certified Credit Union Executive program (CCUE) examination.

Insurance (INS)
Department of Accounting and Computer Academic Programs
Division of Business

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.

DEPARTMENT OF CRIMINAL JUSTICE AND LAW

Director: Jane P. White
C. F. Pegg Center for Criminal Justice and Law
224 Old Central Building

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 agencies that encompass the legal system. Agencies include the police, courts and correctional organizations, security operations and probation and parole.

The Law Program centers primarily on the civil issues and procedures used in society. This also includes specific law classes for the Legal Assistant Program.

The Department of Criminal Justice and Law curricula are designed to prepare men and women for entering a variety of occupations such as law enforcement, corrections, juvenile work, parole and probation supervision, security operations, legal assistant, management and administration. The curricula are designed to provide the student with a general background concerning criminal justice or law prior to their entering the specialized and practical aspects of a particular occupation.

Continuing education is offered for the practitioner in a variety of areas. The Criminal Justice and Law Center presents in-service training for departments and agencies on an on-going basis. Specialized content can be designed for agencies.

Students desiring to enroll in courses offered by the Department of Criminal Justice and Law will find the courses identified as follows:

CJ: Criminal Justice
LAW: Law

Curricular guides for each curriculum offered by the Department of Criminal Justice and Law are available in the counseling offices and the Director's office; however, these guides may be modified to accommodate an individual student's background, goals and abilities. The student is encouraged to discuss unique situations with an academic advisor in the Criminal Justice and Law Center.

Corrections Administration

An Associate Degree 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. (Curriculum Code 465)

Corrections Officer Certificate of Completion

The Corrections Officers Training Act of 1982 mandates that 23 term credits of specific courses must be obtained for entry level into state and local correctional officer positions. The Vocational Correctional Officers Training Certificate is issued by the Center for those who successfully achieve a 2.0 grade point in each class. This training certificate is approved by the Michigan Correctional Officer's Training Council. (Curriculum Code 464)

Criminal Justice

Two different options are available for the student: Associate Degree or the Associate Degree for transfer to a four-year institution. These career degrees allow the student to focus on criminal justice with potential employment in a police agency. (Curriculum Code 460 and 461)

Criminal Justice—Natural Resources Officer Option

An Associate Degree for those students seeking employment in the Michigan Department of Natural Resources. Option to transfer to a four-year institution. (Curriculum Code 463)

Legal Assistant

An Associate Degree curriculum designed for those who choose a paraprofessional career assisting attorneys ranging from office management to preparing case materials. The majority of the graduates will seek employment with law 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 background in legal processes and procedures. Elective choices to attain individual goals are available. This curriculum has American Bar Association accreditation. (Curriculum Code 442)

Legal Assistant/Paralegal Post-Baccalaureate Certificate

A certificate for students who have already earned a Bachelor's Degree from an accredited four-year college or university. This allows the student to choose a shorter curriculum consisting solely of law classes which can be completed in a minimum of nine months. This curriculum has American Bar Association accreditation. (Curriculum Code 443)

Mid-Michigan Police Academy

An Associate Degree curriculum which allows a student to apply to the Police Academy at Lansing Community College towards the end of this two-year program. Michigan Law Enforcement Officers 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, 14 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. The Police Academy is approved by the Michigan Law Enforcement Training Council. (Curriculum Code 460)

Security Administration Program

An Associate Degree program 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 theft prevention and security maintenance 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. (Curriculum Code 469)

COURSE DESCRIPTIONS

Criminal Justice (CJ)
Department of Criminal Justice and Law
Division of Business

(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: 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: 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: 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)
Prerequisite: CJ 101 or CJ 130 or CJ 150. Explores the issue of men and women working together in 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. This course is part of the Correctional Officer Vocational Certificate. (COR 111)

CJ 131   Legal Issues in Corrections   4(4-0)
Prerequisite: CJ 130 or Department approval. 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. This course is part of the Correctional Officer Vocational Certificate. (COR 113)

CJ 133   Juveniles in Corrections   3(3-0)
Prerequisite: CJ 101 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 134   Probation and Parole   3(3-0)
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 and probation and parole violation reports. The history and theory of probation and parole.

CJ 135   Correction Officer   3(3-0)
Designed to explain the role of a correctional officer. Covers the actual duties and responsibilities of an officer. It will help develop the essential skills in the correctional context to establish the base for a career in corrections. True depiction of the job of a correctional officer will be presented. This course is part of the Correctional Officer Vocational Certificate.

CJ 150   Introduction to Security   4(4-0)
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)
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   4(4-0)
Prerequisite: CJ 150. 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 160   Dispatcher/Telecommunicator I   4(4-0)
An introduction to the history and role of the telecommunicator and equipment systems utilized in dispatching. This course is specifically designed for individuals currently employed as police/fire/medical dispatchers or those seeking a career in this field. Stress management and wellness of telecommunicators is also covered.

CJ 161   Telecommunicator/Dispatcher II   4(4-0)
Prerequisite: CJ 160. This course is designed using the most up-to-date information regarding the history of police/fire/medical services, hazardous material incidents, legal issues, emergency plans and dispatch techniques and regulations. This course is specifically developed for individuals who are currently employed as police/fire/medical dispatchers or who seek a career in this field.

CJ 162   Telecommunicator/Dispatcher III   4(4-0)
Prerequisite: CJ 160 or CJ 161. This course utilizes up-to-date information, practical exercises and simulation exercises pertaining to communication skills, empathy training, telephone techniques and call intake processing. This course is specifically developed for individuals who are currently employed as police/fire/medical dispatchers or who are seeking a career in this field.

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)
Managerial functions including roles and responsibilities of supervising employees in criminal justice agencies and implementing policy and procedures. (LE 202)

CJ 203   Criminal Procedure   4(4-0)
Prerequisite: 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)
Techniques and procedures utilized in successfully interviewing or interrogating; behavioral guidelines; constitutional and court decisions regulating appropriate guidelines. (LE 206)

CJ 208   Organized Criminal Activity   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)
Study of basic patrol operation vital to police and security as a primary function; purposes, methods, types and means as well as deployment methods. Also includes neighborhood patrol concepts. (LE 209)

CJ 211   War On Drugs   3(3-0)
This is a survey course covering the impact of drugs (alcohol and other substances) upon society in terms of work, law enforcement, schools, prevention, treatment, prisons and recovery programs and how it relates to the users, abuser, and addicted persons(s), close family members, associates or co-workers. Attention is given to what a criminal justice worker (probation or parole agent) can do in regard to the war on drugs.

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CJ 215 The Criminal Mind 3(3-0)

An introduction to the working of the criminal mind. Basic concepts of mental functioning will be addressed with emphasis on behavioral motivation in criminal conduct.

CJ 216 Psychology of Sex Offenders 3(3-0)

This course is designed to give students a better understanding relating to the motivation of the sex offender's behavior and the meaning of the sexual offender by personality and/or behavioral characteristics and to understand the importance of team efforts regarding crime scene preservation and integrity as well as profiling of the scene.

CJ 217 Psychology of Homicide 3(3-0)

An introduction to the student to the psychodynamics of homicide and establishment of a basis for understanding the crime scene through the use of behavioral analysis.

CJ 235 Basic Firearms 4(4-0)

Prerequisite: Department 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: Department approval and CJ 235. Intermediate instruction as a transition from bull's eye to field and combat shooting. (LE236)

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 in Criminal Justice 2(2-0)

Prerequisite: CJ 101, CJ 130 or CJ 150. Methods of precise writing techniques; proper documentation or work effort; application of skills in writing exercises.

CJ 248 Physical Fitness for Criminal Justice 3(3-0)

This course is designed to assist the students in developing and enhancing their level of health and physical fitness in order that they may successfully complete certification and re-certification physical fitness criteria established in law enforcement and corrections. The course includes aerobic, strength building and stretching exercises along with nutrition information.

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 dua process rights as well as the future projections of correctional institutions. This course is part of the Correctional Officer Vocational Certificate. (COR 212)

CJ 251 Correctional Clients 4(4-0)

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. This course is part of the Correctional Officer Vocational Certificate. (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 Criminal Justice 4(4-0)

Prerequisite: CJ 101 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. This course is part of the Correctional Officer Vocational Certificate. (COR 227)

CJ 280 Criminal Justice Working Internship 4(0-8)

Prerequisite: Department approval and sophomore status. Working in conjunction with State of Michigan Historical Museum on a paid internship 20 hours per week. Students must be available to participate in two consecutive terms. Reports are required.

CJ 281 Director Independent Study 1(1-0)

Prerequisite: Department approval. Ten hours of course work is assigned per credit. (LE 231)

CJ 282 Director Independent Study 2(2-0)

Prerequisite: Department approval. Ten hours of course work is assigned per credit. (LE 232)

CJ 283 Directed Independent Study 3(3-0)

Prerequisite: Department approval. Ten hours of course work is assigned per credit. (LE 233)

CJ 284 Directed Independent Study 4(4-0)

Prerequisite: Department approval. Ten hours of course work is assigned per credit. (LE 234)

CJ 285 Law Enforcement Internship 3(0-3)

Prerequisite: Department approval and sophomore status. Twelve eight-hour shifts are scheduled with an approved police department. (LE 247)

CJ 286 Criminal Justice Internship 8(0-8)

Prerequisite: Department 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 287 DNR Officer Internship 15(0-15)

Prerequisite: Department 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 office. (LE 248)

CJ 288 Corrections Internship 4(0-4)

Prerequisite: Department approval. Working with a corrections facility, the student is responsible for 15 eight-hour shifts along with report writing requirements. (COR 231)

CJ 289 Corrections Internship 15(0-15)

Prerequisite: Department approval. Working with a corrections facility, the student is responsible for an eight-week, 40 hours per week, assignment. The student is also required to submit written reports. (COR 230)

Law (LAW)
Department of Criminal Justice and Law
Division of Business

LAW 100 You and the Law 3(3-0)

An analysis of landlord-tenant law, debtor-creditor laws, contract relationship, consumer credit, consumer rights and other legal regulations affecting private citizens.

LAW 115 Introduction to Legal Assistant 4(4-0)

Prerequisite: Department approval. An introduction to the role of the legal assistant in the legal system. Includes a survey of paralegal employment and regulation, an introduction to the study of law and legal analysis, the skills of a legal assistant and application to the litigation process, and realities of law practice. Students must attend a Legal Assistant orientation session prior to starting this course, and must achieve a grade of 2.0 or higher in order to enroll in further legal assistant courses.

LAW 120 Legal Research I 4(4-0)

Prerequisite: GPA of 2.0 in LAW 115. Includes research procedures and methods, including problem analysis. It provides in-depth treatment of Federal/or Michigan research publications: practice manuals, encyclopedia, digests, reporters, statues, periodicals, citators, treatises, court rules, administrative publications and others. Research assignments are given using the above-mentioned publications together with constructing citations using the Michigan Uniform Systems of Citations.

LAW 121 Legal Writing 4(4-0)

Prerequisite: LAW 120. 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, pleadings, opinions, client letters and drafting instruments.

LAW 130 Michigan Laws and Court 2(2-0)

Survey course designed to provide an understanding of Michigan's overall judicial system.

LAW 160 Critical Thinking in Law 4(4-0)

This course strongly emphasizes the "Learn by Doing" approach, specifically by utilizing group dynamics. The panorama of thinking skills, particularly those relevant in law and criminal justice will be examined and practiced. Innovative evaluation skills, both personal and group, are a regular dynamic of each session.

LAW 200 Law Office Documents 3(3-0)

This course is designed to familiarize students in the legal secretary curriculum with the variety of legal forms and documents encountered in a law practice. Course will explain the function of the documents and an overview of the legal areas in which the forms are used and will also emphasizes the need for accuracy in completing them. Examples of areas to be covered are probate, real estate, litigation and domestic relations.
NOTE: LAW courses 210, 211, 212, 221, 222, 223, 223 and 225 are designed to view the technical problems of the respective legal areas from the standpoint of the legal assistant.

LAW 210   Litigation (formerly Pre-Trial Procedures) I   4(4-0)

Prerequisite: GPA of 2.0 in LAW 115, LAW 215. In-depth study of pre-trial considerations necessary for litigation, including jurisdiction, venue, statutes of limitations, 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   Litigation II (formerly Trial and Appellate Procedures)   4(4-0)

Prerequisite: LAW 210. 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, voie 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   Litigation Specialties   4(4-0)

Prerequisite: GPA of 2.0 in LAW 115, LAW 215. An overview of specialty areas of law, including drafting of pleadings and related legal instruments. It includes 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)

Covers fundamental principles of our law for business and non-business students, to develop understanding of our legal system (federal, state and local), its purposes and importance in society. Course content includes study of the nature and sources of law, courts and court procedure, torts, crimes, contracts, no-fault auto insurance, landlord-tenant relations, personal property and bailments. Taught in traditional classroom style or via Computer Managed Learning (CML) on self-pace study.

LAW 216   Business Law II   4(4-0)

Prerequisite: LAW 215. The nature of law of sales, commercial paper, security devices, debtor-creditor rights, and insurance. Portions of the Uniform Commercial Code (UCC) are explored in-depth. The UCC topics of sales, bulk sales, commercial paper, banking and secured transactions are included. Taught in traditional classroom style or via Computer Managed Learning (CML) on self-pace study.

LAW 217   Business Law III   4(4-0)

Prerequisite: LAW 215. Commences with agency law, the basic building block of complex business organizations. The legal aspects of sole proprietorships, partnerships and corporations are examined. Government regulation of business, real property, will, trusts and estates are also covered. Taught in traditional classroom style or via Computer Managed Learning (CML) on self-pace study.

LAW 221   Real Estate Transactions   4(4-0)

Prerequisite: GPA of 2.0 in LAW 115, LAW 215. 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: GPA of 2.0 in LAW 115, LAW 215. 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: GPA of 2.0 in LAW 115 and LAW 215. 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. Focuses on the role of the legal assistant in domestic relations matters.

LAW 224   Administrative Law   4(4-0)

Prerequisite: GPA of 2.0 in LAW 115, LAW 215. A study of government agencies and their relationships with private activities and citizens affected thereby. Covers rulemaking, adjudication, licensing and informal action.

LAW 225   Legal Research and Writing II   4(4-0)

Prerequisite: LAW 120 and LAW 121. Reviews: principles of legal research and writing; analysis of facts, problems and legal issues; citations; extensive research assignments in Federal and Michigan publications; drafting legal memoranda, opinion letters and Appellate Brief. Some classes will be held at off-campus libraries.

LAW 226   Legal Interviewing and Investigation   3(3-0)

Prerequisite: LAW 115 and LAW 215. Interviewing and investigation methods including information gathering, analysis and report preparation. Emphasis will be given to the role of the legal assistant in the interviewing and investigation process; numerous class exercises utilizing methods and information will be given.

LAW 227   Bankruptcy and Collections   4(4-0)

Prerequisite: LAW 115 and LAW 215 and LAW 216. An in-depth study of Federal bankruptcy law and procedure; including the different bankruptcy chapters, exemptions (State and Federal), dischargeable debts, preferences, the role of the trustee and preparation of petitions and schedules in bankruptcy. The courses will also cover debt collection law and procedure. Emphasis will be given to the role of the legal assistant in collection information; client interviews and document preparation.

LAW 266   Independent Study/Law   1(1-0)

Prerequisite: Department approval. This special course is available only with program area approval for special projects in law which are not available through regular courses. Requires 20 to 30 hours of independent study. Writing required.

LAW 267   Independent Study/Law   2(2-0)

Prerequisite: Department approval. This special course is available only with program area approval for special projects in law which are not available through regular courses. Requires 40 to 50 hours of independent study. Writing required.

LAW 268   Independent Study/Law   3(3-0)

Prerequisite: Department approval. This special course is available only with program area approval for special projects in law which are not available through regular courses. Requires 60 or more hours of independent study. Writing required.

LAW 280   Legal Assistant Internship   3(3-0)

Prerequisite: Department approval and successful completion of specified courses. Actual on-the-job exposure to the legal assistant career through working in a law office or other legal setting. Work includes actual paralegal tasks. Requires at least 110 hours working at the placement, weekly reports and periodic meetings. Performance is evaluated by supervisor.

DEPARTMENT OF HOSPITALITY, TOURISM AND TRAVEL

Director: Lawrance R. Mackey
102 Old Central Building

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 personnel. Business authorities are predicting an accelerated growth in the hospitality industry in the 1990s.

The programs offered within the Department of Hospitality, Tourism and Travel are designed to prepare the student for a career in hotel-motel management, food service management and tourism and travel agency operations. The student receives a balanced program of academic studies and laboratory experience while being trained for one of these careers.

Hospitality students have access to hotels, motels, food service operations, retirement homes, hospitals, clubs and airline feeding companies where they will receive training in the following career-related positions:

Hotel-motel manager	Airline reservationist
Front office manager	Assistant steward
Catering manager	Dining room supervisor
Assistant auditor	Assistant manager-institutional
Sales representative	Food service hostess
Reservation manager	Director of school lunch programs
Entertainment director	Bartending
Food service management	Club manager
Assistant manager/trainee	Cruise line sales representative
Travel Agent	Tour company representative
Airline ticket agent	

Hospitality, Tourism and Travel offers a two-year (90 credits) Associate Degree with a choice of three curricula in hotel-motel and food service management. Certified Hotel Administrator (CHA) courses are also available, sponsored by the American Hotel-Motel Association. In addition, the Hospitality, Tourism and Travel area offers an Associate Degree (90 credits) in travel and tourism.

Hospitality, Tourism and Travel offers a one-year (45 credits) Certificate of Achievement with a choice of two curricula in hotel-motel and food service management.

Students desiring to enroll in courses offered by the Department of Hospitality, Tourism and Travel will find the courses identified as follows:

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

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Guides for each curriculum offered by Hospitality, Tourism and Travel are available in the Counseling offices and the office of the Director; however, these guides may be modified to accommodate an individual student's background, goals and abilities. Students are advised to discuss unique or unusual situations with an academic advisor within the Hospitality, Tourism and Travel area.

Hotel-Motel and Food Service Management

These curricula are designed to prepare the student for mid-management level positions as supervisory personnel in hotels, motels, restaurants and other hospitality institutions. (Curriculum Codes 455 through 459)

Tourism and Travel Agency Operations

This Associate Degree curriculum is designed to prepare students for careers in the airline 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 materials used in the travel industry. 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. (Curriculum Code 484)

Community Service

Whatever the need, the Department of Hospitality, Tourism and Travel is prepared to offer special classes, seminars and in-service training programs designed to prepare the student for employment, for upgrading or to update employed persons. These special classes may be held at the College or off-campus according to the needs of the client. Instructors and coordinators of special classes include College staff, business people and employers with expert qualifications and experience. Special curricula may include: airline, tourism, travel, hostess and waitress training, front office management, food service management, innkeeping law, internship program and executive housekeeping.

COURSE DESCRIPTIONS

Hotel-Motel and Food Service (HMF)
Department of Hospitality, Tourism and Travel
Division of Business

HMF 101   Introduction to Hospitality and Food Service Operations   4(4-0)
Introduction to the hotel-motel-food service industry explaining the individual roles of the various departments in food service and lodging operations.

HMF 103   Training and Coaching Techniques   4(4-0)
The purpose of the course is to help the student develop supervisory skills needed to train employees; devise economical and efficient work methods; improve day-to-day performance for subordinates through sound coaching techniques, and assist in setting realistic job performance standards.

HMF 104   Dining Room Service   3(3-0)
Increase guest satisfaction and repeat business. Offers in-depth detail for managing every area of food service operations, i.e. dining room, coffee shop, cafeteria, club and banquet facilities.

HMF 105   Hotel and Restaurant Human Resource Management   4(4-0)
This course is a survey of principles and practices for managing human resources in the hospitality industry. Includes such topics as staffing, discipline, hiring, termination and their corresponding rules and regulations.

HMF 131   Food Production I   5(5-0)
The objective of this course is to enable the student to achieve a comprehensive educational foundation in food production management. This course will provide the student with academic theory through class discussions and lectures in addition to practical laboratory experiences emphasizing food preparation, equipment operation and managerial procedures.

HMF 132   Food Production II   4(4-0)
Prerequisite: HMF 131. Students entering this course should have acquired a fundamental working knowledge of terminology and procedure basic to all areas of the food service industry. This course is designed to strengthen students' knowledge in food service management. Emphasis will be placed on the needs of potential managerial personnel as well as established hospitality industry employees in formulating the structure for sound business management in the hospitality field.

HMF 134   Nutrition   3(3-0)
This course is a study of basic nutrition, RDA's, energy balance, weight control, diets and dietary guidelines, food processing, natural and organic foods, and fad and fast foods.

HMF 135   Quantity Food Purchasing   5(5-0)
This course is the study of standards in quality and quantity of food, beverages, china, glass, silver, linen, furnishings and supplies. Also it will cover writing specifications and establishing procurement policies. The menu planning and design phase of the course includes the selection of menu items.

HMF 137   Food Service Catering   5(4-2)
This course is designed to acquaint the student with social catering. The student will learn how to begin a catering business. Emphasis is on: how to buy and how to prepare menus; costing and pricing principles; equipment requirements and equipment maintenance; on/off premise functions; sanitation practices; and contractual agreements. A field project will be required.

HMF 142   Meat Cutting I   5(5-0)
The student will learn the retail cuts of beef and pork and will prepare, process, cut and merchandise each of the cuts for service. The student will learn the basic equipment needed in meat cutting.

HMF 143   Meat Cutting II   5(5-0)
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. A laboratory class.

HMF 144   Meat Cutting III   5(5-0)
The student will cut wholesale cuts of meat identifying them to the class. The student will direct the process of the wholesale cut assigned to them and process and prepare it for freezing, learning the best methods and storage time of each and what is the best cut and grade of beef for home, retail and restaurant use. The student will learn the preparation of various types of sausage, as well as clean, fillet, and prepare fresh fish for cooking and storage. A laboratory class.

HMF 170   Menu Design and Layout   4(4-0)
This course includes the basics in menu planning, analysis and pricing. Menu layout and design fundamentals are covered; and the integration of the menu into the operational aspects of purchasing, production and service is explored. Project required.

HMF 190   Internship and Seminar   4(4-0)
Prerequisite: Each student must complete 400 hours of work experience in the hospitality industry before the Associate Degree will be awarded. Offered to students who have successfully completed basic courses. Allows for the student to be placed in an approved training facility, to earn credits for satisfactory work performance and earn wages for hours worked.

HMF 191   Independent Study-HMF   1(1-0)

HMF 192   Independent Study-HMF   2(2-0)

HMF 193   Independent Study-HMF   3(3-0)

HMF 194   Independent Study-HMF   4(4-0)
Prerequisite: Department approval. Explore a topic or problem of interest through readings, research, etc.; at least 10 hours work per credit.

HMF 200   Food Service Externship   8(8-0)
Prerequisite: Second-year students and Department approval. This program is designed to offer the student an out-of-the classroom and on-the-job work experience. The food program coordinator will assist the student externs in finding a place of employment. The employer agrees to hire and train the student on the job. The employer will also agree to cross-train the extern in several positions. Externs will be expected to write three papers during the work experience, sharing what they have learned. Field experience.

HMF 201   Hotel-Restaurant Merchandising   4(4-0)
Sales promotion and methods used to obtain public recognition. Presents a practical understanding of the operating statement and precisely where, how and why the sales effort fits into the total earning and profit picture of a hospitality operation. Emphasis is on producing business at a profit. It teaches how to measure and gauge accurately the precise worth of every type of business in advance.

HMF 203   Hotel-Restaurant Law   4(4-0)
Creates an awareness of the responsibilities and rights which the law imposes upon and grants to the innkeeper; recognition of potential legal problems as to minimize legal action against the property.

HMF 204   Human Relations/Supervisory Development   4(4-0)
A course covering the role of management in the hospitality industry; specific emphasis on the supervisor's role as a leader, recruiter, trainer and a personnel manager.

HMF 205   Hotel-Restaurant Management   4(4-0)

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.

HMF 206   Front Office Procedures   4(4-0)

Organization, control and operation of the front office in the reservation and sale of rooms, and service. Keeping of accurate accounts, presenting bills and receipts of payment.

HMF 207   Financial Control and Management I   4(4-0)

A systematic, integrated study of hotel-motel and food institutional activities. Principles, problems and practices related to financial management will be presented in a balanced manner with regard to their relative importance in the hospitality industry. Such topics as the nature of financial statements, front office procedures and the interpretation of accounts and statements unique to the hospitality industry will be included in the course of study.

HMF 208   Financial Control and Management II   4(4-0)

Prerequisite: HMF 207. Expands the students accounting knowledge and develops more comprehensive knowledge and skill in accounting practices and procedures for the restaurant and hotel manager. A project is required for a final grade.

HMF 212   Hotel/Restaurant Liability and Loss Prevention   3(3-0)

This course includes organization for a security program, protection of the physical facilities, guest protection, emergencies and internal and departmental security measures.

HMF 213   Energy Management and Control   4(4-0)

Although some course material is geared toward types of energy sources and technical terms, it is presented as a management-oriented class.

HMF 214   Supervisory Housekeeping   4(4-0)

Provides an overview of the fundamentals of housekeeping management. This course describes the management functions, tools and practices required in today's lodging and institutional housekeeping departments.

HMF 215   Hotel-Restaurant Marketing   4(4-0)

As the hospitality industry expands, competition becomes keener; and today's guests come to expect a greater value and specific services. The hospitality industry is, therefore, becoming more specialized and sophisticated. Strategic market planning plays a crucial role as a means of surpassing the competition and of meeting today's guests' needs.

HMF 216   Maintenance and Engineering   4(4-0)

To provide essential technical information in electronics, air conditioning, plumbing, heating, electricity and acoustics; and to establish preventative maintenance routine and to make necessary decisions.

HMF 223   Club Management and Service   4(4-0)

This course is an application of decision-making techniques utilizing concepts of finance, marketing, labor relations, management and law in management of public and private clubs.

HMF 229   Convention Management and Services   4(4-0)

Convention management is an integral part of today's hospitality industry. This course provides insight into convention marketing, salesmanship, detail, execution, communication and management. A comprehensive study of methods and techniques for better service.

HMF 230   Math for Food Service Managers   4(4-0)

A course designed to reinforce the students' understanding and use of the fundamentals of mathematics, specifically oriented to food service management. The course will cover subjects such as addition, subtraction, multiplication, division, fractions, percents, recipe and measurement equivalents and the basics of mathematics in food service operations.

HMF 231   Resort Management   4(4-0)

This course offers various approaches to the operation of resort properties. Beginning with historical development, details are presented in planning, development, financial investment management and marketing that address the unique nature of the resort business. This course also examines the future and the impact of the condominium concept, time sharing, technological changes and the increased cost of energy and transportation.

HMF 232   Food and Labor Cost Control   3(3-0)

This course covers the essential principles and procedures to control food, beverage and labor costs. Sales, income and resources within the food service industry are also analyzed.

HMF 233   Food Service Sanitation   3(3-0)

This course is certified by the State of Michigan and Education Foundation in food sanitation procedures. The class is designed to enlighten the food service manager in such areas as: cleanliness, construction of equipment and facilities, safe food handling procedures and several other aspects concerning kitchen sanitation.

HMF 251   Wine Appreciation   2(2-0)

The student will be familiarized with the five basic types of wine: red, white, rose, sparkling and fortified. The student will be exposed to a short history of wine and how wines are made; a mastery of the presentation and serving of wines; and judging for appearance, bouquet and taste. The class will learn how to choose and store wines for restaurant or retail use, and gain a knowledge of how wine and food are related.

HMF 252   Wines of America   2(2-0)

A survey of the wine growing areas of the United States with emphasis on the varietal selections of California, New York, Michigan and Ohio. A study of wine making, comparative tastings and field trips are used to acquaint the student with the wine industry in America.

HMF 253   Wines of France   2(2-0)

Prerequisite: HMF 251 or HMF 252. An in-depth survey of the major wine growing regions of France. Particular emphasis will be given to the geographical and viticultural tradition which produce the distinctive wines that have given France its world famous reputation for fine table and sparkling wines.

HMF 254   Mixology   5(6-0)

This course provides the student with a mastery of over 150 mixed beverages. It teaches the combination of the arts of efficient mixology and hospitality with control that distinguishes the "Mixologist" from the ordinary bartender. Mixology emphasizes incorporating speed and accuracy.

HMF 260   Gourmet Basic Cookery   3(3-0)

This course is designed to teach the beginning cook correct techniques in pre-planning, preparation, service and clean-up involved in a meal. The student will become familiar with shopping lists, menus, recipes, costing, cooking measuring units and basic nutritional information. Student preparation.

HMF 261   Italian Cookery   3(3-0)

This course covers basic cookery techniques within regional areas of Italy. Local talent and community Italian experts contribute to the culinary bill of fare. Student preparation. (Formerly HMF 291)

HMF 262   Gourmet Foreign Cookery   3(3-0)

This course covers basic cookery using foreign foods from around the world, prepared and tasted by the student. Wine and cheese samplings are also a part of this course. Student preparation.

HMF 263   Gourmet American Cookery   3(3-0)

This course is designed for the working person and explores four great cuisines: Regional American, French, Italian and German. The course will include planning, preparing, costing, serving and eating 10 gourmet meals. This will also include garnishes, soups, sauces, entrees, vegetables and desserts. The proper use of cutlery, kitchen aids, and pots and pans will be explored. Special attention will be provided for budgeted low-cost preparation of restaurant gourmet entrees. Student preparation.

HMF 264   Gourmet Barbecue Cookery   3(3-0)

This spring and summer oriented course explores innovative techniques of preparing food outside. Meat, vegetables, hors d'oeuvres, salads and desserts are prepared throughout the term. Student preparation.

HMF 266   Chinese Cookery   3(3-0)

Chinese cooking is noted for its diversity of taste, texture and aroma. Chinese dishes to be prepared include: sweet and sour pork, chicken almandine and egg rolls, which will accentuate these characteristics through the use of sauteing and "red" cooking techniques. Student preparation.

HMF 267   Advanced Chinese Cookery   3(3-0)

Student preparation of some of the more elegant Chinese dishes and use of the traditional Chinese spices and ingredients. Student preparation.

HMF 268   Vegetarian Cookery   3(3-0)

Course designed to teach basic skills in the preparation of nutritious meals using ingredients other than meat. The course will center on the preparation of main meals with attention given the related area — nutritious snacks, sweets, frostings, sprouting beans and seeds, and quick mixes. This course will cover basic cooking skills needed to plan, prepare and evaluate meatless meals. The course will include discussion and food preparation. Student preparation.

HMF 269   Mexican Cookery   3(3-0)

Introduction to basic and exotic Mexican and Spanish Cookery, including proper pronunciation of Mexican dishes and corresponding symbols. Student preparation.

HMF 270   Microwave Cookery   3(3-0)

A presentation in production of various types of food geared toward introducing the student to the microwave oven and its capabilities. Student preparation.

HMF 271   Advanced Microwave Cookery   3(3-0)

Prerequisite: HMF 270 or equivalent. Enables the student to expand basic microwave cookery using recipes from microwave cookbooks and adapting the student's own recipes to microwave use. The technical and theoretic principles of microwave cookery will be presented. Student preparation.

HMF 272   Canning and Preserving   3(3-0)

This course includes the basics in water bath methods and steam kettle canning, smoking meats, dehydrating fruits and vegetables and jelly making. Student preparation.

HMF 273   Cajun Cookery   3(3-0)

Identification of various regional influences and cuisine which form the Cajun style including Creole Cajun and Louisiana cookery. Identification of indigenous ingredients, seasonings, and basic cooking techniques used in Cajun cookery. Discussions in class will cover historical as well as contemporary perspectives on these original American cuisines. (Formerly HMF 292)

HMF 274   Lean Gourmet Cookery   3(3-0)

Basic cookery using less fat and salt, fresh herbs, spices and chicken broth instead of cream. The focus of this class is on the food we eat. The student will learn the composition of food and why some foods make better choices for our diets than other foods. (Formerly HMF 290)

HMF 275   Bakery Products   3(3-0)

An approach to familiarize the student with bakery products. This course is taught by a professional baker who will demonstrate various types of baked goods and products from the kitchen. Student preparation.

HMF 276   Advanced Pastry and Decorating Techniques   3(3-0)

A class from which the apprentice or a homemaker can improve his/her pastry making and decoration skills. While some use of savory pastry preparation will be covered, emphasis will be on French pastries or similar small baked products and cake decorating from basic to trellis work and flower piping. Student preparation.

HMF 280   Food Specialties I: Garde Manger   8(8-0)

A basic course in the decoration and presentation of cold foods. This course will introduce the student to cold food specialization, vegetable carving, hors d'oeuvres, canapes, the use of spices, sauces, dressings and complete buffet set-up. Garde Manger is the showcase for the artistic presentation of foods. Student preparation.

**HMF 281   Food Specialties III: Soups, Sauces,
Fruits and Vegetable Cookery**   6(6-0)

The purpose of his course is to help the student develop the necessary skills in the preparation of soups from scratch as well as utilization of convenience food items such as food bases and commercial mixes. The student will gain a working knowledge of soups and sauces through hands on preparation of these items. Student preparation.

HMF 282   Food Specialties IV   3(3-0)

This course is designed to expose the student to the tools, techniques and skills required to carve a block of ice. The student will be carving from a block of ice before the conclusion of the course. This is a hands-on course for the chef apprentice and/or for one desiring to develop new skills.

Tourism and Travel Agency Operations (TA)
Department of Hospitality, Tourism and Travel
Division of Business

TA 100   Introduction to Travel Agency Operations   4(4-0)

An introduction to career opportunities in the travel industry, the travel product, the selling of travel, the agencies policies and procedures and how travel businesses function.

TA 106   Communications For the Travel Professional   4(4-0)

An atmosphere is created for the learning of basic rules of communication. Emphasis is on skills in grammar, sentence structure, spelling and speaking—to help students reach a higher level of professionalism. IBM computers are used for self-instruction in form letter modifications used in the travel office.

TA 110   Travel Agent Ticketing/Domestic   4(4-0)

Prerequisite: TA 100 recommended. 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.

TA 115   International Ticketing   4(4-0)

Prerequisite: TA 110. An overview of international airline ticketing, routing and scheduling. Students also learn to correctly issue an accountable airline ticket.

TA 120   North American Travel I   4(4-0)

A study of the history and development of the United States, Canada and Mexico, followed by specific location and identification projects. These would include countries, states, providences, capitals, principal cities, rivers, lakes, national parks and monuments, etc. Next the major points of tourist interest will be discussed along with climate, ethnic influences, distances and time zones.

TA 125   Foreign Country Travel II   4(4-0)

A study of history and development of the Caribbean, Central America and South America 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 will be covered.

TA 130   Foreign Country Travel III   4(4-0)

A study of history and development of the Middle East and Europe with specific location and identification projects. Major points of tourist interest will be discussed along with climate, distances and the time zones. Passports, visas and other entry requirements will be covered.

TA 131   Foreign Country Travel IV   4(4-0)

A study of history and development of 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 will be covered.

TA 135   Introduction to Airline Operations   4(4-0)

An introduction to airlines and airline operations centering on the many varied tasks performed by airline personnel at the airport. Topics to be discussed include ticket counter operation, the gate area, aviation weather, how airplanes fly, flight planning, aircraft weight and balance, aircraft servicing and cargo handling and loading. An airport visit will be included to observe the actual servicing of a flight.

TA 137   Tour Escorting and Wholesaling   4(4-0)

An introduction to tour escorting and wholesaling, the policies and procedures normally required by most tour companies. Other topics to be discussed include the psychology of tour traveler, their needs and desires.

TA 140   Introduction to Ground Transportation   4(4-0)

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 for motorcoach and railroad companies.

TA 145   Introduction to Cruise Sales and Operations   4(4-0)

An analysis of cruise sales and operations including how to sell a cruise, costs, selecting the right cruise, ports of call, ship profiles, ship listings, reference materials and cruise destinations of popular passenger and freighter ships.

TA 146   Seminar at Sea   2(2-0)

A seminar designed to develop a basic understanding of cruise lines and their ships. Gain first-hand knowledge of a cruise line ship, pier and dock facilities. Students will be able to dialogue with cruise ship staff members and observe daily cruise activities.

TA 150   Tourism for the Travel Industry   4(4-0)

An introduction to the principles of tourism, practices and philosophies. This course offers a practical and realistic education in the business of travel and tourism.

TA 160   Achieving Professional Excellence   4(4-0)

This course is designed to aid the student in gaining and keeping employment. It will help to adapt an individualized professional appearance for both the office and travel. Positive personal presentation will be emphasized through topics such as personal coloring, figure types, personality and wardrobes. Interviewing procedures along with preparing resumes and cover letters will help prepare the student for the job search.

TA 170   Opening and Operating a Travel Agency   (4-0)

This course will describe and explain the procedures involved in opening a new travel agency or acquiring an existing agency. This course also will explain travel agency operations from a management perspective.

TA 180   Career as a Flight Attendant   4(4-0)

To provide information and practical knowledge for a career as a flight attendant through lectures and discussions in the classroom and on an aircraft. This course is designed to provide an overview of a career as a flight attendant and provide practical experience of activities of a flight attendant on board an aircraft.

TA 185   Airport Operations   4(4-0)

This course centers on the basic structure of an airport, its different facilities and functions and its impact on the surrounding community.

TA 190   Internship and Seminar   4(4-0)

Prerequisite: Second-year Airline, Tourism and Travel Agency students. 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.

TA 200   Profitable Travel Marketing and Counseling   4(4-0)

An introduction to methods and techniques used in the modern travel agency covering the marketing environment, identifying consumer needs and examining the product, price and promotion.

TA 210   Group Travel Operations   4(4-0)

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.

TA 220   International Relations   4(4-0)

Discusses political, social and economic relationships between countries and how they affect the travel and tourism industry. Defining and discussing cultural differences and introducing the foreign monetary system.

TA 230   Travel and Tourism Law   4(4-0)

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.

TA 240   Computerized Reservation Training   4(4-0)

Prerequisite: TA 100. An introduction to and hands-on experience with the Sabre computer system, a multi-access airline reservation system. Developing a basic passenger name record, modifying, pricing and finding air fares and rules.

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 Sabre computer with hotel, car rental and train travel descriptions and bookings.

TA 251   Sabre Airline Computer Workshop   1(1-0)

Prerequisite: TA 250. The introduction to and use of the Sabre computer reservation system. This course will give the previously trained Mars Plus student a chance to adapt what they have learned on a different reservation system to Sabre. This hands-on opportunity will allow the student to realize differences and similarities between computer reservation systems.

TA 255   Advanced Sabre Training   4(4-0)

Prerequisite: TA 240 and TA 250. Advanced use of Sabre Airline Computer Reservations System. Skills will be taught in the area of international reservations and ticketing, tour bookings, fare storing and destination information.

TA 260   Travel Agency Accounting   4(4-0)

A course designed to explain and describe basic travel agency accounting concepts. Approximately one-half the course will be given to how financial statements are compiled and interpreted. The other half of the course will discuss how accounting systems should be constructed for the travel business.

DEPARTMENT OF MANAGEMENT, MARKETING AND ECONOMICS

Director: William P. Holda
Office Unit B

The mission of the Department of Management, Marketing and Economics is to impart knowledge and develop skills and competencies that will prove practical, useful and marketable in a student's chosen career. Our program area is broad and diverse in its course offerings. We offer courses leading to certificates and/or degrees in the following areas: Advanced Management, Bank Management, Computer Sales Specialist, Credit Union Management, Field Sales, International Business, Management, Marketing, Personnel/Labor Relations, Pre-Business Transfer, Pre-Economic Transfer, Property Valuation and Assessment Administration, Real Estate, Savings and Loan Management, Transportation and Traffic Management. We strive always to maintain relevance and a high level of quality throughout our course offerings.

Advisory committees have been established for each of the programs offered. These committees, composed of successful practitioners in the various curriculum areas, assist in reviewing course offerings and keeping in touch with the business community and emerging trends in business and society.

Students desiring to enroll in courses offered by the Department of Management, Marketing and Economics will find the courses identified as follows:

AIB:	American Institute of Banking
BUS:	Business
CUM:	Credit Union Management
EC:	Economics
LR:	Labor Relations
MGT:	Management
MKT:	Marketing
RE:	Real Estate
SL:	Savings and Loan

Curricular guides for certificates and associate degrees are available in the Counseling offices or the Director's office area. Faculty advisors are available to assist in planning.

Certificate in Advanced Management

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 through Northwood Institute and other four-year colleges. Most course work for this Bachelor's degree is taken at Lansing Community College. (Curriculum Code 472)

Computer Sales Specialist

Associate Degree curriculum which trains persons in computer sales. The course work is divided among data processing, marketing and business subjects. (Curriculum Code 477)

Cosmetology Management

An Associate Degree curriculum 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. (Curriculum Code 470)

Field Sales and Marketing Associate Degree

This curriculum 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 curriculum is to train individuals to participate efficiently in business sales activities. (Curriculum Code 479)

Field Sales and Marketing Certificate

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 of Achievement 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. (Curriculum Code 478)

Financial Institutions

Certificate and/or Associate Degree curricula are offered in bank management, credit union management and savings and loan management in cooperation with financial institutions in the Greater Lansing area.

Certificate and Associate Degree curricula 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. (Curriculum Codes 492 and 493)

A certificate is offered in Savings and Loan Management in affiliation with the Institute of Financial Education. Students receive dual credit, both through Lansing Community College and the Institute of Financial Education. (Curriculum Code 494)

A certificate of completion and an Associate Degree is offered in Credit Union Management. The specific credit union courses utilize material developed by the Credit Union National Association (CUNA). (Curriculum Codes 497 and 498)

International Business

Virtually all companies and individuals making business decisions today are affected by international events. The technological revolution is changing markets from specific geographic places to a global network. Firms, therefore, must focus on international business in order to remain competitive. Even those not directly engaged in international business will be affected in their domestic operations by the business activities of foreign entities. The future economic health of the United States is clearly dependent on international trade.

Career opportunities in the 1990s and beyond will abound for an individual who possesses a broad background in international management, finance and marketing; has expertise in a specific functional business area; has language facility in two or more languages, and has an understanding of cross-cultural customs, behaviors and lifestyles. Employment opportunities will exist not only in the large multinationals, but also in small- and medium-sized firms. In terms of dollar value, a few multinational corporations account for the largest portion of international activities in the United States. However, on a transaction basis, most businesss is done by small firms with limited international exposure. These firms will have more questions and will need more help than their larger, more experienced competitors. Both types of firms offer excellent employment opportunities. The International Business program will help prepare you to meet the future challenges of the international workplace. (Curriculum Code 482)

Labor Relations

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 certificate of completion 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 or BUS 226.

Management Associate Degree

This Associate Degree curriculum 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 emphasizes the premise that every manager is a professional worker in a field with a history, a heritage and a future.

Lansing Community College personnel and facilities are available for organizing, conducting and coordinating management programs to meet needs of interested businesses on an individual or group basis. (Curriculum Code 470)

Management Certificate

This 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 Department of Management, Marketing and Economics 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. (Curriculum Code 471)

Marketing Associate Degree

This curriculum 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 merketing. The primary objective is to train individuals to participate efficiently in business activities. (Curriculum Code 475)

Marketing Certificate

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. Faculty advisors in Management, Marketing and Economics will recommend electives to students in accordance with the students' needs and goals. (Curriculum Code 476)

Pre-Business Administration

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. (Curriculum Code 480)

Property Valuation and Assessment Administration

This curriculum is 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, this curriculum introduces technical and procedural material and 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 completion or an Associate Degree in Property Valuation Assessment Administration, depending upon the curriculum completed. (Curriculum Codes 490 and 491)

The curriculum is designed to provide preparation for employment, either in an assessor's office or an equalization department, and to help improve the competence of those already in the field. Curricular 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/assessors in adjacent areas;
3. To introduce the student to 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; and
6. To promote standardization of procedures, forms and reports.

Real Estate

The real estate curricula 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 of completion or Associate Degree, it is possible to specialize in a number of vocations involving real estate that need experienced and knowledgeable personnel. (Curriculum Codes 473 and 474)

Some real estate specialities include selling residential, commercial and industrial properties; appraising all types of property; real estate investment counseling; property management; urban planning; industrial planning; housing specialist or mortgage specialist; and serving as a closing officer in a real estate brokerage office.

Since the real estate community is involved with these curricula, the student can benefit from close association with those already in the field who are knowledgeable and willing to share their time end expertise. 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.

COURSE DESCRIPTIONS

American Institute of Banking (AIB)
Department of Management, Marketing and Economics
Division of Business

AIB 101 Principles of Banking 3(3-0)
This course is an introduction to the field of commercial banking, designed not only for newcomers to the field, but for students presently employed in banking who desire to broaden their knowledge and/or increase their opportunities for advancement.

AIB 120 Economics for Bankers 3(3-0)
This course provides bankers with an introduction to the fundamental principles of economics. Special emphasis is placed on topics of importance to bankers. The text covers the basics of economic theory and examples of the application of economics to banking.

AIB 130 Financial Planning for Bankers 3(3-0)
Financial planning is the process by which a coordinated plan is developed to achieve an individual's specific financial objectives. This course will give students a general understanding of the financial planning process and its applications. The course will prepare students for financial decisions at home and at work.

AIB 170 Preparing for Supervision 1(1-0)
This seminar is designed to help the employee (student) prepare for the transition to supervisor, and/or to help those who wish to evaluate their own capabilities and desires to move toward a supervisory role.

AIB 171 Customer Service for Bank Personnel 1(1-0)
The purpose of this seminar is to identify and personally apply professionalism while identifying and responding to bank customer needs.

AIB 172   Product Knowledge   1(1-0)

This course teaches bank customer contact personnel to determine a customer's prospects for more than one bank product and then how to cross-sell these products. Emphasis is placed on basic selling skills and product knowledge.

AIB 173   Selling Bank Services   1(1-0)

Selling Bank Services is designed to help employees develop the selling qualities of a good salesperson while emphasizing the impact this will have on a bank's competitiveness.

AIB 174   Personnel and the Law for Bankers   .75(.75-0)

This seminar is designed to provide an introduction and overview to the principles and application of laws affecting banking personnel policies and procedures. The seminar will be most applicable to bank personnel officers, managers, branch managers and supervisors.

AIB 175   Bank Security for Customer Contact Personnel   .5(.5-0)

This course is designed to teach students how to prevent security problems from arising by developing good security habits. It develops students ability to detect security threats and to handle them in a way that ensures personal safety and minimizes the loss of depositor funds.

AIB 176   Compliance Management   2(2-0)

This seminar take students through the steps leading to an effective compliance program. The course provides guidelines for determining how the compliance function fits with the overall bank structure. It also explains how to implement a valid program and discusses ways to monitor and audit the program.

AIB 177   Officer Calling Skills   .5(.5-0)

Calling on business loan prospects is a skill and an art. This course is designed to assist appropriate bank personnel in developing their skills more completely.

AIB 178   Problem Loans   .5(.5-0)

This course outlines an effective program of loan analysis, points out the early warning signals of problem loans and shows students how to minimize losses should a problem loan occur.

AIB 203   Trust Business   3(3-0)

Services rendered by institutions engaged in trust business. Primarily for the personnel of trust departments of commercial banks and trust companies.

AIB 204   Credit Administration   3(3-0)

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.

AIB 205   Real Estate Financing   3(3-0)

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.

AIB 206   Money and Banking   3(3-0)

Prerequisite: AIB 120 or Department approval. 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.

AIB 207   Consumer Lending   3(3-0)

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.

AIB 208   Commercial Lending   3(3-0)

Prerequisite: ACC 210 or Department approval. Commercial loan processing, procedures and servicing, small business loans, real estate loans, dealership loans and related areas that qualify for commercial loan status.

AIB 209   Bank Cards   3(3-0)

Overview of the bank card industry, its role in the economy and basic operational policies and procedures.

AIB 212   Analysis of Financial Statements   3(3-0)

Prerequisite: ACC 210 or equivalent. Characteristics of financial statements and financial statement analysis; some accounting necessary for profitable study of financial statement analysis.

AIB 214   Law and Banking: Principles   3(3-0)

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.

AIB 215   Law and Banking: Applications   3(3-0)

Prerequisite: AIB 214 recommended. 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; and impact of the law and applicable bank regulations.

AIB 230   Marketing for Bankers   3(3-0)

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.

Business (BUS)
Department of Management, Marketing and Economics
Division of Business

BUS 118   Introduction to Business   4(4-0)

Principles, problems and practices related to our economic framework. Includes organization, production, marketing, personnel administration, finance and economics.

BUS 123   Introduction to Association Management   3(3-0)

An introductory course designed to provide an overview of the principles involved in managing non-profit associations and organizations. It will enable the student to understand the interrelationships between associations, business, government and society.

BUS 191   Independent Study-Management   1(1-0)

BUS 192   Independent Study-Management   2(2-0)

BUS 193   Independent Study-Management   3(3-0)

BUS 194   Independent Study-Management   4(4-0)

Prerequisite: Department 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 10 hours work per credit required.

BUS 201   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.

BUS 223   Management and Supervisory Development   3(3-0)

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.

BUS 224   Human Resources Management   3(3-0)

Principles, problems and practices of modern business, government and other organizations involved in employee relations from recruiting through post-retirement.

BUS 225   Principles of Management   3(3-0)

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.

BUS 226   Employment Law for Managers   4(4-0)

This course is designed to provide an introduction and overview to the principles and application of laws affecting the workplace, not including traditional labor relations law. Areas of law covered include: discrimination, wage-hour, unemployment benefits, personnel records and common law issues relating to discharge and other matters.

BUS 228   Organizational Behavior   4(4-0)

Application of psychological principles and methods to selection, placement, training, supervision and evaluation and motivation of workers' and managers' efficiency. Also, accident prevention, problems of human relations and psychological illnesses in business and industry.

BUS 229 Public Relations 3(3-0)

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 Oral Communications for Business 4(4-0)

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 non-verbal communication.

BUS 250 Personal Finance 3(3-0)

Specific topics covered include: choosing your job, budgeting, smart shopping, avoiding swindles, buying a car, renting or buying your home, selling your home, credit and borrowing, investing, insurance, retirement and estate planning, income taxes, etc. There is a great deal of material covered in a relatively short period of time. This class is not for individual financial advice. The student would need to analyze his/her own situation and come to a decision based on fundamental knowledge acquired in the course, from experience, other readings and experts in the various fields.

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. Introduction 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)

This course covers the fundamental principles of investing and its role in our economy. Emphasis will be upon developing terminology, types of investments and personal financial planning such as, but not limited to, mutual funds, real estate, CD's, money market funds, limited partnerships, insurance, IRA's, stock and tax shelters. This is an overview course.

BUS 255 Advanced Investments 3(3-0)

Prerequisite: BUS 254. The emphasis will be the development and implementation of an investment strategy. Investment objectives and influencing factors will be examined.

BUS 260 Transportation and Traffic Management 3(3-0)

Theoretical, historical and academic aspects of traffic management are presented with analysis of practical problems and specific cases.

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)

Prerequisite: BUS 281 or Department approval. Residential and agricultural appraisals and soil survey.

BUS 283 Property Valuation and Assessment Administration IV 3(3-0)

Prerequisite: BUS 282 or Department approval. Appraisal of commercial and industrial properties.

BUS 284 Property Valuation and Assessment Administration V 3(3-0)

Prerequisite: BUS 283 or Department approval. 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 284 or Department approval. Valuation and auditing of personal property, classification and equalization of appeal procedures, allocation, truth in assessment, taxation and Headlee rollback computations.

BUS 286 Applied Appraisal Concepts 2(2-0)

Prerequisite: BUS 282 or BUS 283 or Department approval. Field inspection and appraisal of residential, commercial and industrial properties. Emphasizing potential appraisal problems utilizing the cost approach to value.

BUS 287 Applied Appraisal Concepts II 2(2-0)

Prerequisite: BUS 283 or Department approval. Field inspection and appraisal of commercial and industrial properties which emphasize potential appraisal problems using the cost approach to value.

BUS 288 Income Approach To Value 3(3-0)

Prerequisite: BUS 283 or RE 291. Introduces the advanced student to the appraisal concepts used in the appraisal of income producing properties.

BUS 289 Income Approach to Value II 3(3-0)

Prerequisite: BUS 288. Advanced study of the appraisal concepts utilized in the appraisal of income producing properties.

BUS 290-293 Management Internship 3(3-0)

Prerequisite: Coordinator 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.

Credit Union Management (CUM)
Department of Management, Marketing and Economics
Division of Business

CUM 100 Introduction to Credit Unions 3(3-0)

This course provides the student with an overview of the credit union movement and its position in the financial services industry. Directed toward staff, management and elected officials of credit unions who wish to increase their knowledge of the national and international credit union movement.

CUM 110 Credit Union Operations 3(3-0)

This course offers the student with an overview of basic credit union operating procedures. This course is directed toward individual managers of smaller credit unions, staff members of credit unions and elected volunteer officials who wish to increase their knowledge of credit union operations.

CUM 200 Credit and Collections 3(3-0)

This course covers the basic fundamentals of the credit/collection industry. Emphasis on learning the basics of the credit decision and the collection of past due loans. The course is designed for credit union personnel who want to better understand the relevant laws and regulations of credit union credit and collections.

CUM 201 Credit Union Financial Counseling 3(3-0)

An overview of financial counseling techniques and skills for credit union employees. Special emphasis will be placed on class as well as group participation and attendance.

CUM 215 Business Law for Credit Unions 4(4-0)

Covers fundamental principles of law applicable to credit union personnel. This course will prepare students to perform the legal responsibilities of their jobs more knowledgeably. Course content includes study of contracts, personal, real property, torts, crimes and the natures and sources of law as they relate to credit union operations.

Economics (EC)
Department of Management, Marketing and Economics
Division of Business

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-Micro 4(4-0)

This course is designed to develop objective consideration of economic issues and provides 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-Macro 4(4-0)

Prerequisite: Department approval or EC 201. This course addresses the theory of national income, employment and prices; and 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 4(4-0)

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 and 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 221   International Economics   4(4-0)
Prerequisite: EC 202 or permission of instructor. This course examines the interrelationship between the U.S. economy and the rest of the world. It covers from both a historical and a theoretical perspective the balance of payments, exchange rate systems, the effects of international economics on domestic, monetary and fiscal policy, the gains from trade, the impact of restrictions on trade like tariffs and quotas and the development of international trade organizations.

EC 224   Intermediate Micro-Economic 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   Independent Study/Economics   1(1-0)
Prerequisite: Department approval. This course includes 20 to 30 hours of study in special economics projects.

EC 268   Independent Study/Economics   3(3-0)
Prerequisite: Department approval. Three credits requiring 60 to 70 hours of study in special economics projects.

Labor Relations (LR)
Department of Management, Marketing and Economics
Division of Business

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: Department 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: Department approval or LR 200. Grievance procedure, including employee discharge and discipline, is examined in-depth with a review of pertinent legislation. This "how to" course introduces the basic knowledge and skill necessary for grievance handling and understanding the fundamentals of contract language.

LR 203   Labor Law   4(4-0)
Prerequisite: Department 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 208   Labor Relations in Government   4(4-0)
Structure and practice of labor relations in the public sector. Recommended for government employees.

Management (MGT)
Department of Management, Marketing and Economics
Division of Business

MGT 200   Problem Solving and Thinking Skills for Managers   4(4-0)
This course is designed to provide business students with a repertoire of basic and higher order thinking skills, including critical thinking, creative thinking, decision-making and problem-solving for use in management situations.

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   Strategic Management and Policy   4(4-0)
Prerequisite: MGT 300 or BUS 225. The course pulls together learning from the areas of management and marketing to consider an overall organizational perspective — the strategic formulation and implementation for the organization as a whole. The process involves the pursuit of organizational mission while managing the relationship of the organization to its environment. Case method is used.

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 324   CAM Independent Study   4(4-0)
Prerequisite: Department 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 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 335   Managerial Statistics   4(4-0)
Prerequisite: MTH 012 or equivalent. Application of statistical tools and techniques to improve decision-making processes 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. Techniques for setting objectives with employees, conducting performance appraisals and 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 that 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. (This course is offered only as part of the Japan Adventure program.)

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 or equivalent. This course is designed to provide the necessary and practical skills to deal with financial matters and communicate with those people who specialize 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.
Total instruction in Management Effectiveness (TIME Series) TIME courses are 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   The PC in Plain English   .5(.5-0)
This course is computer-interactive to help the learner cut through the jargon of computers to understand how the personal computer works and how it can help the learner work faster, more effectively and smarter. The course is for learners with no knowledge of computers.

MGT 351   How To Solve Problems   .5(.5-0)

This convenient and effective computer interactive course will help participants to quickly recognize and describe a problem and accurately determine its true cause and best solution. Participants will also practice the problem-solving model in a detailed case study.

MGT 352   Personal Financial Planning   2(2-0)

Prerequisite: Lotus 1-2-3 knowledge. This course will show students how to start building financial security. It emphasizes spending strategies and capital-building techniques rather than housekeeping methods. Included is a computer template disk to accompany Lotus 1-2-3 for student use during the course.

MGT 353   How To Delegate Effectively   1(1-0)

This course will show participants how to increase their productivity by doing less while managing more. It is designed to increase comfort with the delegation process which will help improve job performance.

MGT 354   How To Analyze the Competition   2(2-0)

This course will enable students to pinpoint competitors' strengths and weaknesses so students can identify and act upon competitive challenges before they occur. The course assists students in the design, implementation and management of a competitor "intelligence" system.

MGT 356   Managing Risk In Changing Times   .5(.5-0)

This computer interactive course focuses on personal risks managers face today. Topics include choosing risk, preparing for risk-taking and determining appropriate risk.

MGT 357   Success Through Assertiveness   1(1-0)

This course will help to put participants in command of their career in order to respond to difficult situations according to individual desires, interests and feelings. Participants will learn how being properly assertive at the right times and in the right place can help them achieve their goals.

MGT 358   Assertiveness for Career and Personal Success   1(1-0)

The topics covered are: 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. Uses audio cassettes.

MGT 360   Communications That Work   2(2-0)

This course will help the busy manager learn to use more effectively the tools he/she has to get a message across. Includes areas of practical application such as effective writing of letters, memos and reports, running meetings and interviewing and listening. A video course.

MGT 362   A Manager's Guide to Working With People   2(2-0)

This course is designed for all managers who want to learn to work effectively with people, both on and off the job. Students will acquire an understanding of human needs and motivation, leadership styles and problem-solving techniques and effective self-assertive methods.

MGT 364   Supervisory Management   2(2-0)

Designed to help managers at all levels to develop, enhance and update their skills. Major areas of emphasis include: planning, operating, controlling, personnel functions, decision-making, job design, job analysis and quality control within the department.

MGT 365   Leadership Skills for Managers   .5(.5-0)

This computer-interactive course helps managers motivate employees and obtain participation. A text accompanies the computer disks.

MGT 367   How To Keep Satisfied Customers   .5(.5-0)

This computer interactive course is designed to make the task of keeping customers satisfied an easier one. The ultimate goal of this course is to help improve students' abilities to communicate effectively with customers.

MGT 368   How To Implement a Business Plan   2(2-0)

This course is designed for managers who want to give their company's business plan real meaning and power. Participants will learn how to develop realistic action programs and responsibility plans for allocating scarce resources, installing workable monitoring and control systems and creating supportive policies and procedures.

MGT 369   How To Improve Team Leadership Skills   2(2-0)

This self-paced course on team building in organizations goes beyond quality circles to build skills in team training, interaction and facilitation emphasizing the "problem-solving team" process.

MGT 370   How To Deliver Winning Presentations   2(2-0)

This course will provide the student with a basic awareness of the steps necessary for making an effective oral presentation. It is designed for anyone who wants to reduce the fear of public speaking by learning how to deliver presentations.

MGT 371   Understanding Personal Interactive Skills   .5(.5-0)

This course is designed to increase awareness of personal styles and preferences for interacting with others. It is also designed to heighten awareness of styles and preferences of people with whom the student interacts daily.

MGT 372   Assessing Personal Management Skills   .5(.5-0)

This course is designed to assess participants' personal management skills. It will them determine how well they manage people to achieve results and apply management methods such as setting goals, organizing work, reviewing performance and managing stress.

MGT 373   Speed Learning   2(2-0)

This course offers an entirely different way to read that reduces reading time while increasing comprehension. It teaches how to organize thinking systematically so the reader can learn quickly and efficiently in all reading situations. Uses audio cassettes.

MGT 374   How Managers Make Things Happen   1(1-0)

This course is a revised and updated audio edition of Odiorne's classic work. It shows the learner how to cut through people problems, inertia and red tape in order to make things happen in the work setting. The audio cassette program tells how to increase production, turn apathetic workers into motivated workers and boost work quality. Uses audio cassettes.

MGT 375   Situational Leadership   1(1-0)

In this course the learner will discover the secrets of great leadership and learn about the four basic leadership styles. Participants will master the art of goal-setting, find their most effective leadership style and learn when to use the right style at the right time. Uses audio cassettes.

MGT 376   What Do Manager's Do?   2(2-0)

This course is a practical skills-building program that concentrates on the functions that most often determine success in management.

**MGT 377   Fundamentals of Finance and Accounting
             Nonfinancial Managers**   2(2-0)

Designed to provide the manager with an understanding of finance. It is a practical way for a manager to become more effective and valuable.

MGT 378   How To Be A Successful Project Manager   2(2-0)

This course provides a comprehensive understanding of the techniques and methodology needed to plan and control any project, large or small, in any industry. Both basic and more sophisticated tools are covered. Students will also learn how to use these tools as decision aides during the tracking and controlling phase of the project.

MGT 379   The Write Words   .5(.5-0)

This course uses computer disks to help participants recognize the areas in their word choice and usage that need improvement to develop a more concise, straightforward writing style.

MGT 380   Getting It Write: A Process That Works   .5(.5-0)

This course uses computer disks and a manual to help students make clear the intent of their documents, take into account the knowledge and attitudes of the reader and organize ideas and polish the finished product.

MGT 381   How Successful Women Manage   2(2-0)

This course has a computer bank of review questions for each chapter. It is an overview of the various functions and processes involved in management. Class members will discuss possible explanations for women's slow rate of progress in attaining managerial positions. It is enlightening and an absolute "must" for any woman who is considering entering or is now a part of the managerial area.

MGT 382   Dealing With Difficult People   1(1-0)

This course covers the specific communication, motivational and conflict resolution approaches that seasoned managers have proven effective. Students will also learn how to avoid difficult behaviors by instituting positive work strategies, structures and values before problems develop. Uses audio cassettes.

MGT 384   How To Write A Marketing Plan   2(2-0)

This course is designed for small business owners, marketing managers, product managers and others responsible for the creation of a marketing plan. The course instructs students how to fuse all the vital elements to create a marketing plan that is right for their product line, department or company.

MGT 385 Using Microcomputers in Marketing 2(2-0)

This course is a practical, hands-on course that helps make the job of choosing and using the software you need, easy and efficient. It is designed for marketing managers who want to use microcomputers to solve tough marketing problems. The course does not use interactive computer activity.

MGT 386 The Psychology of Selling 1(1-0)

This course will teach participants what to do to become a top professional sales-person and why they should do it in order to sell successfully.

MGT 387 How To Use Lotus 1-2-3 2(2-0)

In this course students will learn what Lotus can do for them. This interactive computer course uses a "private tutor" which is an audiotape to talk students through each essential step and procedures of Lotus 1-2-3.

MGT 388 Time Management for Managers 1(1-0)

This videotape plus workbook course covers principles of time management, decision-making, delegating, scheduling, managing interruptions, personal and professional time. Case studies and exercises are included.

MGT 389 How to Write a Business Plan Using Lotus 1-2-3 2(2-0)

Prerequisite: Lotus 1-2-3 knowledge. This unique course combines a compre-hensive self-study course and an easy-to-follow manual and an instructional data disk. It guides students through the entire planning process, from analyzing a company's marketing, organizational and financial positions, to setting achievable goals and objectives for the future.

MGT 390 Building Memory Skills 1(1-0)

This course uses audiotapes and a textbook to help apply the skills that increase ability to obtain and utilize information. The result of using improved listening and memory skills will help realize leadership potential.

MGT 391 Psychology of Winning 1(1-0)

This unique audio-cassette course can help students realize their full potential for total success. It goes beyond positive thinking or other motivational programs to offer the key that unlocks inner power.

MGT 393 How To Manage Stress .5(.5-0)

This course is computer-interactive and will help participants learn how to handle daily stress. Using the five diskettes, learners will become aware of positive and negative stress and how to use relaxation techniques, positive attitudes and life-styles to relieve stress.

MGT 394 Strategic Planning for Entrepreneurial Business 2(2-0)

In this course owners and managers of new and growing business, or of com-panies that operate within an entrepreneurial environment, will learn how to build a strategic plan, step by step. Students will learn about organizational charts, goal-setting matrices, diagnostic summary sheets and checklists—all designed to help them create a plan that works while they learn.

MGT 396 Successful Marketing for Service Organizations 2(2-0)

This course will help students learn to create services for markets rather than markets for services. It is designed for service company managers and others who need to sharpen their competitive edge by using marketing concepts long associated with manufactured goods.

MGT 397 How To Improve Writing Skills 1(1-0)

This course provides all the tools used to convey ideas effectively in any business situation. Topics include writing memos and proposals, non-verbal communication and making presentations.

MGT 398 Using Mathematics As A Business Tool 2(2-0)

A computer-assisted instruction course designed to increase familiarity with for-mulas and calculations most frequently used in business. Participants will learn to 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.

MGT 399 Fundamentals of Modern Personnel Management 1(1-0)

This course is a comprehensive source of personnel ideas and techniques to help managers in an organization contribute to a human resources program that will increase productivity and profits.

Marketing (MKT)
Department of Management, Marketing and Economics
Division of Business

MKT 119 Marketing and Managing Your Professional Image 4(4-0)

Marketing and managing your professional image can assist every level of busi-ness in learning how to effectively market and manage their image and their business affairs. This course is a complete guide for everything people and their companies need to know to do the right thing at the right time in every business situation.

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: MKT 120 or Coordinator approval. 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: MKT 120 or Department 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: Department approval. Practical computer field sales experience in consumer and industrial sales. Advanced techniques of selling and refining selling skills.

MKT 124 Practical Sales Skills 3(3-0)

Prerequisite: MKT 120 or Department approval. This course is hands-on training helping students improve their technique and ultimately their earnings.

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 and 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 135 Telemarketing 3(3-0)

This course is designed to make people more productive over the telephone. The course teaches skills to help one make better use of time to increase pro-ductivity and sales by mastering the art of telephone selling. The course will also show practical methods and alternatives that work to increase efficiency as well as how to put information power to work to increase closing percentages.

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 market-ing 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 con-cept 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. The course focuses on the solution of marketing problems through the use of cases. This approach relates marketing to the total enterprise by analyzing the problem, analytical tools used and the approaches to business decision-making. Particular attention will be paid to the various aspects of the marketing mix, their relationship to the company and how marketing management deals with these aspects.

MKT 204 Marketing Research 4(4-0)

Prerequisite: MKT 200. Types of data, sampling, data collection, analysis, inter-pretation, and applications of marketing research. A practical managerial approach—NOT a statistical or mathematical orientation.

MKT 220 Sales Management 3(3-0)

Prerequisite: MKT 120 or equivalent. Explores strategies managing salespeople. Training, recruiting, motivation, evaluation, planning and organizing are all em-phasized. 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 var-iables that help shape consumer action. Concepts that integrate the study of consumer behavior with the practice of marketing.

MKT 225 Written Communications for Business 4(4-0)

How to write clearly, accurately and quickly. Organize writing for the busy reader's needs. Letters, reports, memos and procedures—technical or nontechnical.

MKT 230-233   Independent Study-Marketing   3(3-0)

Prerequisite: Coordinator 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 235-238 Marketing Internship   3(3-0)

Prerequisite: Coordinator approval. An approved training station, earn credits for satisfactory work performance related to marketing.

Real Estate (RE)
Department of Management, Marketing and Economics
Division of Business

RE 250   Real Estate Math Seminar   .5(.5-0)

This seminar will provide practical applications of the most common uses of math in the real estate industry. It is designed to provide additional practice for students currently enrolled in RE 274, but is open to any interested students.

RE 251   HP-12C Seminar   .75(.75-0)

Prerequisite: Need HP-12C calculator. This seminar will acquaint the user of the Hewlett Packard HP-12C calculator with basic functions, financial calculations and related real estate calculations. It is designed to provide additional practice with the HP-12C for students currently enrolled in RE 273, but is open to any interested students.

RE 271   Introduction to Real Estate   3(3-0)

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.

RE 273   Real Estate Investment and Taxation   3(3-0)

Prerequisite: RE 271, RE 274 or Department approval. Emphasis on investment analysis, financing, depreciation, capital gains, exchanging and federal tax implications of real estate acquisitions, ownership and disposal.

RE 274   Real Estate Licensee Examination   4(4-0)

Intense study in the fundamentals of real estate. Preparation for the State of Michigan license examination, administered by the Applied Measurement Professionals (AMP). This class meets statutory requirements including four hours in fair housing.

RE 275   Real Estate Finance   3(3-0)

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.

RE 277   Property Management   3(3-0)

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.

RE 279   Buying and Selling a Home   3(3-0)

For potential purchasers or sellers of residential property. Mechanics of buying and selling a home. Covers steps necessary to transfer title, including the "closing."

RE 281   Successful Home Buying Seminar   .75(.75-0)

The successful home buying seminar introduces students to the fundamentals of selling and buying a home. Participants will learn what they need to know about the buying and selling process, from determining needs to closing procedures.

RE 290   Real Estate Inspection and Construction   3(3-0)

This is a course in basic real estate construction for real estate salespersons, brokers, and those interested in learning more about single-family residential construction. Topics include: construction basics, from excavation to finished stages; various architectural styles; mechanical systems, their operation and interrelationships; reading a house plan; common problems of houses; site selection; and building materials.

RE 291   Residential Appraisal   3(3-0)

Principles, methods and techniques of residential real estate appraising with application.

RE 293   Real Estate Law   4(4-0)

Prerequisite: RE 271 or RE 274 or Department approval. Topics covered include: 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 and landlord-tenant relations; private land use controls including restrictions; condominiums and tax policies pertaining to real estate.

Savings and Loan (SL)
Department of Management, Marketing and Economics
Division of Business

SL 102   Applied Business English   3(3-0)

This course focuses on business applications of principles of the English grammar, mechanics and usage that frequently present difficulties to those working in financial institutions. Students will review sentence structure and the forms and functions of nouns, pronouns, verbs, adjectives and adverbs. In addition, students will study the rules that govern the punctuation of sentences, the capitalization of words and the expression of numbers in business writing. The course also introduces students to a popular business correspondence format and to proofreading skills. Thus, the course is a thorough review of the English grammar, mechanics and usage principles recognized as "standard" by business professionals for practical business applications.

SL 103   Teller Operations   3(3-0)

Importance of the teller in creating and maintaining good customer relations. Specific operational procedures necessary for successful performance.

SL 104   Effective Speaking   3(3-0)

Effective speaking provides working adults with opportunity to practice an essential business skill—oral communication. An important goal of this course is to help students recognize and become more skillful in the "public speaking" events that occur daily in business. Classroom discussions and speaking assignments are directed toward business topics.

SL 127   Personal Investments   3(3-0)

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.

SL 130   Financial Planning Basics   3(3-0)

This course provides the basic financial planning information needed to answer questions customers have about financial matters. Students will learn what factors to consider when devising a financial plan. Topics to be covered include taxation, risk and return, safety, insurance, investments, retirement planning and more.

SL 160   Introduction to the Savings Association Business   2(2-0)

Survey the role of savings associations in business. Historical development, present-day organization, competition and future direction.

SL 161   Deposit Accounts and Services   3(3-0)

This course is designed to give savings institution employees a thorough knowledge of the legal nature of the deposit contract, the forms of account ownerships and the variety of services offered by savings institutions in a deregulated market.

SL 162   Savings Institution Operations   3(3-0)

Provides an overview of the internal operations of savings institutions with emphasis on the functions of various departments. Shows how job duties interrelate throughout the departments. Highlights ways in which each area of activity can contribute to the success of a savings institution. Serves as an introduction to other institute classes that relate specifically to a particular functional area in the organization.

SL 166   Communication Skills for Business   3(3-0)

Practice skills of effective two-way communication and analyze strengths and weaknesses to achieve better communication with co-workers and customers.

SL 170   Effective Business Writing   3(3-0)

You will learn specific skills needed to write effectively in your job as a financial services professional. Refining your writing skills will save time, improve the relationship with customers and contribute to professional success.

SL 173   Selling Financial Services   2(2-0)

This course is a concise introduction to the art of selling financial services. It gives an opportunity to master the basic sales skills that a financial business professional needs in today's competitive environment.

SL 200   Marketing Financial Institutions   3(3-0)

Students will learn the fundamentals of marketing as they apply to the financial services business. This course explains how to conduct market research, plan marketing strategies and use direct marketing and personel selling techniques.

SL 208 Savings Accounts   3(3-0)

Nature and types of savings account ownership and problems unique to savings accounts.

SL 209 Savings Account Administration   3(3-0)

Extends the general presentation and emphasizes the administration and insurance of savings accounts.

SL 210 Consumer Lending   3(3-0)

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.

SL 211 Mortgage Lending   3(3-0)

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.

SL 220 Techniques for Customer Counseling   3(3-0)

A course for all financial service professionals who meet with customers that presents theories from Sociology, Psychology, Economics and other disciplines along with practical, job-related techniques and guidelines. In this course, students investigate all aspects of customer contact in a problem-solving manner. The course covers all of the major elements that interact in financial counseling — customers and their needs, the financial services that can satisfy those needs, and the counselor's relationship to both the financial institution and the customer. This approach allows students to learn the knowledge, skills and attitudes that are required to meet special challenges of financial counseling.

SL 223 Supervisory/Personnel Management   3(3-0)

This course is for new or experienced supervisors and managers. It will cover the supervisor's role: characteristics and skills effective supervisors need, methods to interview employees and train them efficiently, ways to establish relationships with employees as individuals and members of work groups and techniques for on-the-job counseling.

SL 224 Supervisory/Personnel Management II   3(3-0)

This course is the second part of a two-part course in supervision designed by the Institute of Financial Education. The course attempts to provide new and potential supervisors with the basic knowledge and concepts necessary to be effective supervisors through classroom instruction, discussions, case studies, mini-games and role play.

SL 226 Human Relations   3(3-0)

Purpose of course is to introduce students to behavioral concepts and techniques that are directly applicable to work environment. This course is practice-oriented. Students will be actively involved in class as they apply concepts and techniques to their own situations with the goal of improving personal relationships at work.

SL 230 Branch Management   3(3-0)

This course is designed for working adults who are branch managers in a financial institution or hope to become branch managers.

DEPARTMENT OF OFFICE ADMINISTRATION

Director: Dr. Mildred L. Williams
Office Unit B

The goal of the Department of Office Administration is to anticipate the needs of business and industry by providing quality education in training or updating skills of office professionals including administrative assistants, secretaries, word processors, receptionists, data entry specialists and court and conference reporters. To achieve this goal, Office Administration is continually researching and implementing new ideas to provide up-to-date, innovative learning methods to offer traditional classroom instruction, hands-on training on state-of-the-art equipment, computer-aided instruction (CAI), self-paced learning and seminars. The rapid advances in office automation have changed the nature of many office positions; therefore, all programs in Office Administration have been designed to provide individuals with the expanded knowledge and technological skills which are being demanded in today's business world at entry or advanced levels. Long range plans for the 1990s are being made to provide its students with skills assuring them of employability in the present as well as in the future.

To keep pace with trends in the business world, Office Administration has recruited the aid of advisory committees who are totally involved in each of its programs. Office Administration is extremely sensitive and listens to the advice of its advisory committee members who, because of their experience and role in the business world, greatly contribute to the excellence of curricula offered by the Department.

To perfect the quality of training, Office Administration offers an internship program designed to give its students practical applications to classroom training.

Participants in the internship program receive on-the-job experience in local businesses, government or industry while earning college credit. In addition, overseas internships are being developed to broaden the scope of experience of students in Office Administration.

Office Administration offers several Associate Degree curricula designed for individuals desiring comprehensive training in preparation for employment in the professional office field. An Associate Degree requires the successful completion of a minimum of 90 credits.

Certificate of achievement curricula requiring the successful completion of a minimum of 45 credits are designed for persons desiring basic skills as well as rapid entry into the labor market.

Students desiring to enroll in courses offered by the Department of Office Administration will find the courses identified as follows:

     BUS: Business
     CCR: Court and Conference Reporting
     DE: Data Entry
     WP: Word Processing

General curricular guides for each curriculum offered by Office Administration are available in the counseling offices and the program area office in Office Unit B. The student is encouraged to discuss his or her particular educational background and requirements with an advisor from Office Administration.

Administrative Assistant

This Associate Degree curriculum offers opportunities to those persons who want responsible office positions in other than the secretarial areas. Successful graduates of this program are equipped to handle effectively the functions of most offices. The curriculum provides for adequate skills to succeed in entry-level positions and incorporates the business understanding and management training necessary for advancement to supervisory positions. Formerly Office Management Program. (Curriculum Code 425).

Automated Office Specialist

This certificate curriculum is designed for the individual who may have had previous secretarial or office clerical education and experience who desires to update training and skills for the new automated office environment. Special emphasis is given to computer usage for word processing and other applications that will provide information for the decision-making process within an administrative office position. Writing skills are also developed to allow for improved communications. (Curriculum Code 417)

Court and Conference Reporting

The Court and Conference Reporting curriculum is an Associate Degree curriculum presented in eight terms, including the summer term. In addition to preparing students to meet state certification requirements, this program prepares students for positions as court reporters, conference reporters, hearings reporters, legislative reporters and general freelance reporters. The program provides instruction in machine shorthand, computer-aided transcription, technical, legal and medical dictation and vocabulary, as well as in core skills. The curriculum begins each fall and spring term. (Curriculum Code 415).

For graduation with an Associate Degree as a court reporter, a student must pass two 5-minute tests with 95 percent accuracy at each of the following speeds: 230 words per minute Q&A, 2-voice testimony; 220 words per minute Jury Charge; 180 words per minute Literary; 180 words per minute Medical Testimony; and in addition complete 100 verified hours of actual writing time during internship training and type a minimum of 60 net words per minute.

Data Entry Specialist

The certificate curriculum is designed to provide business, industry and government with improved information flow. Students will be trained on electronic equipment utilized in automated office systems and will learn automated office procedures and basic business skills. Students will be prepared for multi-vocational skills leading them to positions such as typist, record clerk, data entry operator and similar positions. (Curriculum Code 421)

Executive Secretary

The two-year Executive Secretarial curriculum will prepare the student for placement in the many interesting and challenging positions in business, from senior stenographer to executive secretary. The curriculum 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. (Curriculum Code 435)

Information/Word Processing Associate Degree

This curriculum provides students with intensive training in skills needed for the automated office as well as skills basic to any office. The graduate of this two-year curriculum will have instruction in machine transcription the use of the microcomputer for word processing, spreadsheets, graphics, data base management and communications. In addition, an office simulation program is designed to enable students to move rapidly on their career path. 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. (Curriculum Code 418)

Information/Word Processing Certificate

This one-year certificate curriculum is designed for those individuals who want to develop entry-level skills in typewriting, machine transcription, and word processing applications on the microcomputer, as well as receive training in other skills basic to any office. (Curriculum Code 419)

International Administrative Assistant

This Associate Degree curriculum is designed to prepare office professionals to assist in transacting international business. Students in the International Administrative Assistant curriculum will become familiar with different cultures and their ways of doing business and will be encouraged to learn other languages. Skills acquired in this program prepare students for administrative entry-level positions and incorporate the business understanding and management training necessary for advancement to supervisory positions. (Curriculum Code 426)

Legal Secretary

An Associate Degree curriculum which provides the student with the skills and knowledge necessary to manage the office of an attorney. It develops an understanding of the specialized legal vocabulary and the production of legal documents, in addition to providing secretarial skills. (Curriculum Code 440)

Medical Secretary

This Associate Degree 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 or other health-related institutions. (Curriculum Code 445)

Medical Transcriptionist

This one-year certificate curriculum concentrates on the knowledge of medical terminology and machine transcription skills in preparing for entry level transcription positions found in medical offices, hospitals, clinics and other health-related institutions. (Curriculum Code 423)

Office Support

The one-year office clerical curriculum is designed for those students who want to develop or increase the basic skills necessary for entrance jobs in the modern office. Further courses may be taken leading to an Associate Degree. (Curriculum Code 420)

Records and Information Management

Students completing this Associate Degree curriculum will be prepared for a position in a records department or center as a records employee or manager. Students will learn manual and electronic methods of filing, storage and retrieval. Some courses will use the microcomputer applications. The field of records management is growing rapidly and increasing in importance due to the rapid explosion of information. (Curriculum Code 427)

Stenographer, Gregg Shorthand

This certificate curriculum provides instruction in skills and abilities for entry level positions requiring shorthand. Students completing this program will be qualified for a variety of office positions as well. Students may elect to continue their studies for an Associate Degree in the secretarial program. (Curriculum Code 430)

Stenographer, Speedwriting

This one-year Speedwriting Stenographer curriculum includes instruction and practice in basic office skills as well as an alphabetic method of taking dictation. A certificate is awarded for satisfactory completion of the courses. (Curriculum Code 431)

COURSE DESCRIPTIONS

Business (BUS)
Department of Office Administration
Division of Business

BUS 100   College Typewriting I   4(4-0)
This course is designed to teach the typewriter keyboarding process in addition to developing speed and accuracy on straight-copy materials. Personal and business correspondence and other skills will be taught. A basic skill level of 34 to 41 words per minute (wpm) is developed.

BUS 101   College Typewriting II   4(4-0)
Prerequisite: BUS 100 or previous typing. This course is designed to improve the speed and accuracy of typing straight-copy materials together with learning tabulation, manuscripts, footnotes, business letters and special communication forms. Performance levels range from 40 to 51 wpm.

BUS 102   College Typewriting III   4(4-0)
Prerequisite: BUS 101. This course is the capstone of the typing courses. Students will prepare a variety of office documents as they work for different types of organizations. The main goal of this course is to apply keyboarding and document formatting skills to office work. This course involves "real work" to be accomplished in a variety of simulated office settings.

BUS 104   College Gregg Shorthand I   4(4-0)
This course teaches principles of Gregg shorthand and basic business vocabulary and is offered for students who have had no previous Gregg shorthand experience. A minimum performance level of 60 wpm for one minute at 95 percent accuracy is required before advancing to Shorthand II.

BUS 105   College Gregg Shorthand II   4(4-0)
Prerequisite: BUS 104 or previous shorthand. This course continues the application of principles learned in Shorthand I in addition to developing speed and accuracy in taking dictation and completing transcription. Students with Gregg shorthand experience gained at other schools or colleges should resume their skill building in this course. A minimum performance level of 70 wpm for two minutes at 96 percent accuracy is required before advancing to Shorthand III.

BUS 106   College Gregg Shorthand III   4(4-0)
Prerequisite: BUS 105. This course emphasizes skills developed in Shorthand I and II in addition to developing greater ability in taking and transcribing dictation at a performance level of 80 wpm for three minutes at 97 percent accuracy level.

BUS 107   Business Calculating Machines   2(0-4)
Prerequisite: BUS 117 or previous math. This course utilizes the 10-key adding machine, printing calculator and/or electronic printing calculators; operations of addition, subtraction, multiplication and division; plus business-type problems dealing in percentages, interest and related principles.

BUS 114   College Speedwriting I   4(4-0)
Students will learn an alphabetic shorthand. The minimum performance level for dictation and transcription is 60 wpm for two minutes at 95 percent accuracy before the student is eligible for Speedwriting II.

BUS 115   College Speedwriting II   4(4-0)
Prerequisite: BUS 114. This course is designed to build speed and accuracy. The minimum performance level for a 2.0 is 70 wpm for three minutes at 96 percent accuracy. Completion of this course will give students a marketable office skill.

BUS 117   College Business Mathematics   4(4-0)
Prerequisite: Math or placement. This course can be taken as a classroom lecture or as a laboratory course in the Interactive Learning Center. Both methods of teaching develop skill and accuracy in basic mathematical computations as found in accounting, finance, management and marketing.

BUS 119   Practical Office Procedures   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 121   College Typewriting Skillbuilding   3(3-0)
Prerequisite: Previous typing. This course is designed to develop speed and accuracy at the typewriter. The diagnostic approach is used to individualize the development of speed and accuracy for each student. Once problem areas are identified, specific drills are implemented to correct weaknesses.

BUS 125   Business English   4(4-0)
This course is designed to review all parts of grammar, punctuation and sentence structure. There will be special emphasis on usage of rules covering proper usage of punctuation, capitalization, possessives, number usage, plurals and mechanics for written business communications.

BUS 150   Professional Imaging   3(3-0)
An investigation and evaluation of elements comprising the total professional image in the workplace. Verbal and non-verbal communication will be covered with emphasis on role playing in the classroom to familiarize the student with the course material.

BUS 153   College Gregg Shorthand Refresher   2(2-0)
Prerequisite: Knowledge of Gregg shorthand. This course is designed to refine and increase existing skills in Gregg Shorthand with emphasis upon producing accurate transcripts. Previous knowledge of shorthand is necessary.

BUS 154   Speedwriting Refresher   2(2-0)

Prerequisite: Knowledge of Speedwriting. This course is designed to refine and increase existing skills in the speedwriting method of shorthand with emphasis upon producing accurate transcripts. Previous knowledge of speedwriting is necessary.

BUS 155   Business Theory for Professional Secretaries   3(3-0)

During Fall term, this course discusses the secretary's proficiency in office administration and communication. Topics covered include executive travel, office management, reprographics, written business communications, editing, abstracting and preparing communications in final format.

During Winter term, economics and management emphasis is placed on understanding of the basic concepts underlying business. Key economic and management principles as well as the latest governmental regulations in business are covered.

BUS 195   Human Behavior in the Workplace   3(3-0)

This course emphasizes the importance of the skill of human relations in the workplace. Through a combination of case studies, self-analysis exercises and discussion, students will become more aware of the impact of positive interaction at work. Proficiency in enhancing good human relations and in confronting difficult situations is stressed.

BUS 199   Medical Vocabulary   3(3-0)

This course provides instruction in spelling, definition, structure and concepts of medical terms from various fields of medicine.

BUS 200   Critical Thinking   4(4-0)

Critical thinking has been designed to provide students with a repertoire of basic and higher-order thinking skills, including critical thinking, creative thinking, decision-making and problem-solving. Emphasis will be placed on gaining proficiency in critical awareness to enable students to confidently appraise and discriminate information, problems, issues and issues—whether in a societal, educational or organizational settings.

BUS 203   Administrative Office Procedurea   3(3-0)

Prerequisite: Sophomore status or secretarial experience. This capstone course covers topics involved in the work completed in today's electronic office — office information systems technology; document creation and distribution; research and organization of information; travel and conference planning; financial and legal procedures.

BUS 204   Business Communications   4(4-0)

Prerequisite: Typewriting ability and BUS 125. This course emphasizes the organization of clear, concise, easy-to-understand documents by application of basic business theory in communication. On-campus sections will use the microcomputer or electronic typewriter to prepare and edit documents in addition to classroom instruction. Off-campus sections will receive classroom instruction only.

BUS 206   Legal Vocabulary and Forms Preparation   4(4-0)

This course utilizes basic legal terminology and procedures of general and specialized areas of law. It defines legal terms and their uses in legal contexts. Legal forms are prepared in class.

BUS 207   Medical Tranacription and Terminology   4(4-2)

Prerequisite: BUS 199, WRI 119 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 tha self-correcting typewriter or the microcomputer. Emphasis is on development of accuracy and knowledge of medical terminology for the transcription of reports. The class will consist of lecture, group discussion and transcription of assignments. The lecture sessions will cover various aspects of terminology and transcription. This includes a discussion of various types of medical reports, special typing rules, component parts of medical terminology, proofreading and ethical and legal aspects and sources of employment. The lecture session will also include a discussion of the cases to be transcribed.

BUS 210   Administrative Development for Office Personnel   3(3-0)

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.

BUS 215   Records and Information Management I   4(4-0)

This course includes 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.

BUS 216   Records and Information Manegement II   3(3-0)

Prerequisite: BUS 215 and previous typing. This course is a concentrated study of planning, organizing and controlling records and information management systems and emphasizes the role of records management in integrated information systems. The student will use the microcomputer to complete some exercises.

BUS 217   Micro-Records   2(2-0)

The student will become familiar with the general terms of micrographics, the function and operational theory of related micrographic equipment and elementary principles of microfilm creation and use.

BUS 218   Records and Information Management Data Base Office Applications   4(4-6)

This course provides practical, hands-on experience using a data base management system with IBM microcomputers. Activities will allow the student to create, maintain, search and retrieve records, and create reports. The current software, Q & A, also provides experience using artificial intelligence.

BUS 220   Office Systems Management   3(3-0)

This course emphasizes the principles of office management, the role of the office as a service center as well as part of a system, structure and design; workflow; procedures; job analysis; and issues relating to personnel selection, salary administration, productivity and budget.

BUS 221   Human Resource Management in the Automated Office   4(4-0)

This course emphasizes the increasing role of human resource management in a modern organization subject to changing governmental and legal requirements, increasing demands for a higher skilled and better motivated work force as well as intensifying foreign competition.

BUS 222   Advanced Medical Transcription   4(4-6)

Prerequisite: BUS 207. This course is designed to develop skill in defining, writing and transcribing words and phrases commonly used in medical language. Actual medical reports from hospitals are utilized for transcription.

BUS 230   Office Seminar   .5(.5-0)

BUS 231   Office Seminar   1(1-0)

BUS 232   Office Seminar   2(2-0)

Classroom instruction is given on special topics of current interest. The length of the seminar determines the amount of "P-Z" credits earned. Contact the Department of Office Administration at (517) 483-1587 for specific seminar topics.

BUS 233   Profassional Secretary Seminar   .5(.5-0)

Bus 234   Professional Secretary Seminar   1(1-0)

BUS 235   Profassional Secretary Seminar   2(2-0)

Seminars in the Professional Secretary series are designed to prepare employed secretaries and students who are nearing the end of their course of study for the Certified Professional Secretary and the professional Legal Secretary examinations. The topics for each seminar will vary. Contact the Department of Office Administration at (517) 483-1587 for specific seminar topics.

BUS 240   Office Internship (Fall Term)   3(0-6)

BUS 241   Offica Internship (Winter Term)   3(0-6)

BUS 242   Office Internship (Spring Term)   3(0-6)

BUS 243   Office Internahip (Summer Term)   3(0-6)

Approval for an office internship is based on the successful completion of basic business courses. Placement is made in an approved treining 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.

BUS 275   International Business Communication   4(4-0)

The need to communicate effectively across national barriers is becoming more acute as the United States competes increasingly in the international business arena. This course is designed for managers and office support personnel to help familiarize them with the dynamics of communication in business interactions on an international level. The content of the course deals with various business cultures, language barriers and protocol.

Court and Conference Reporting (CCR)
Department of Office Administration
Division of Business

First Year CCR—Day Sequence Courses

CCR 101   Machine Shorthand I   6(8-0)

This course is specifically designed for basic touch shorthand computer-compatible theory taught on a stenograph machine developing notetaking accuracy from 92 percent to 96 percent or better.

LANSING COMMUNITY COLLEGE

CCR 102   Machine Shorthand II   6(8-0)

Prerequisite: CCR 101. This course is specifically designed for continuation of the basic touch shorthand computer-compatible theory taught on the stenograph machine, developing notewriting accuracy from 92 percent or better.

CCR 103   Machine Shorthand III   6(8-0)

Prerequisite: CCR 102. This course is specifically designed for speed building in machine shorthand at the rates of 100 to 120 words per minute (wpm) in the areas of literary and jury charge dictation.

CCR 104   Machine Shorthand IV   6(8-0)

Prerequisite: CCR 103. This course is specifically designed for advanced speed building in machine shorthand at the rates of 120 to 140 wpm in the areas of literary and jury charge dictation.

Second Year CCR Classes

CCR 201   C.A.T. Xscribe   2(1-2)

Prerequisite: CCR 211. 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: CCR 104. This course includes two-voice testimony dictation and machine shorthand speed building up to 140-160 wpm.

CCR 212   Q & A II   4(4-0)

Prerequisite: CCR 211. This course includes two-voice testimony dictation and machine shorthand speed building up to 160-180 wpm.

CCR 213   Q & A III   4(4-0)

Prerequisite: CCR 212. This course includes two-voice testimony dictation and machine shorthand speed building up to 180-200 wpm. It also introduces four-voice testimony.

CCR 214   Q & A IV   4(4-0)

Prerequisite: 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 210-240 wpm.

CCR 221   Jury Charge I   2(2-0)

Prerequisite: CCR 104. This course includes jury charge dictation and machine shorthand speed building up to 120-140 wpm.

CCR 222   Jury Charge II   2(2-0)

Prerequisite: CCR 221. This course includes jury charge dictation and machine shorthand speed building up to 140-160 wpm.

CCR 223   Jury Charge III   2(2-0)

Prerequisite: CCR 222. This course includes legal argument dictation, jury charge dictation and machine shorthand speed building up to 170-180 wpm.

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 and argument dictation is also included.

CCR 231   Literary I   4(4-0)

Prerequisite: CCR 104. This course includes literary dictation and machine shorthand speed building up to 110-130 wpm.

CCR 232   Literary II   4(4-0)

Prerequisite: CCR 231. This course includes literary dictation, and machine shorthand speed building up to 130-150 wpm.

CCR 233   Literary III   4(4-0)

Prerequisite: CCR 232. This course includes literary dictation and machine shorthand speed building up to 150-170 wpm.

CCR 234   Literary IV   4(4-0)

Prerequisite: CCR 233. This course includes literary dictation and machine shorthand speed building up to 170-190 wpm.

CCR 240   Court Internship   4(1-6)

Prerequisite: Q & A speed of 200 wpm and Literary speed of 150 wpm. Students placed in this internship will spend 10 to 12 hours per week with officials, deposition and hearings reporters writing and transcribing notes in proepr form in order to learn courtroom, conference, hearings and deposition techniques and procedures.

CCR 251   Medical/Technical Testimony I   2(2-0)

Prerequisite: CCR 250. This course includes medical and technical dictation and machine shorthand speed building. Dictation speeds are 130-150 wpm.

CCR 252   Medical/Technical Testimony II   2(2-0)

Prerequisite: CCR 251. This course includes medical and technical dictation and machine shorthand speed building up to 150-170 wpm.

CCR 253   Medical/Technical Testimony III   2(2-0)

Prerequisite: CCR 252. This course includes medical and technical dictation and machine shorthand speed building. Dictation speeds are 170-190 wpm.

CCR 254   Medical/Technical Testimony IV   2(2-0)

Prerequisite: CCR 253. This course includes medical and technical dictation and machine shorthand speed building. Dictation speeds are 170 to 190 wpm.

Data Entry (DE)
Department of Office Administration
Division of Business

DE 101   Fundamentals of Data Entry   4(0-8)

Prerequisite: Typing 35 wpm, reading test. The basic concepts of data entry operations are learned on the IBM Personal Computer. Data entry, editing and document handling skills are also developed in this course.

DE 102   Key To Diskette   4(0-8)

Prerequisite: DE 101. This course is directed toward the refinement of the skills attained in DE 101. The student will enter data onto a diskette, learn complex job layouts, and the use of program and data diskettes on the IBM 3742 Key Diskette. At the completion of the course, the student should have acquired the skills needed for employment.

DE 103   Advanced Data Entry—Visual Display Terminal   4(0-8)

Prerequisite: DE 102. Students will learn new types of formatting, more complex exercises, documentation handling on the microcomputer; and expand their knowledge of common formats of input and output devices for data entry.

Word Processing (WP)
Department of Office Administration
Division of Business

WP 101   Introduction to Office Automation   4(4-0)

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. A concept course—no hands-on experience is provided.

WP 102   Proofreading   2(2-0)

The course is designed to teach proofreading and editing skills essential to the production of accurate and coherent business communications.

WP 103   Keyboarding on the Computer   3(3-0)

Development of basic keyboarding skills on the microcomputer. Emphasis is upon speed and on accuracy. Designed for students having no previous typing experience.

WP 105   Machine Transcription   4(4-4)

Prerequisite: BUS 101 and BUS 125/WRI 119. This course is designed for the production of mailable communications by using transcribers, recorded cassettes and microcomputers. Development of proficiency in spelling, punctuation, grammar and business vocabulary is emphasized.

WP 130   Word Processing Seminar   .5(.5-0)

WP 131   Word Processing Seminar   1(1-0)

WP 132   Word Processing Seminar   2(2-0)

WP 133   Word Processing Seminar   3(3-0)

Prerequisite: Typing ability. These seminars are designed to acquire or expand skills end abilities in the word processing field. One-half credit seminars cover specific functions on various software packages. One- and two-credit seminars cover basic and advanced training for various software packages. These word processing seminars are continually being developed and updated to offer the community the opportunity for an introduction to or an intensive refresher for a specific skill area. For more information, contact the Department of Office Administration at (517) 483-1587.

WP 205   Word Processing Management   4(4-0)

This course will include identifying methods of developing 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.

WP 213   Fundamentals of DOS for Word Processing—
           Microcomputer   3(3-0)

Prerequisite: BUS 100 or WP 103 or equivalent. This course is designed to introduce the student to the IBM Personal Computer and compatibles. Terminology associated with personal computer hardware and software will be discussed. The major emphasis will be placed on the student learning how to use the IBM Personal Computer Disk Operating System. Class may be taken on an arranged basis in the Interactive Learning Center.

WP 214   Word Processing, Beginning—WordPerfect 5.1   4(4-6)

Prerequisite: BUS 101 or equivalent. This course is designed to develop a basic word processing skill on the IBM Personal Computer using IBM WordPerfect software for the rapid production, revision and retrieval of routine business documents, i.e., letters, envelopes, memorandums, tables, reports, short manuscripts and repetitive correspondence. Class may be taken on an arranged basis in the Interactive Learning Center.

WP 216   Business Graphics and Spreadsheet
           on the Microcomputer   4(4-4)

This course combines in-depth training in business graphics and spreadsheets. The course is divided into two parts with a combination of learning applications at the end of the course.

WP 217   Desktop Publishing—WordPerfect 5.1   3(3-3)

Prerequisite: WP 214 or WordPerfect 5.1 experience. Instruction is given in advanced functions of WordPerfect 5.1 to produce specialized business documents such as brochures, newsletters, flyers, proposals and office forms with a combination of text and graphics.

WP 219   Word Processing, Advanced—WordPerfect 5.1   4(4-6)

Prerequisite: GPA of 2.0 in WP 214. This course is designed to expand on word processing skills previously developed in WP 214.

WP 221   Integrated Office Automation Applications   4(4-6)

Prerequisite: Knowledge of beginning and advanced WordPerfect 5.1, Graphics and Lotus. This course is a simulation of skills previously developed in machine transcription, word processing, spreadsheets, graphics, calendaring and communications. Introduction to additional applications such as database management and merging software packages will be taught.
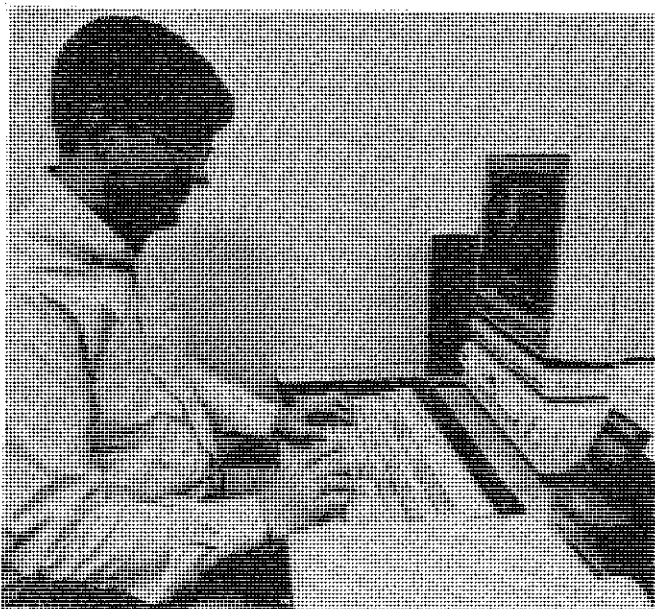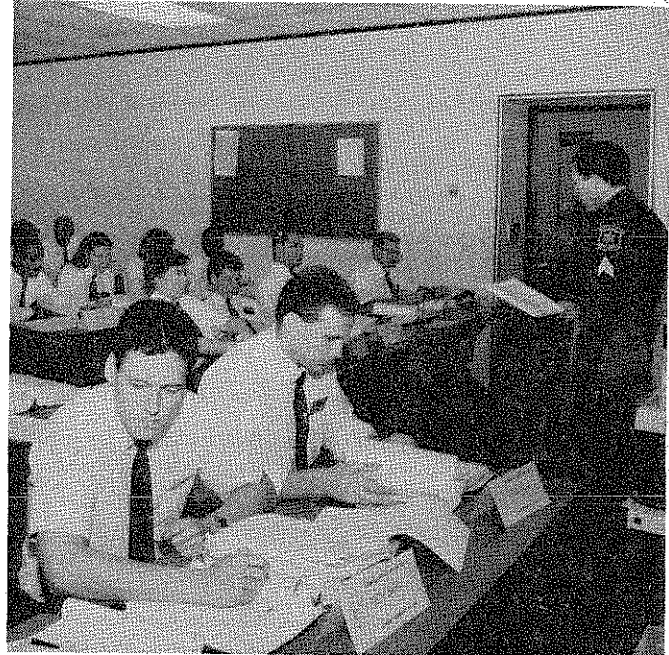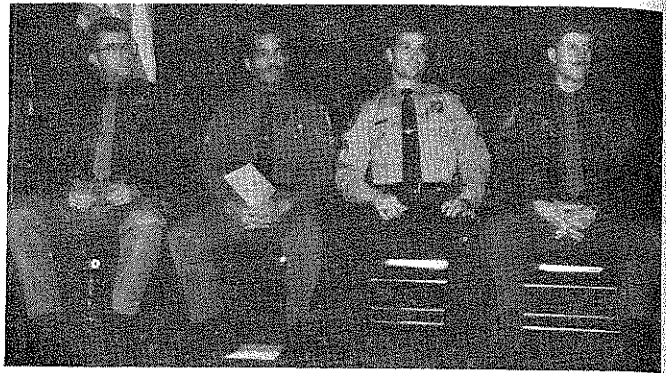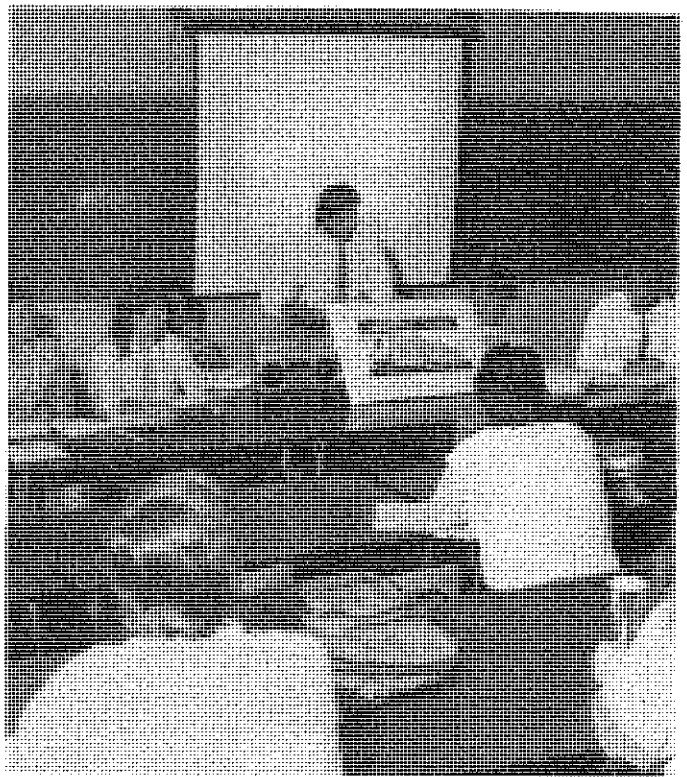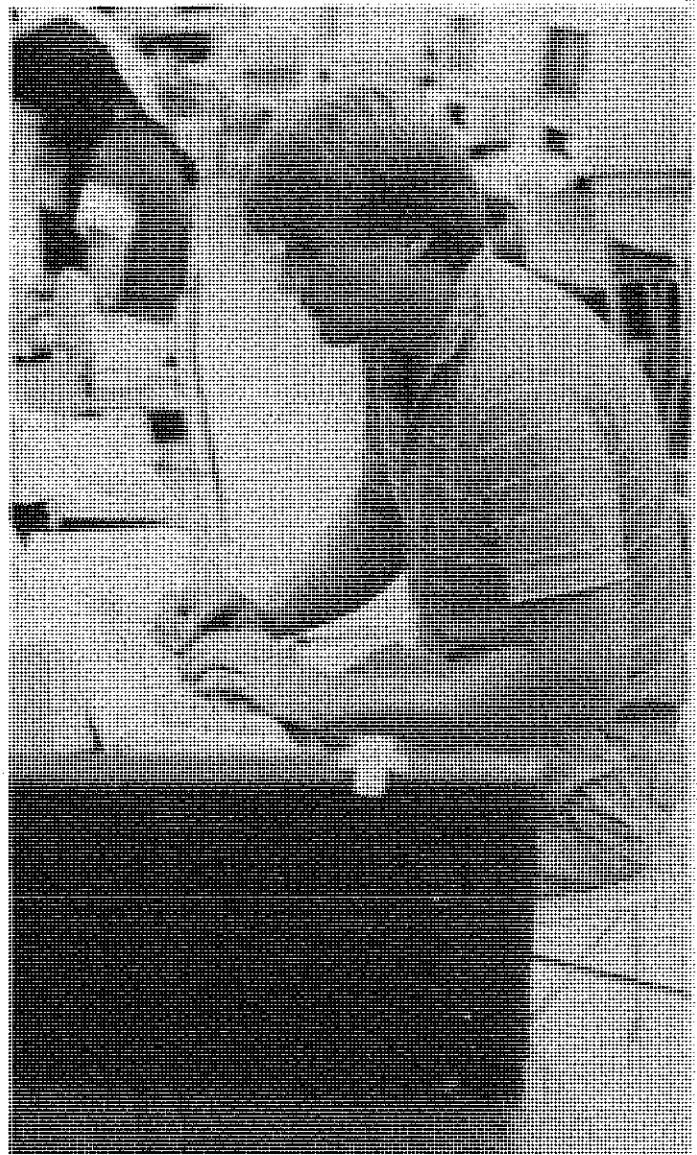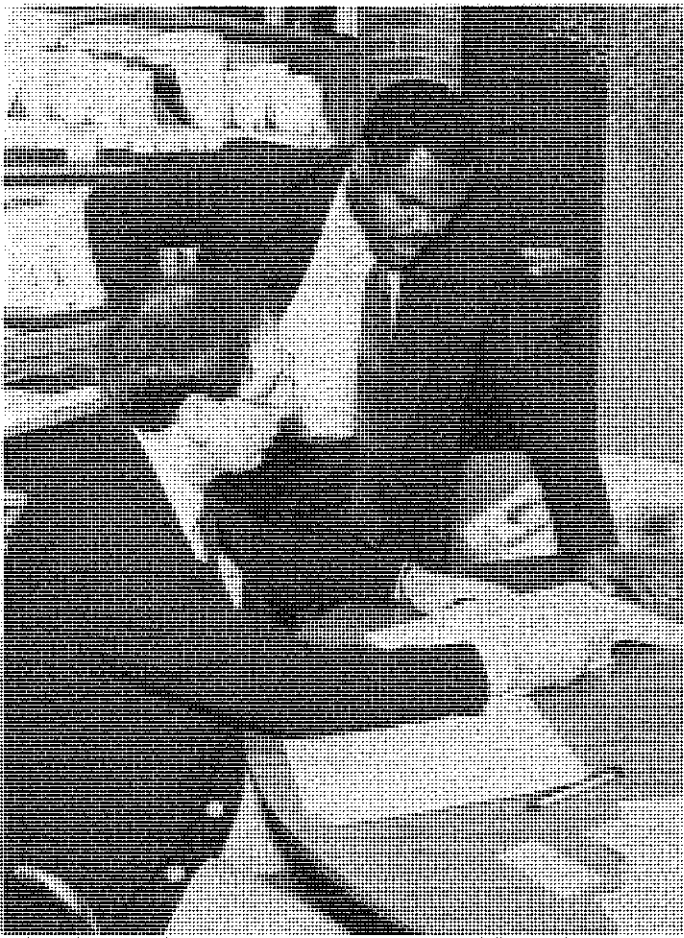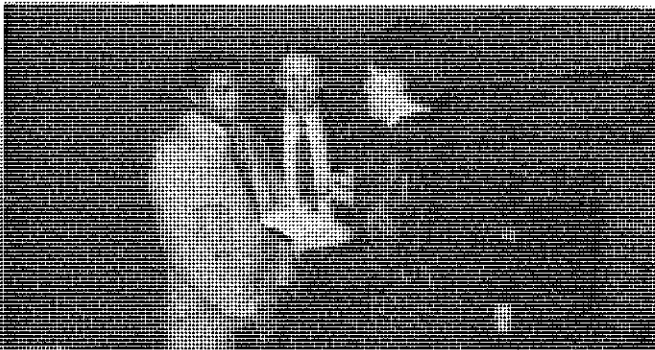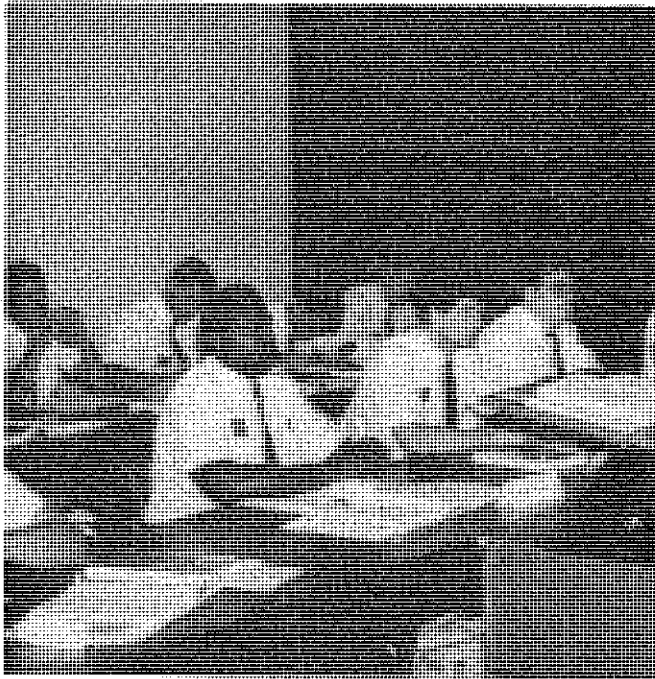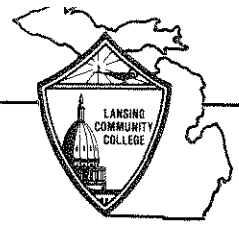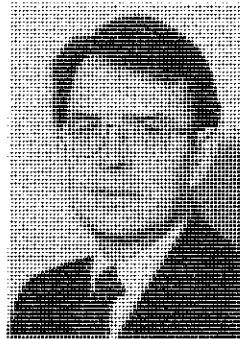
Lansing Community College

Executive Director
Charles H. Bettinson

BUSINESS AND INDUSTRY INSTITUTE

Account Executive Services
Business Development Services
Management Development Center
Program Development
Small Business Development Center

BUSINESS AND INDUSTRY INSTITUTE

Executive Director: Dr. Charles H. Bettinson
Plaza, GVT 139

The purpose of the Business and Industry Institute is to serve as the College division with primary responsibility for outreach and contact between Lansing Community College and business, industry, government and labor organizations in the College's service area. The BII meets its responsibility by coordinating the College's comprehensive program of account executive contacts, by carrying out targeted outreach activities and by developing partnerships between business and industry and the College.

The Business and Industry Institute, in cooperation with the College's other divisions, serves as a broker for specialized and customized education and training services from across the College. The Institute works with the other divisions to ensure that the customized training services provided by each division of the College are flexible and timely in meeting the needs of business, industry, labor and government.

To further strengthen the College's customized training programs and services, the Institute is responsible for the development and operation of a computerized business and industry information system. This college-wide system is used by all College divisions to monitor and record the College's activities in business and industry outreach, customized training and fee-for-service programs.

Divisional Objectives

The program and service objectives of the Division are:

To serve as the College's primary outreach and contact organization to business, industry, government, labor and non-profit organizations through the co-ordination of a program of account executive contacts within the community.

To function as a broker between the College and the community for customized education and training programs and services.

To build and maintain close working partnerships between Lansing Community College and business, industry, government, labor and non-profit organizations.

To promote the growth and development of business and industry and the overall economic development of the community through business development and counseling services and through community access to customized training and education services for business development.

To coordinate the development and delivery of a group of specially designed short-term courses and seminars, through the Management Development Center, which address the management development training needs of private and public sector employees.

To develop and maintain a computerized information system which records and monitors the College's outreach and customized training activities with business and industry.

Organization of Resources

The Business and Industry Institute is uniquely organized to serve as the out-reach and brokering organization for the customized training programs and services of Lansing Community College. Staff from the Business and Industry Institute work closely with other College divisions and departments to ensure that BII staff are up-to-date regarding the new courses and programs offered by the College. Through this close working relationship, College staff are also immediately made aware of the specialized and evolving education and training needs of mid-Michigan employers. By facilitating the activities of specialized interdivisional outreach teams of faculty and staff from across the College, the Business and Industry Institute has access to the College resources most appropriate for meeting the needs of business, industry, labor and government.

Customized Training Support Council

The brokering and outreach functions of the BII are supported by the Customized Training Support Council. This Council is comprised of representatives from across the College, and provides a systematic method of ensuring that College resources are used most effectively and efficiently to meet the education and training needs of business, industry, labor and government.

Through the Customized Training Support Council, divisional representatives share information and develop strategies to deliver education and training which directly meets the long and short-term needs of the community. The Council functions as an information sharing and planning body and not as an academic forum or as an arbitrative body.

The objectives of the Customized Training Support Council are:

1. Maintain open communication among College divisions to maximize efforts in outreach and service to business, industry, government and labor.
2. Develop an information retrieval data base (Outreach and Contact Information System).
3. Serve as a clearinghouse for outreach and service information.
4. Design prototype format for such things as company contracts, pricing and billing.
5. Develop a marketing plan for customized and fee-for-service training.

Representatives involved in business, industry and government outreach and customized training in each of the divisions are assigned to serve on the Council.

The individuals appointed by the respective Vice President/Dean/Executive Director from each division. Each of the following College divisions participate:

> Arts and Sciences Division
> Business Division
> Business and Industry Institute
> College Services
> Student Personnel Services Division
> Technology and Applied Sciences Division
> TeleCommunication and the Arts Division

Program Development

The Program Development Unit of the Business and Industry Institute at Lansing Community College designs and develops behaviorally-based, modularized and customized training programs for delivery to business, industry, government and labor. Program Development staff provides on-call assistance for faculty, administrators, and clients in planning, analyzing, designing, developing and evaluating customized training materials.

Account Executive Services

The Business and Industry Institute maintains close working relationships with mid-Michigan-based employers by directing the activities of a group of Lansing Community College account executives. These members of the BII staff make direct contacts at targeted organizations in the College's service area. By providing this direct link, account executives can efficiently broker the programs and services of each of the College's divisions. This unique outreach concept provides business and industry with College contacts who have years of practical experience. These account executives, working with representatives from other College divisions, will assess training needs and identify customized training solutions which can enhance productivity.

The Business and Industry Institute utilizes the customized training and instructional development resources of the Management Development Center and the Small Business Development Center.

BUSINESS DEVELOPMENT SERVICES

Director:
Plaza, GVT 139

Business Development Services coordinates a comprehensive program of account executive contacts between Lansing Community College and business, industry, labor and government agencies in the mid-Michigan area. College account executives, working with Business Development Services, regularly contact community-based employers in both the private and public sector to provide access to Lansing Community College results-oriented training programs. Through its role as a broker, Lansing Community College, customized training resources are available to the community through Business Development Services staff.

In addition to its role as a broker of services from across the College, Business Development Services' education and training services end programs of the Management Development Center and the Small Business Development Center are available for program development and delivery. Specialized training activities include: customized management training, small business development services, management seminars, community/business leadership development and foreign trade related training.

Program Areas:

> Management Development Center
> Small Business Development Center
> Outreach Services for Business, Industry and Government

MANAGEMENT DEVELOPMENT CENTER

The Management Development Center supports private and public sector employers in their quest for productivity by presenting professional training programs responsive to their needs. Training programs consist of specially designed seminars covering a wide range of topics including the following:

> Management
> Supervisory Skills
> Personnel Administration
> Marketing and Sales
> Train the Trainer
> Leadership Development

Management Development Seminars (MDC)
Management Development Center
Business and Industry Institute

Open-to-the-Public Management seminars are designed for those who want to improve their supervisory and management skills, who are interested in becoming more effective as trainers or who wish to learn how to better manage their own careers. Scheduling information will appear in the term schedule book.

MDC 217 Management I: Overview 1(1-0)

This seminar will help supervisors analyze their strengths and skills and explore techniques to help them become more effective managers. Participants will be able to manage interactions with employees more effectively using a participative style.

MDC 222 Management II: Overview 1(1-0)

This seminar is designed to help supervisors analyze their management strengths and skills. Participants will explore techniques to help them manage their employees more effectively.

MDC 231 Coping with Difficult People .75(.75-0)

Difficult people create problems! In this practical workshop participants will observe and practice effective strategies for handling difficult people. Participants will be able to reduce the problems difficult people create.

MDC 232 Managing Your Boss .75(.75-0)

There are skills involved in complementing the strengths of one's boss and together forming a productive team. This is a specific "how-to" course that trains each participant how to assess his/her own strengths and weaknesses and those of his/her boss, and how to build on strengths and compensate for the boss' weaknesses. Each person succeeds when his/her boss succeeds.

MDC 233 Leading Diverse Work Groups 2(2-0)

The ability to effectively work with diverse employees has been identified as a critical success factor for the 1990s. Leaders who understand and value cultural differences will be better equipped to work with individuals and promote improved working relationships. In this workshop, specific information about work group diversity will be applied to human resource management, communication, conflict reduction and work group effectiveness.

MDC 902 Teaching Through Demonstration 1(1-0)

This seminar presents several specific strategies for teaching skills in one-on-one training situations. Each strategy is presented and participants are given an opportunity to apply it in simulated activities.

MDC 903 Train-the-Trainer 2(2-0)

New and seasoned trainers can use this seminar to rethink training strategies and to sharpen skills in developing and facilitating training activities. Emphasis is on the practical strategies of organizing and conducting instructional or training activities.

MDC 904 Instructional Media for Trainers 1(1-0)

This seminar introduces trainers to media available to make instruction more effective. Transparencies, charts, slides, videotapes, audiotapes and other media will be discussed. Participants will analyze their own instructional programs and identify the appropriate media to use.

MDC 905 Using Audiovisual Equipment 1(1-0)

In this basic level seminar, participants will learn how to set up, operate, trouble shoot and disassemble the following equipment: 16MM film projector, overhead projector, slide projector, audio tape player, video recorder and flip chart.

MDC 906 Applying the Principles of Adult Learning .75(.75-0)

This seminar considers four fundamental principles of adult learning: motivating resistant learners, creating a positive climate for learning, using participative training techniques, and developing learning contracts. Participants learn to incorporate these principles into their instructional activities.

MDC 926 Managing Discipline .75(.75-0)

Learn the difference between preventive and corrective discipline, how to utilize documentation and the critical steps of due process to ensure the rights of all individuals.

MDC 928 Effective Presentation Skills 1(1-0)

This two-day seminar covers the techniques of an effective presentation: planning, preparing and presenting. This seminar culminates with the participants giving a 10-minute presentation. Emphasis will be on practicing and critiquing presentation skills.

MDC 929 Leading Effective Meetings .75(.75-0)

Effective meetings are vital to the productivity and morale in an organization and depend largely on the multiple skills of a leader. Those skills include planning and preparing for a meeting, conducting a meeting and following up on a meeting. This seminar will help participants develop the skills necessary for leading effective meetings.

MDC 932 Employee Selection Interviewing .75(.75-0)

Learn a three-stage model for interviewing (planning, conducting the interview and deciding), the characteristics of an effective interview, and legal and illegal pre-employment inquiries. Practice skills for conducting the interview.

MDC 943 Problem Solving .75(.75-0)

Problems occur in all areas of life. This seminar acquaints participants with practical strategies and workable skills for handling problems, and it offers practice activities for solving problems as a group or as an individual.

MDC 950 Dynamic Leadership .5(.5-0)

Dynamic leaders create and translate visions into reality within their organizations. This seminar describes the essential features and functions of dynamic leadership in the context of the present world market. Participants will be inspired to develop their abilities as dynamic leaders.

MDC 951 Strategic Planning .5(.5-0)

Effective strategic planning is essential for long-term success in the world market. It focuses on doing the right thing, on being effective. This seminar teaches a team approach to strategic planning.

MDC 952 Team Building .5(.5-0)

Dynamic leaders develop dynamic teams. They need followers, but followers who can function independently and cooperatively in the organizational endeavor. This seminar instructs participants in practical strategies for creating dynamic teams.

MDC 953 Leading Group Decision Making .5(.5-0)

In order for groups to work together well, leaders must be skilled in people functions and task functions. They must be able to lead a group through a process of decision-making while maintaining positive relationships and high quality decisions. This workshop will train participants in the skills of leading and the processes of decision-making.

MDC 959 Developing Instructional Materials 2(2-0)

Learn how to write goals and objectives, sequence instruction, identify strategies, develop assessment tools and evaluate instruction materials. During the seminar you will develop materials for your own training programs.

MDC 960 Guiding the Training Process 2(2-0)

Learn the necessary skills for facilitating a training program. Includes asking and answering questions, administering and debriefing exercises, giving constructive feedback, guiding small group discussion, demonstrating and prompting learners.

MDC 964 Employee Performance Appraisal .75(.75-0)

Learn how to organize performance appraisals, establish effective performance standards and conduct effective performance appraisal meetings. Develop your skills in the performance appraisal process.

MDC 968 Dynamics of Relationships .75(.75-0)

This workshop will train participants to develop positive, productive relationships. Participants will develop a variety of skills to deal with specific kinds of problems.

MDC 970 Managing Organizational Change .75(.75-0)

This seminar will enable participants to manage the change process in their current work environment. Participants will identify the positive and negative effects of change on the organization, subgroups within the organization and the individual; will develop alternatives for implementing change; and will identify support systems in the internal and external environment.

MDC 972 Job Descriptions and Performance Standards .75(.75-0)

Learn to analyze basic tasks and key elements of jobs, write job descriptions which meet legal requirements and set performance standards that match the position description.

MDC 978 Solving Time Management Frustrations .75(.75-0)

Time management problems originate from numerous sources. Participants will identify and analyze these sources to provide a firm basis for solving frustrating time problems. This seminar will teach how to establish goals and schedules, and utilize time management skills.

MDC 984 How to Get Things done .75(.75-0)

This seminar is designed for first-level supervisors, office managers, and administrative assistants. It will sharpen communication skills and time management capabilities as well as encourage an action plan.

MDC 985 Coaching Work Performance .75(.75-0)

Learn to address performance problems so that employees know what's wrong and how to correct it. Learn how to reinforce expected performance, communicate expectations and utilize effective feedback methods and goal-setting.

MDC 988 Stress Management .75(.75-0)

This seminar will help participants prepare an individual stress management plan that can be applied to personal or work situations. Topics include uncovering stressors, assessing their impact and utilizing coping techniques.

MDC 996   Skills Training for Supervisors   3(3-0)

Participants are trained in the essential processes of supervision: leading with a participative style, giving instructions, enhancing the natural motivation of employees, communicating effectively, "active listening," improving employee performance, conducting performance appraisals, problem solving, managing time and building team cohesiveness.

Small Business Management (SBM)
Management Development Center
Business and Industry Institute

SBM 250   Starting a Business   .75(.75-0)

Entrepreneurs are usually required to wear many "hats" and may have no idea what skills and processes are involved in starting and operating a small business. This seminar will familiarize participants with these. If you decide that owning a business is feasible, this seminar can help you find assistance to begin and maintain a business operation.

SBM 252   Financial Management for Small Busines   .75(.75-0)

This seminar offers practical presentation, application and practice of basic financial management techniques, such as analyzing and applying information from balance sheets, income statements and cash flow statements.

SBM 254   Systems for Record Keeping   .75(.75-0)

This seminar increases participants' working knowledge of the accounting process and the maintenance of accounting records, including ledgers, income statements and the preparation for income tax time.

SBM 256   Legal Considerations for Small Business   .75(.75-0)

This seminar will familiarize participants with the legal considerations of business formation, consumer protection, employee relations, competition and benefit packages.

SBM 260   Developing a Marketing Plan   .75(.75-0)

This seminar familiarizes participants with marketing and provides an opportunity to write a marketing plan. Participants will learn to use a six-step process that involves obtaining data, developing the plan and analyzing the results.

SBM 262   Advertising for Small Business   .75(.75-0)

This seminar will teach how to plan, create, select and evaluate advertising. Anyone involved with small businesses can learn to develop an advertising plan that is unique to the special needs of their organizations.

SBM 264   Customer Relations   .75(.75-0)

Anyone who sells, greets or provides services to customers can discover new ways for creating good customer relations and enhancing the image of their organization. By understanding customer personalities and how to deal with them, assessing their own motivation and esteem needs, and communicating effectively, participants can serve their customers in a positive manner.

SBM 270   Computers in Small Business   .75(.75-0)

In this seminar, participants learn the fundamentals of selecting and using a computer in the small business environment.

SBM 276   Writing a Business Plan   .75(.75-0)

Participants can expect to become familiar with business planning and how to develop and maintain a business plan. Most creditors require a business plan before reviewing a loan application. Be prepared. Write your business plan with the information provided at this seminar.

SBM 280   Business Planning   .5(.5-0)

In this seminar, participants will learn how to use their business plan as an ongoing management tool to reduce risk and enhance chances for success. It includes the use of small computers to assist in the process.

SBM 282   Small Business Taxes   1(1-0)

Federal, state and local governments assess a variety of taxes on businesses. This seminar will identify the various taxes which pertain to small businesses in Michigan and provide information on the tax returns used and the filing responsibilities of the business.

SBM 284   How to Staff Your Small Business   .75(.75-0)

This seminar will train participants in various aspects of employment procedures, including interviewing, evaluating potential employees and following the law.

SBM 288   Evaluating and Buying a Business/Franchise   .75(.75-0)

This seminar will familiarize participants with statistics needed, legalities involved and the evaluation of the seller's books in order to determine the business' worth. It will also acquaint participants with the considerations and background information needed to buy a franchise.

SBM 290   Pitfalls to Avoid When Going into Business   .75(.75-0)

This seminar, presented by a successful business person, can save you both problems and money. What to AVOID! What to LOOK OUT FOR! Where to SEEK HELP! Where to CUT COSTS! How to help ensure your chances of a successful business venture! Come and learn from those who can help.

SMALL BUSINESS DEVELOPMENT CENTER

Director: Deleski Smith
129B Old Central Building

The purpose of the Small Business Development Center is to promote new business development by providing consulting, customized training, information services and networking to those interested in starting or improving the management and operation of a small business. The Lansing Community College Small Business Development Center was established in cooperation with local business, government and community agencies, and is supported by funding from federal and state grants and by Lansing Community College.

The objectives of the Small Business Development Center are:
* To contribute to the economic growth and development of the mid-Michigan area by assisting the small business community.
* To function as a centralized resource to assist small business management.
* To provide information concerning available services and education programs relating to small business operations.
* To provide seminars to familiarize participants with principles relating to small business development and management.
* 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.
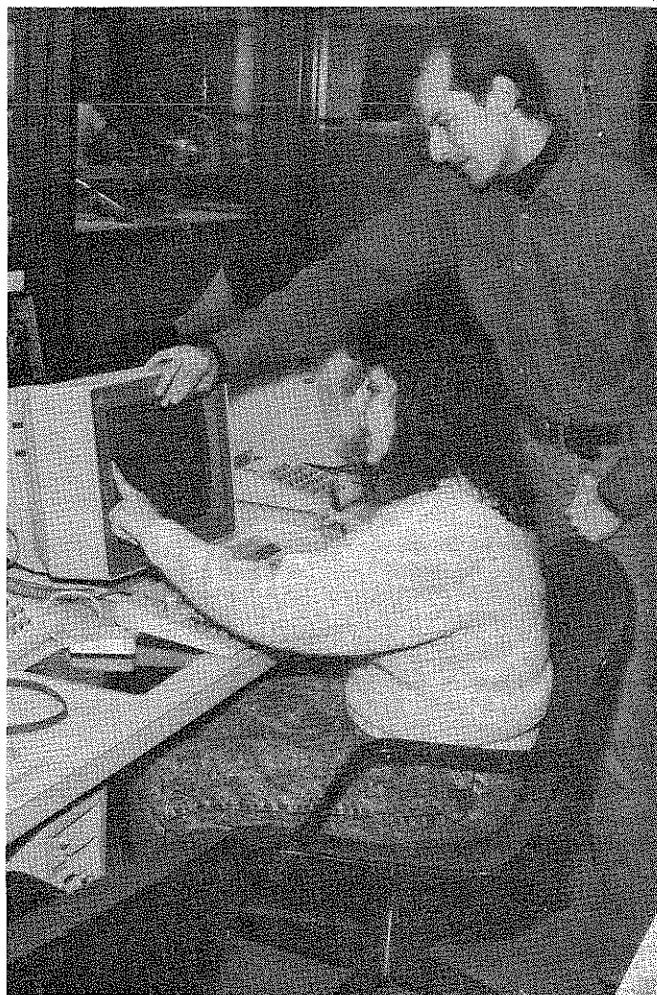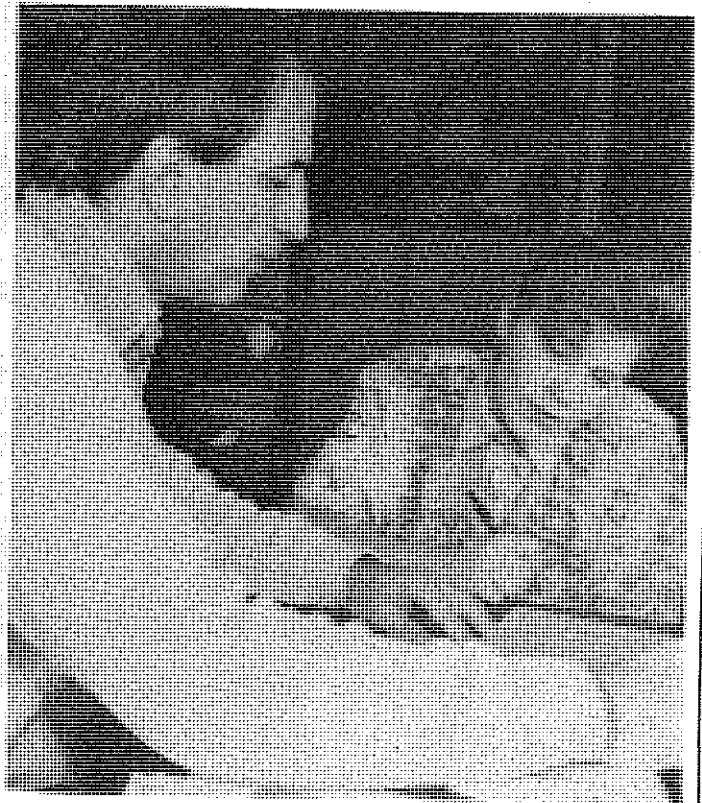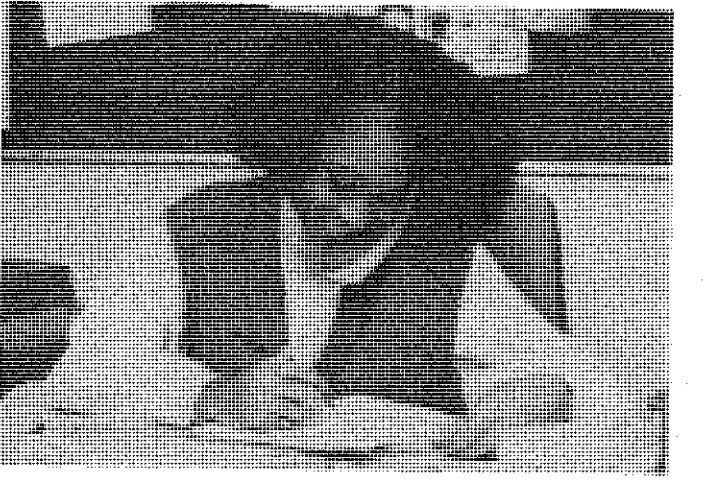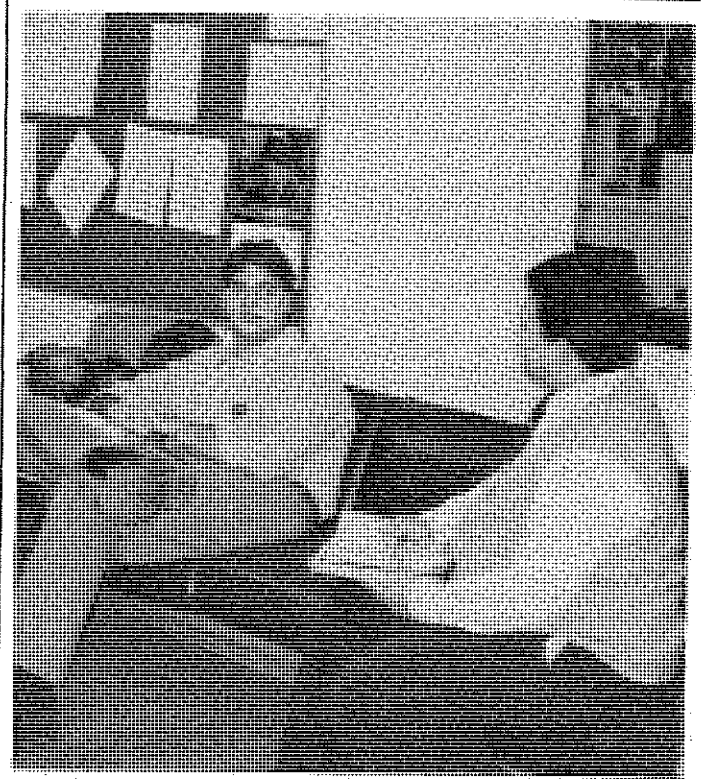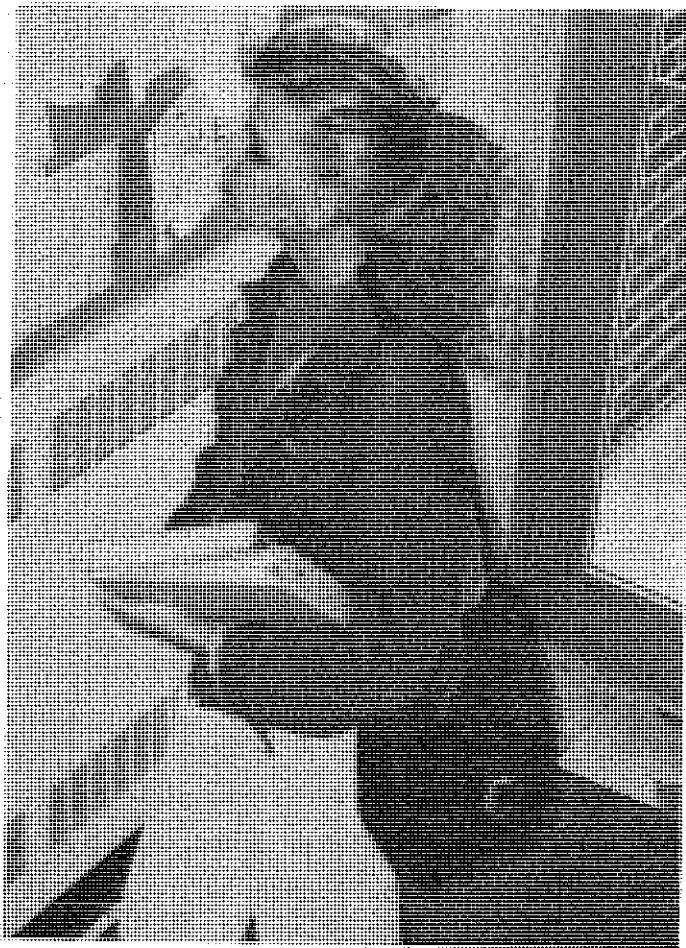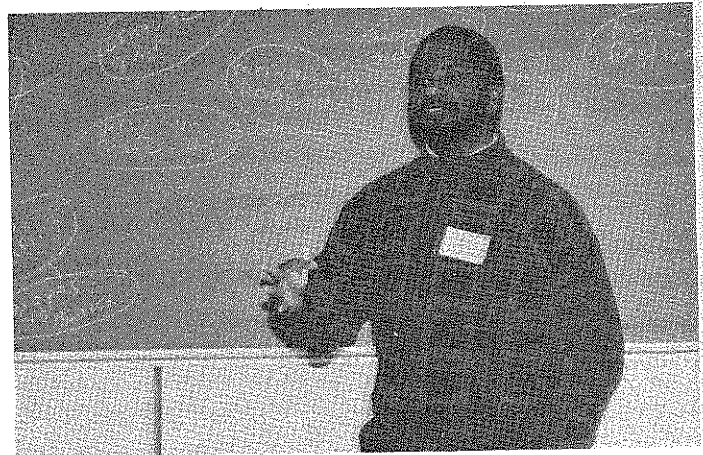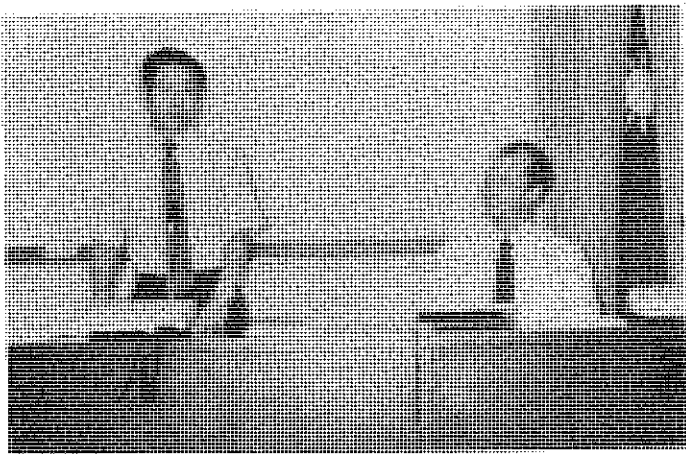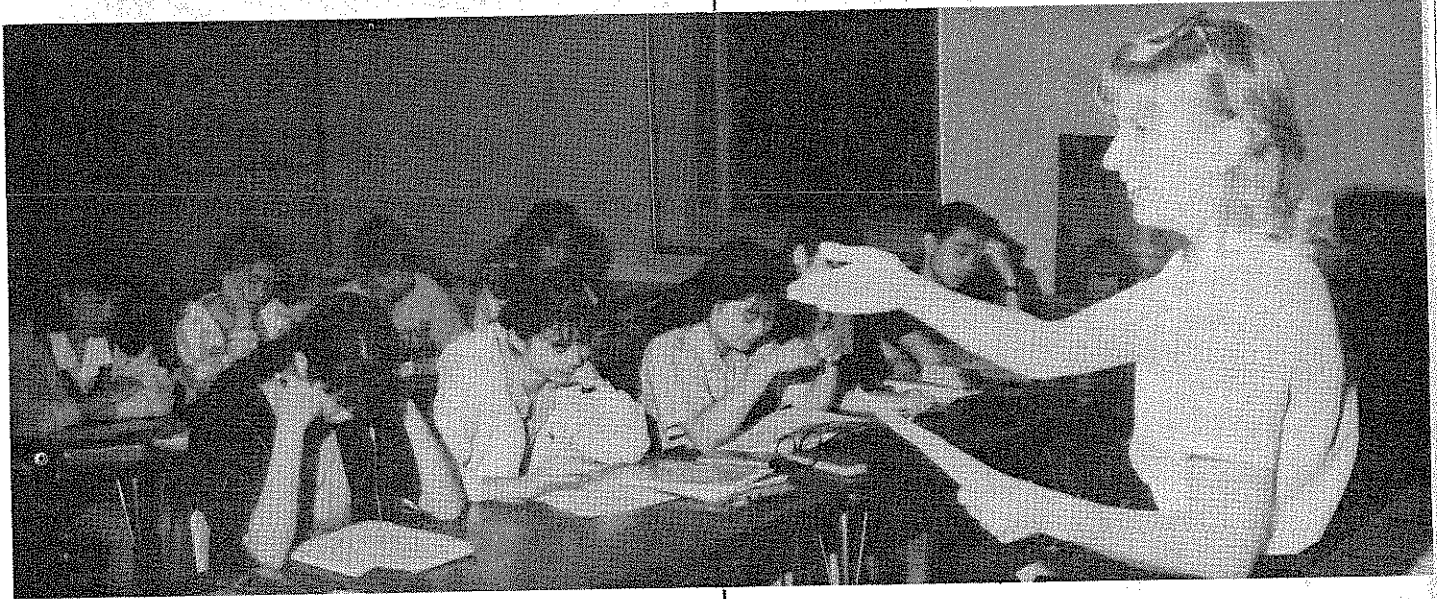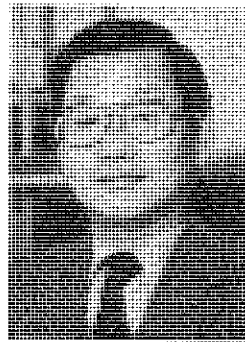
Lansing Community College

Director
Tai Sung Kim

INTERNATIONAL PROGRAMS

Overseas Programs
Asian Resource Center
Special Projects

LANSING
COMMUNITY
COLLEGE
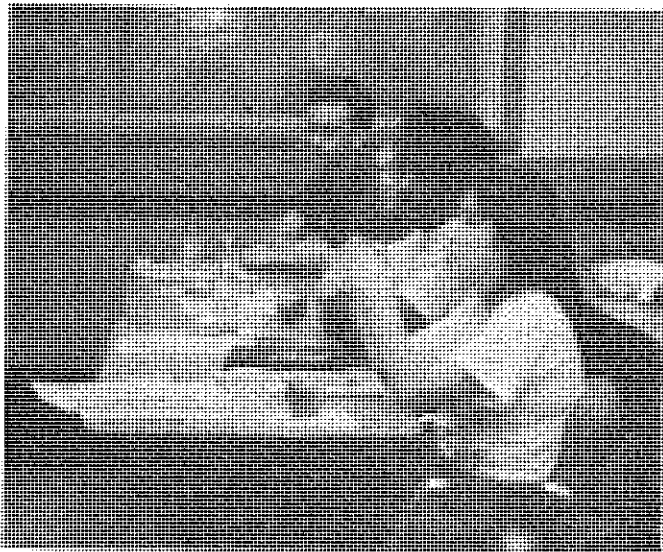
INTERNATIONAL PROGRAMS

Director: Dr. Tai Sung Kim
Plaza, GVT 139

Lansing Community College programs, faculty and students make an impact locally, nationally and internationally. The term community college now refers to an interdependent world community. LCC's International Programs prepare students to become more competitive in a global marketplace and benefit from its cultural diversity. The College's international dimension includes sister college partnerships with institutions in Japan, France, Mexico, Taiwan, Germany, Korea and the People's Republic of China.

International Programs at Lansing Community College provides a broad array of opportunities which assist the College as it progresses toward accomplishing its strategic goal of internationalizing its curriculum. The International Programs Office develops and coordinates the College's overseas study programs, coordinates activities between the College and its sister colleges overseas, coordinates activities of scholars visiting LCC from other countries and provides curriculum development. In addition, International Programs develops and offers special training programs for foreign students and faculty.

All foreign languages are located in the Department of Humanities.

PROGRAM AREAS:

Overseas Programs
Asian Resource Center
Special Projects

OVERSEAS PROGRAMS

The main purpose of the College's overseas programs is to develop and coordinate overseas academic work/study programs and sister college relationships. Through these work/study programs, Lansing Community College students are provided with opportunities to work, travel and study overseas.

Japan Adventure

In cooperation with the Biwako Kisen Steamship Company, the College has developed the Japan Adventure, a unique four-term academic work/study program in Japan. The students selected for the Japan Adventure program begin their study in Lansing and continue for a nine-month period at the College's educational center, "Michigan House," in Otsu, Shiga Prefecture, Japan. Their studies focus on the Japanese language and culture, history, society and business practices. Participants earn one year of academic credit. While in Otsu, they participate in an internship in hospitality services aboard the "Michigan," a cruise ship owned by Biwako Kisen Steamship Company.

The selection process for the Japan Adventure program is competitive. The application deadline is the end of October, and the students are notified in mid-November. The Japan Adventure group begins its year of study in January. For further information, contact the International Programs Office.

Japan Horizon

The Japan Horizon program, like the Japan Adventure program, is a four-term academic work/study program in Japan. The students selected for the Japan Horizon program begin their study in Lansing and continue for a nine-month period at the College's educational center, "New Horizon Center" in Sakaide, Japan. Their studies focus on the Japanese Language and culture, history, society and business practices. Participants earn one year of academic credit. As part of their educational experience, the students are involved in an internship in a restaurant complex, Keihan Fisherman's Wharf located at the foot of Seto Ohashi, the bridge connecting Honshu and Shikoku, Japan.

The selection process for the Japan Horizon program is competitive. The application deadline is the end of October, and the students are notified in mid-November. The Japan Horizon group begins its year of study in January. For further information, contact the International Programs Office.

Program Hermandad

Program Hermandad is for students with some background in the Spanish Language. The purpose of the program is to increase cross-cultural knowledge and understanding of Mexico while obtaining specific career training through an internship in Guadalajara, Mexico. Students begin Fall Term at LCC enrolled in intensive Spanish and courses in the curriculum area of International Administrative Assistant, International Business or International Hotel Administrator. Winter and Spring terms are spent in Guadalajara, Jalisco, Mexico at the Universidad Autonoma de Guadalajara taking courses in the Spanish language and serving an internship related to the chosen curricular area.

ASIAN RESOURCE CENTER

The Asian Resource Center is operated by the International Programs Office in order to provide instructional and reference materials on Asian language and culture to faculty and staff from K-12 school districts and community colleges throughout the state. A catalog of resource materials is circulated to school districts and colleges involved in internationalizing their courses and curricula; and materials are circulated to school districts on a loan basis.

SPECIAL PROJECTS

A unique aspect of International Programs at LCC is the opportunity for interaction with students from LCC's sister colleges. Through organized classroom and social activities and short-term and long-term homestay experiences, students practice language skills and learn first hand about each other's culture. For more information about the homestay program, contact the International Programs Office at (517) 483-1006.

The active involvement of the College in international programs has created numerous special international projects on a contracted basis between the College and interested outside organizations. These projects are developed on a fee-for-services basis and provide further opportunities for LCC faculty and staff to become involved in international learning activities.

For example, the International Programs Office has coordinated special training programs for Faculty Fellows from polytechnical colleges in the People's Republic of China and has developed special summer English-as-a-Second Language (ESL) and culture programs for LCC sister-college students from Japan and Korea. Overseas study tours for business and industry leaders have been arranged, and state-wide conferences on international education have been organized for participants from colleges and universities across the state.
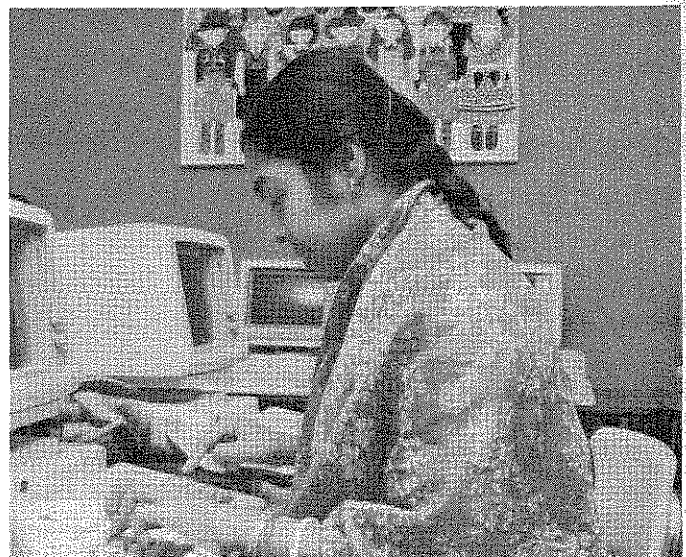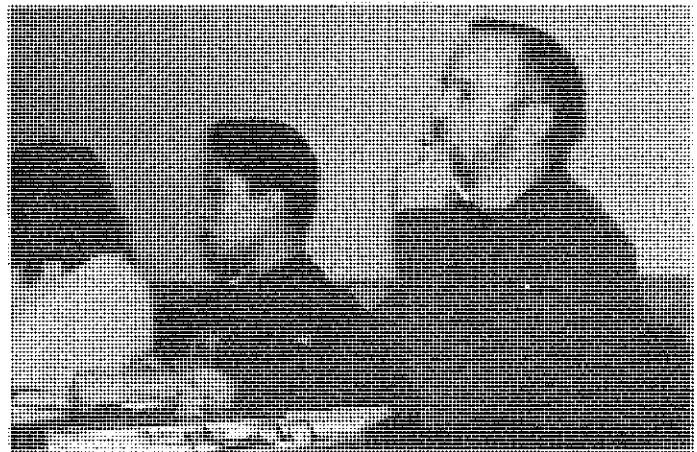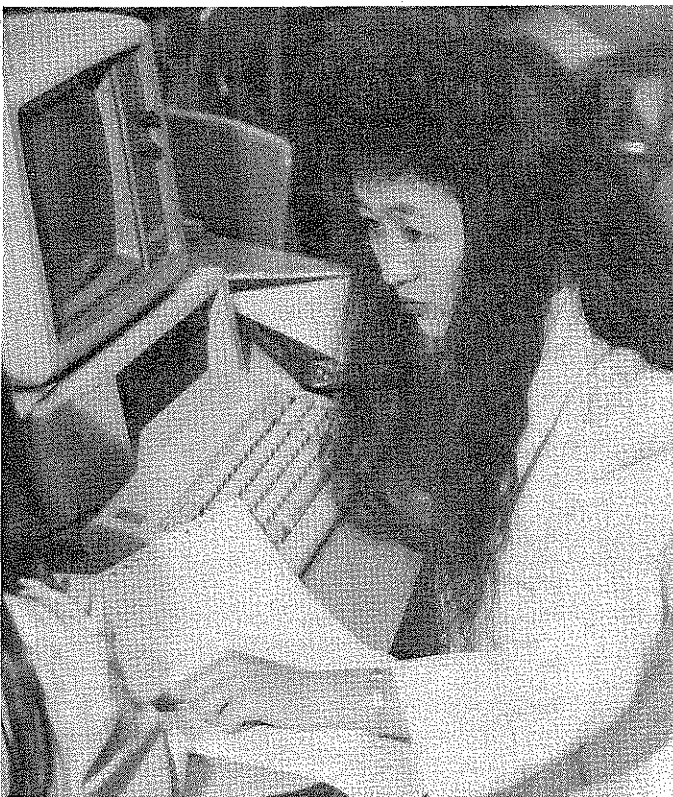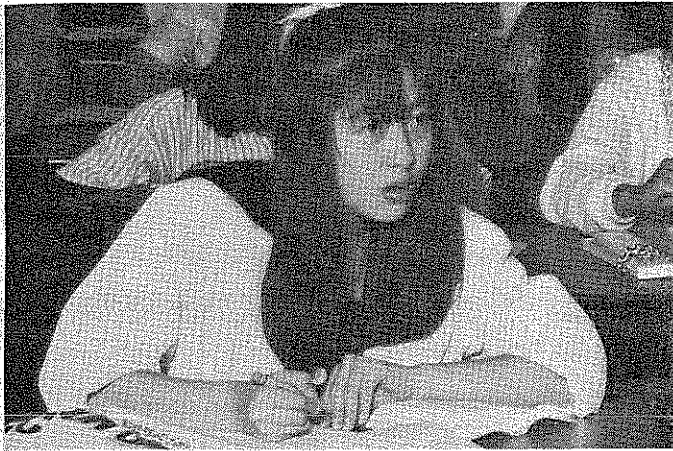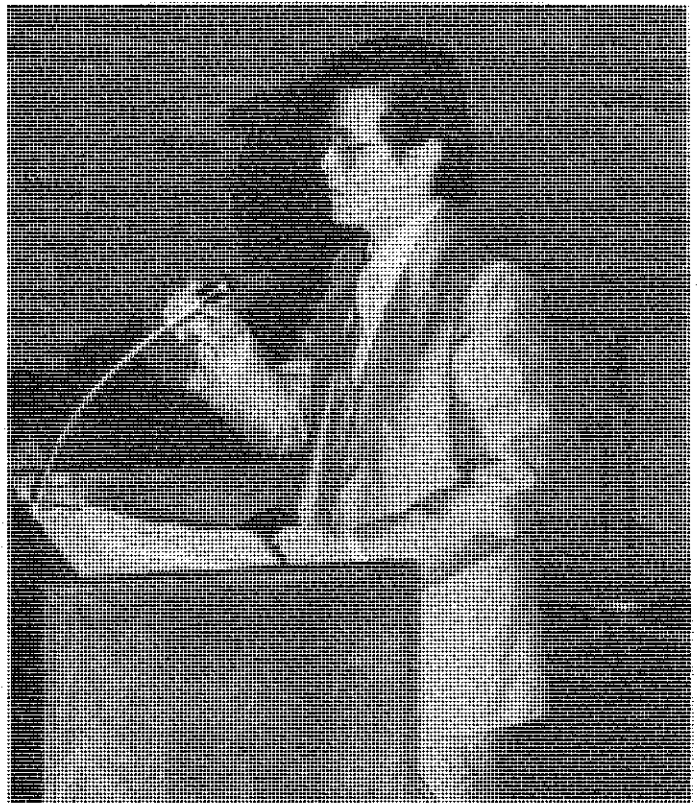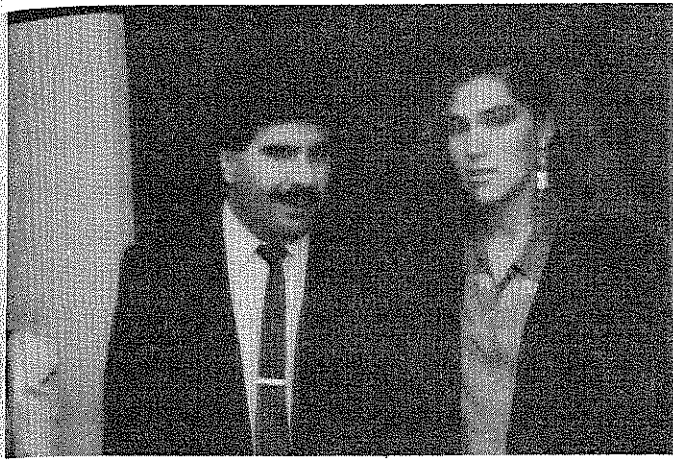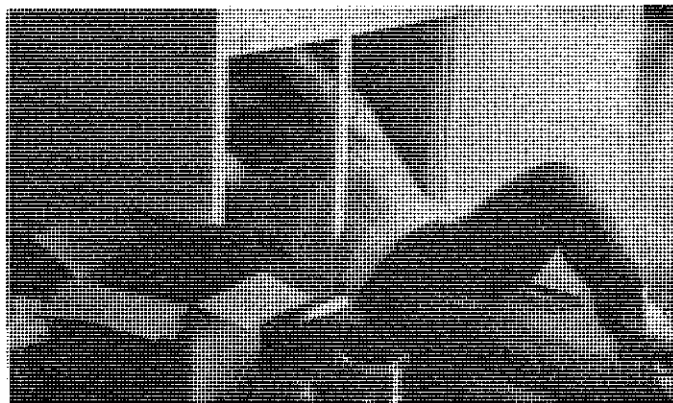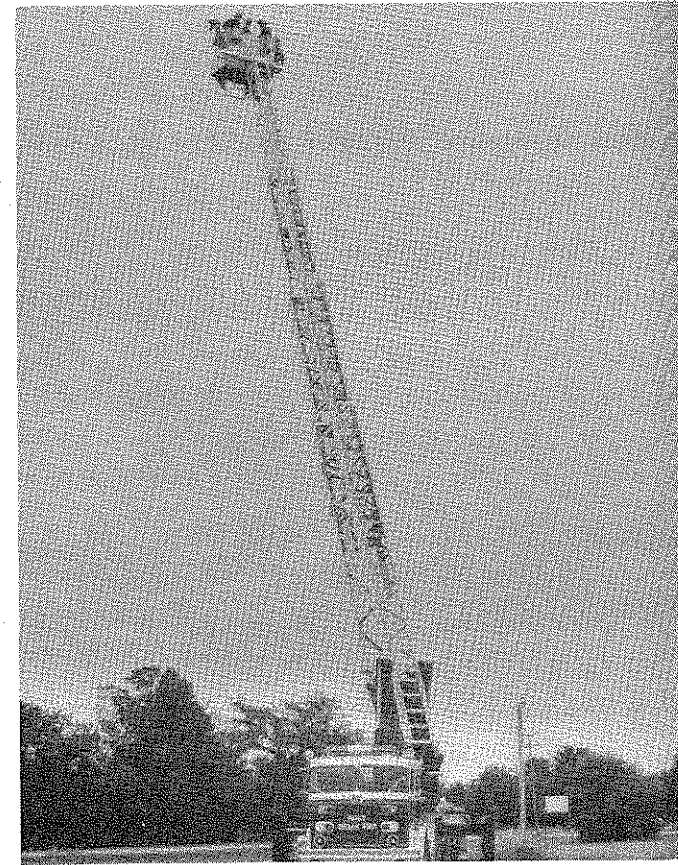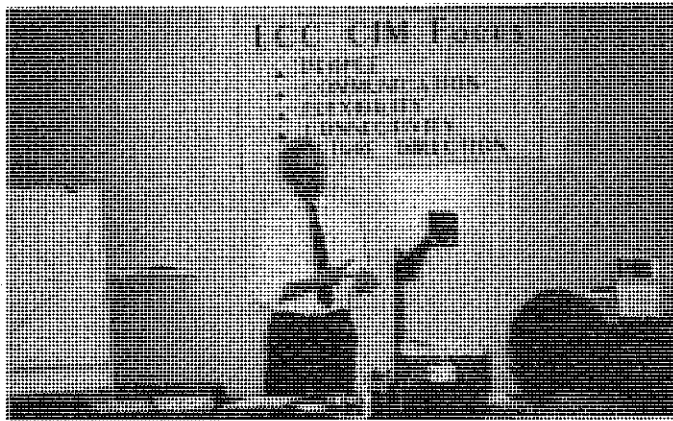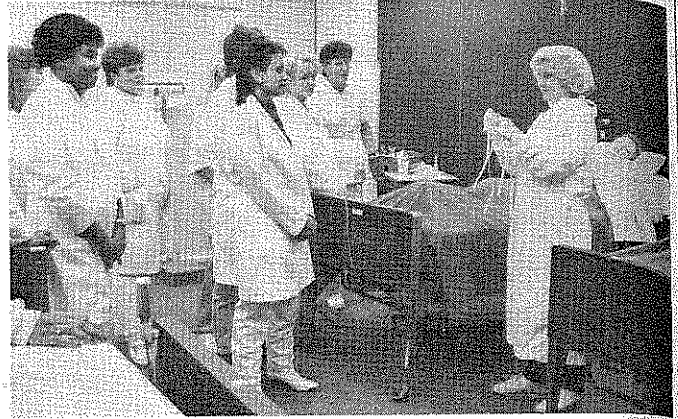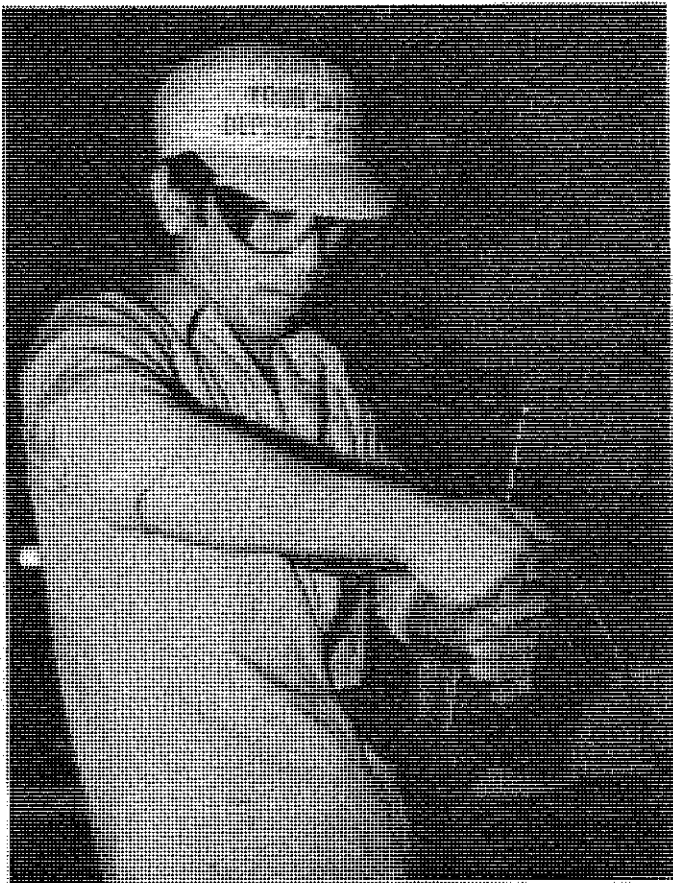
Lansing
Community
College

Dean William R. Darr

DIVISION OF TECHNOLOGY AND APPLIED SCIENCES

Automotive Technology
Aviation Technology
Construction and Engineering Technology
Health Careers Technology
Industrial Operations Technology
Manufacturing Technology

LANSING
COMMUNITY
COLLEGE

DIVISION OF TECHNOLOGY AND APPLIED SCIENCES

Dean: William Darr
Room 220-I Gannon Vocational Technical Building

The 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 selected continuing education courses offered by the Department of Health Careers, all courses offered by the Division can be applied to a certificate or degree curriculum. However, students who wish to take individual courses may do so without being required to enroll in either a certificate or degree curriculum.

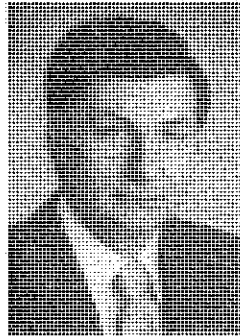The Division of Technology and Applied Sciences includes a listing of all courses offered by the Division. However, from time to time, courses are added to satisfy changing student needs. For this reason, anyone desiring a course not listed in the catalog should contact a Department Director or the Dean for further information.

Divisional Purposes

The purpose of the Division of Technology and Applied Sciences has been designed:

1. To meet specific individual needs through single courses, combinations of selected courses, one-year Certificate programs and Associate Degree career programs,
2. To provide an opportunity for students to prepare for one of today's increasingly complex jobs, to become qualified for a more advanced position or to perform better in their present jobs,
3. To provide an opportunity for industries, governmental agencies, hospitals, or other organizations wishing specific courses to help their employees perform better in their assigned tasks or to become qualified for advancement,
4. To provide an opportunity for apprentices to enroll in joint "on-the-job" training with local employers and related training at the Community College, and
5. To provide fee-for-service contracts for companies wanting specific training.

Organization of Resources

In addition to the College staff or full-time faculty, the career programs feature a team of adjunct 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.

The Division also utilizes advisory committees for all programs to ensure that the programs are state-of-the-art and meeting industry needs. Many programs require licensure or certification for graduates in order for them to become employed after completion of their program.

The modern facilities and equipment in the Division make it possible for the students to receive training on equipment currently being utilized in industry.

Major Programs

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) apprenticeships.

Associate Degrees

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 the curriculum guide for the Associate Degree in General Technology (#830).
2. Completion of a minimum total of 90 credits.
3. A grade point average 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 31 technical fields and eight health fields (a total of 39 career 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)
- Architectural Technology

- Automotive Technology
- Auto Body Repair
- Avionics Technology
- Aviation Flight Technology
- Aviation Maintenance Technology
- Body Design, Industrial Drafting
- CAD/CAM Engineering Technician
- Chassis Design, Industrial Drafting
- Civil Technology
- Computerized Numerical Control
- Dental Assistant
- Dental Hygiene
- Diagnostic Medical Sonography (Ultrasound) Technology
- Diesel Engine Technology
- Electrical Technology
- Electronics Technology - Communications Option
- Electronics Technology - Biomedical Option
- Electronics Technology - Digital Option
- Fire Science Technology
- General Maintenance
- General Technology
- Heating, Air Conditioning and Refrigeration
- Industrial Automation
- Industrial Drafting Technology
- Industrial Technology
- Interior Architectural Design
- Landscape Architectural Technology
- Machine Maintenance
- Machinist Toolmaker
- Nursing (Career Ladder LPN – RN)
- Production and Inventory Management
- Quality Control Technology
- Radiation Therapy
- Radiologic Technology
- Respiratory Therapy Technology
- Residential Building
- Welding Technology

Certificates

Certificates are designed to meet specialized needs of students in certain career fields. Such curricula vary in duration from a few days for an intensive workshop to an extensive program requiring additional work beyond the associate degree. These certificate curricula, like the Associate Degree curricula, are described in the departmental sections of this catalog.

The following is a list of certificate curricula:

- Auto Body Repair
- Auto Mechanics
- Computer Repair Technician
- Dental Assistant
- Dental Business Assistant
- Diagnostic Medical Sonography (Ultrasound)
- Die Maker - Tool and Die Maker
- Diesel Engine Technology
- Emergency Medical Technician
- General Maintenance
- Heating and Air Conditioning
- Industrial Drafting
- Industrial Technology
- Machine Repair
- Machinist/Toolmaker
- Medical Assistant
- Millwright
- Pipefitting
- Nursing (Career Ladder LPN)
- Radiation Therapy Technology
- Residential Builder
- Respiratory Therapy
- Small Engine Repair
- Surgical Technology
- Truck Driver Training
- Welding

Certificates of Achievement

Currently, the Division of Technology and Applied Sciences offers a total of 25 curricula leading to a Certificate of Achievement. Sixteen of these curricula are in general technical fields and nine of these are in the health field. Like the Associate Degree curricula, these Certificate of Achievement curricula are listed in the subsequent sections of this catalog devoted to the offerings of the departments of the Division.

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 upgrade the working effectiveness of individuals by the improvement of 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 usually be applied 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 Sciences.

Transfer Curricula

Although many students transfer to professional schools or into four-year university programs 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 curriculum.

Universities and colleges throughout the United States differ widely in courses they accept for transfer. Transferability depends upon the university or college and the curriculum into which the student wishes to transfer. Students planning to transfer to other universities or colleges should contact their transfer institutions or the Lansing Community College counseling office.

Apprenticeship Training

Apprentice training offers an 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 craftsperson or tradesperson. Many of the key people in industry today began as apprentices.

To qualify for an apprenticeship in any of the skilled trades, a student must have mechanical aptitude, perserverance, ambition and initiative. In addition, he/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

Director: Walter E. Hayward
Room 220-F Gannon Vocational-Technical Building

The Automotive Technology Program offers courses under the following course codes:

ATS: Automotive Seminars
AUT: Automotive Technology
TDT: Truck Driver Training
THE: Truck and Heavy Equipment

Automotive Technology is designed to develop service technicians 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 to 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.

Automotive Technology offers three Associate Degree curricula and a series of classes leading to a Certificate of Achievement.

The three Associate Degree curricula are:

Associate in Applied Science - Automotive Technology
Associate in Applied Science - Auto Body Repair
Associate in Applied Science - Diesel Engine Technology

The four Certificate curricula are:

Certificate of Achievement - Automotive Technology
Certificate of Achievement - Auto Body Repair
Certificate of Achievement - Diesel Engine Technology
Certificate of Achievement - Small Engine Repair

Associate in Applied Science Degrees

The Associate Degrees in Applied Science for Automotive Technology are 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 Degree are set forth in the section devoted to the Division of Technology and Applied Sciences. Curricular guides for Associate Degrees are available in the Dean's Office, Technology and Applied Sciences, GVT Room 220. Students in degree curricula are provided the opportunity to practice diagnostic and repair skills in a specialized area of their choice.

Certificate Curricula

The Automotive Certificate of Achievement curricula are designed to provide a student with job-entry skills for employment in the automotive service trade. The certificate curricula consist of practical courses providing the skills needed to compete in today's job market. Curricular guides are also available in the Automotive Department office.

Courses completed in Automotive Technology Certificate curricula are transferable toward an Associate Degree of similar nature.

COURSE DESCRIPTIONS

Automotive (AUT)
Automotive Technology
Division of Technology and Applied Sciences

AUT 100   Auto Service I   4(2-4)
Basic tools and equipment, safety, lubrication, exhaust systems, precision measurement and basic oxyacetylene welding. The student is required to spend a minimum of 20 hours per term reviewing slides and tapes of the program. Course 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. Course fee.

AUT 111   Tune-Up I   4(2-4)
Prerequisite: AUT 210 or instructor approval. A lecture-laboratory course covering fuel systems, equipment operations and tune-up procedure. Course 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. Course fee.

AUT 120   Auto Drive Train   4(2-4)
Prerequisite: AUT 100 or concurrent. Servicing clutches, manual transmissions, universal joints, differentials and rear axles. Course fee.

AUT 121   Automatic Transmission I   4(2-4)
Prerequisite: AUT 120. A basic course for automatic transmission repair. Course fee.

AUT 122-123 Automatic Transmission II-III each   4(2-4)
Prerequisite: AUT 121 and AUT 122. Advanced automatic transmission repair. Course fee.

AUT 130 Auto Engines
4(2-4)

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. Course fee.

AUT 133 Small Engines I
3(2-2)

Basic course covering service and repair of two-cycle and four-cycle small gas engines. Each student is required to supply a small engine for laboratory work. Course fee.

AUT 134 Small Engines II
3(2-2)

Prerequisite: AUT 133. A continuation of Small Engines I with more emphasis on laboratory work with larger, more complex engines and accessories. Each student is required to supply a small engine. Course fee.

AUT 135 Chain Saw Repair
3(2-2)

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. Course fee.

AUT 136 Marine Engine Repair
3(2-2)

Covers the basics of outboard engine servicing including carburetion, ignition and troubleshooting malfunctions. Course fee.

AUT 137 Motorcycle Repair I
3(2-2)

Covers the theory of operation of a motorcycle and basic service procedures, including tune-up, wheel service, brake service and drive mechanism. Course fee.

AUT 140 Auto Brakes
4(2-4)

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. Course fee.

AUT 150 Auto Suspension
4(2-4)

Prerequisite: AUT 100 or concurrent. Instruction in wheel alignment, wheel balancing and front-end part replacement procedures. Course fee.

AUT 160 Auto Air Conditioning
4(2-4)

Prerequisite: AUT 110. Instruction in the operating principles of auto air conditioning systems and repair procedures. Course fee.

AUT 165 General Auto Mechanics
3(2-2)

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. Course fee.

AUT 166 General Auto Mechanics and Women
3(2-2)

Student will gain fundamental understanding of how an automobile works and will be able to perform basic maintenance and repair procedures. Lectures cover engines, fuel and exhaust, electrical system, cooling and lubrication, transmission, steering, brakes and suspension. Lab work includes: checking and changing oil filters, belts, hoses, tires, bulbs and fuses; demonstration/identification of automotive components; use of basic hand tools.

AUT 180 Auto Body Welding
4(2-4)

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, heat shrinking and plasma arc cutting. The plastic section covers identification of weldable plastics, selection of appropriate welding procedures, repair of soft fascia and vinyl repair. Course fee.

AUT 181 Metal Finishing
4(2-4)

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. Course fee.

AUT 182 Panel Repair and Replacement
4(2-4)

Prerequisite: AUT 181. Instruction in repair of larger dented panels, with the emphasis on replacing panels. Course fee.

AUT 183 Major Collision Repair
4(2-4)

Prerequisite: AUT 182. Emphasizes restoration of a collision-damaged automobile to its original condition, including estimating the total job, glasswork and painting. Course fee.

AUT 184 Frame Straightening
4(2-4)

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. Course fee.

AUT 185 Painting I
4(2-4)

An auto painting course designed to teach basic refinishing procedures. The student must refinish at least one panel in acrylic enamel or acrylic lacquer at the end of the course. Course fee.

AUT 186 Painting II
4(2-4)

Prerequisite: AUT 185. Advanced auto painting techniques for spot repair, color matching and troubleshooting. Course fee.

AUT 187 Painting III
4(2-4)

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. Course fee.

AUT 188 Auto Body Repair and Painting
4(0-8)

Prerequisite: AUT 180, 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. Course fee.

AUT 200 Basic Diesel Maintenance
4(2-4)

Covers theory of operation of both two- and four-cycle diesels, maintenance operation, model identification, systems maintenance including fuel system, lubrication system, cooling system; and naturally aspirated, supercharged and turbocharged in take systems and their repair. Course fee.

AUT 201 Advanced Diesel Maintenance
4(2-4)

Prerequisite: AUT 200. Theory and practice in maintenance repair and minor rebuilding of head assemblies and ancillary equipment (i.e., water pumps, air pumps, oil pumps and generator starters), tune-up and electrical systems, systems diagnosis and troubleshooting. Course fee.

AUT 202 Diesel Engine Rebuilding
8(4-8)

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. Course fee.

AUT 203 Diesel Fuel Systems
4(2-4)

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. Course fee.

AUT 210 Auto Electrical Theory II
4(2-4)

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. Course fee.

AUT 215 Automotive Computers
4(2-4)

Prerequisite: AUT 111 and AUT 210. Theory of operation and repair procedures on computerized engine and emission control systems. Operation of dwell meters, tachometers, computerized engine analyzers, digital high impedance multimeters and other equipment used in servicing electronic engine control systems. Course fee.

AUT 237 Motorcycle Repair II
4(2-4)

Prerequisite: AUT 137. A continuation of Motorcycle Repair I with emphasis placed on engine overhaul, transmission service and repair. Course fee.

AUT 251 Suspension II
4(2-4)

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 minor suspension and frame repair and rack and pinion steering on Chrysler, Ford and General Motors products. Course fee.

AUT 271 Engine Laboratory*
6(0-12)

Prerequisite: AUT 130 and instructor approval. A laboratory course to develop trade entry skill. Course fee.

AUT 272 Tune-Up and Electrical Laboratory*
6(0-12)

Prerequisite: AUT 112 and instructor approval. A laboratory course to develop trade entry skill. Course fee.

AUT 273 Brake Laboratory*
6(0-12)

Prerequisite: AUT 140 and instructor approval. A laboratory course to develop trade entry skill. Course fee.

AUT 274   Suspension Laboratory*   6(0-12)

Prerequisite: AUT 150 and instructor approval. A laboratory course to develop trade entry skill. Course fee.

AUT 276   Automatic Transmission Laboratory*   6(0-12)

Prerequisite: AUT 122 and instructor approval. A laboratory course to develop trade entry skill. Course fee.

AUT 280   Auto Service Laboratory*   6(0-12)

Prerequisite: AUT 100 and instructor approval. A laboratory course for practicing skills learned in previous courses. Course fee.

*Approval may be given to take any of these lab courses twice (for a maximum of 12 credits in each area of specialization).

AUT 291   Automotive Internship   6(1-5)

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 coordinator is required; director must approve training station and working conditions.

Trucks and Heavy Equipment (THE)
Automotive Technology
Division of Technology and Applied Sciences

THE 220   Truck Drive Lines   4(2-4)

Theory and application of the power train system including clutches, torque converters, transmissions and final drives. Course fee.

THE 240   Air Brakes   4(2-4)

Covers air brake systems, their component parts, troubleshooting, design and control systems. Course fee.

Truck Driver Training (TDT)
Automotive Technology
Division of Technology and Applied Sciences

Director: John Theroux
16350 East Dickman Road
Augusta, MI 49012
(616) 731-4125

Curriculum Code 580
12 credits
Course fee

TDT 101   Truck Driver Training

The Truck Driver Training curriculum consists of an intensive course intended to train drivers in the theory and practical application of driving heavy duty, tractor-trailer combination units—both in interstate and intrastate operation. The curriculum also aims to increase the employment possibilities of persons who have never driven commercially and desire to enter this rewarding occupation. The curriculum emphasizes safe driving from start to finish.

Transportation Training prepares the student for a career in the transportation industry. The curriculum 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, Department of Transportation (DOT) safety regulations, map reading, registration and state code. Students will also be required during the training period to successfully complete Michigan's Commercial Driver License written and skills test.

Driving range activities curriculum consist 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, and be eligible for a Temporary Instruction Permit. A prospective student's driving record will be examined before program admission is granted. The student's motor vehicle operating records will be verified through the Michigan Secretary of State.

Enrollment requirements for this program include a Department of Transportation physical examination, ability to communicate in the English language—both spoken and written—and a good driving record.

Students meeting the above criteria are placed on an acceptance list; and student program start dates are determined by application date.

A $100 deposit is required with the application to reserve a space in the class desired. This deposit is refunded on cancellation if the College is notified at least eighteen (18) days prior to the class starting date. There is a 100 percent tuition refund (less $100 deposit) if the student drops during the first week.

Instruction covers a five-week period, 8:00 a.m. to 5:00 p.m., five days a week. Actual driving time is 140 hours with 60 hours of classroom instruction and an extended road trip during the last week. Applicants must know how to shift a straight stick transmission and use a clutch, before attending, as shifting a truck requires double clutching.

Student housing is provided at the Truck Driver Training Facility at no extra charge. No cooking facilities are available; and students must provide their own bedding and laundry.

AVIATION TECHNOLOGY

Director: Gayland Tennis
108 Aviation Technology Center
Capital City Airport, Lansing

Aviation Technology offers instruction in the following areas, under the codes indicated:

AFG: General Maintenance
AFM: Airframe Maintenance
AFP: Powerplant Maintenance
AFT: Flight Technology
AV: Avionics Technology

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, 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 aviation technology at Lansing Community College have achieved excellent reputations in the aviation industry and such graduates can be found working virtually worldwide 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 Aviation Technology curricula at Lansing Community College are fully approved by the Federal Aviation Administration under Curricular Codes 531 and 532.

Aviation Maintenance Technology (AFG, AFM, AFP)

Associate Degree in Aviation Maintenance Technology (AFG) (AFM) (AFP). This 24-month curriculum 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 training in Aviation Maintenance Technology, students will cover a wide variety of subjects dealing with airplanes: reciprocating engines, turbine, fuel systems, propellers, ignition, electrical systems and hydraulic systems. This program requires approximately a total of 1,900 hours of classroom instruction, shop work and laboratory experience divided into the following three areas: airframe and powerplant mechanics general - 440 hours; powerplant mechanic - 770 hours; and airframe mechanic - 825 hours. A waiting list is maintained for admission. The Curriculum Code for this program is 532.

Avionics Technology (AV)

Associate Degree in Aviation Electronic Maintenance Technology (Avionics). This curriculum is designed to prepare the student for a professional career in Aviation Electronic Maintenance and it culminates in the issuance of an Associate Degree in Avionics Technology. Graduates will have achieved the qualifications necessary for an aviation radio repairman cartificate to be issued upon employment by a Federal Aviation Administration certified repair station. Graduates will have passed the general radio telephone license examination, received hands-on bench maintenance and factory approved unit training. The Avionics curriculum covers a broad range of material from aircraft drawings to weather radar. The electrical background includes DC analog circuits of auto pilots to input diodes in radar altimeters and weather radar. This curriculum requires approximately 2,000 hours of classroom instruction, lab work and bench experience. The Curriculum Code is 567.

Flight Technology (AFT)

This curriculum provides training for students who aspire to become professional pilots. It includes the flight, simulator and classroom training to prepare students for the written and practical tests for the private, commercial and instrument pilot certificates.

The curriculum electives include courses leading to certification as: multi-engine pilot; flight instructor; instrument flight instructor or multi-engine flight instructor. Additionally, for the more advanced student, ground and flight training is provided in preparation for the airline transport pilot as well as ground training in preparation for the flight engineer basic and turbojet written exam.

Students are encouraged to take additional elective courses in general education to complete the requirement of 90 credits for an Associate Degree and to prepare them for transfer to a baccalaureate degree-granting institution. The curriculum is approved by the Federal Aviation Administration. The Curriculum Code is 531.

The courses Flight Training I through IX are designed to train the students in flight maneuvers, navigation and instrument flying skills required of the Commercial Pilot with an instrument rating seeking a career as a professional pilot. Each flight training course provides at least 30 hours of concentrated flight training.

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Prerequisites for these courses include: department approval and possession of an FAA Class II medical certificate. Additionally, the student must have attained the age of 17 prior to the start of AFT 202.

All new and continuing flight students are required to meet with the Chief Flight Instructor prior to the beginning of the term to reserve flight times. The student is required to pay a deposit toward his/her lab fees for the upcoming term.

COURSE DESCRIPTIONS

Airframe General (AFG)
Aviation Technology
Division of Technology and Applied Sciences

AFG 100   Aviation Mathematics and Physics   3(3-0)
Prerequisite: Program approval. Fractions, decimals, ratios, proportions, measurements and physics involving fluids, light, heat and electrical application used in aviation maintenance careers.

AFG 101   Basic Electricity   7(5-4)
Prerequisite: Program approval. Basic electrical theory and its application to aircraft and related electrical systems and circuits. Includes AC and DC currents, magnetism, generators, motors, series, series-parallel and electrical relay circuits.

AFG 102   Aircraft Drawing   2(2-1)
Prerequisite: Program approval. Basic drawing applications used in aviation maintenance. Read and interpret drawings and schematics used in production of aircraft parts, components and related systems.

AFG 103   Weight and Balance   3(2-2)
Prerequisite: Program approval. Calculations involving aircraft weight changes and distribution occurring by loading, unloading and equipment installation or modifications. Methods of computing and maintaining required records.

AFG 104   Materials and Processes I   4(2-4)
Prerequisite: Program 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.

AFG 105   Materials and Processes II   5(4-3)
Prerequisite: Program approval. Aircraft construction and methods of cleaning and preserving aircraft structural materials. The non-destructive inspections are conducted by Zyglo, magnaflux and dye penetrants.

AFG 106   Ground Operation and Servicing   2(1-2)
Prerequisite: Program 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.

AFG 107   Maintenance Regulations, Publications,
**   Forms and Privileges**   3(2-3)
Prerequisite: Program approval. Explores various aircraft maintenance publications, forms and records. Introduces regulations involving mechanic limitations and rights and maintenance-accepted practices.

Airframe Mechanics (AFM)
Aviation Technology
Division of Technology and Applied Sciences

AFM 208   Aircraft Structures I   7(5-5)
Prerequisite: Program 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.

AFM 209   Aircraft Structures II   7(3-8)
Prerequisite: Program approval. Studies maintenance practices used in construction, inspection and repair of aircraft metal structures.

AFM 211   Assembly and Rigging   6(4-4)
Prerequisite: Program 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.

AFM 212   Aircraft Fuel Systems   3(2-2)
Prerequisite: Program approval. Covers the study, analysis, troubleshooting and repair of various aircraft fuel systems.

AFM 213   Aircraft Electrical Systems   9(7-5)
Prerequisite: Program approval. Inspection and repair of aircraft electrical circuits and components.

AFM 214   Aircraft Hydraulics and Pneumatics Systems   4(3-2)
Prerequisite: Program approval. Inspection, service and repair of aircraft hydraulics and pneumatic systems and components.

AFM 215   Aircraft Landing Gear Systems   4(3-3)
Prerequisite: Program approval. Study, analysis and troubleshooting of aircraft landing gear and its various warning systems.

AFM 216   Aircraft Environmental and Protection Systems   4(3-2)
Prerequisite: Program 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.

AFM 217   Aircraft Instruments and Communications   4(3-2)
Prerequisite: Program approval. Application of various instrument systems used in pressure, heat, flow and navigation. Identifies types and location of communication, navigation equipment and antenna systems.

AFM 218   Airframe Inspection   3(2-2)
Prerequisite: Program approval. Inspection systems used to meet conformity certification of aircraft and system components.

AFM 243   Aircraft Restoration   3(2-2)
Prerequisite: Program approval. Covers techniques of modern aircraft restoration to include an overview of the regulations pertinent to restoration, and requirements for returning restored aircraft to an airworthy status.

AFM 244   Restoration II   3(2-2)
Prerequisite: Program approval. Covers techniques of dope and fabric and sheet metal restoration. Includes an overview of the regulations pertinent to restoration and requirements for returning restored aircraft to an airworthy status.

AFM 250   Helicopter Maintenance   3(1-4)
Prerequisite: Program approval. Covers theory of flight, structural designs and systems of helicopters. Also studies maintenance practices used in construction, inspection and repair of helicopters.

AFM 251   Helicopter Maintenance II   3(1-4)
Prerequisite: Program approval. Studies maintenance practices used in construction, inspection and repair of helicopters.

Aviation Powerplant (AFP)
Aviation Technology
Division of Technology and Applied Sciences

AFP 219   Engine Electrical Systems   3(2-3)
Prerequisite: Program approval. Study, analysis, service and repair of engine electrical systems and components.

AFP 220   Ignition Systems   7(5-5)
Prerequisite: Program approval. Study, analysis, service and repair of aircraft engine ignition systems and components.

AFP 221   Propeller Systems and Controls   6(4-4)
Prerequisite: Program approval. Covers study, analysis, service and repair of aircraft engine propellers, systems and controls.

AFP 222   Lubrication Systems   4(3-2)
Prerequisite: Program approval. Studies aircraft engine lubrication systems and components.

AFP 223   Engine Fuel Systems I   1(1-1)
Prerequisite: Program approval. Studies and analyzes aircraft engine fuel systems and components.

AFP 224   Engine Fuel Systems II   4(3-3)
Prerequisite: Program approval. Covers aircraft engine carburetion requirements including the application, service and repair of carburetors.

AFP 225   Induction and Exhaust Systems   3(2-2)
Prerequisite: Program approval. Study of aircraft engine induction and exhaust systems; the maintenance, repair and inspection of these systems and components.

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AFP 226   Reciprocating Engine I   7(5-5)

Prerequisite: Program 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.

AFP 227   Turbine Engine I   4(3-2)

Prerequisite: Program approval. Covers the theory of operation and design of various turbine engine powerplants.

AFP 228   Reciprocating Engine II   3(2-3)

Prerequisite: Program approval. Covers practical installation, removal and troubleshooting reciprocating engines and their related systems.

AFP 229   Turbine Engine II   3(2-3)

Prerequisite: Program approval. Covers practical test cell installation and troubleshooting turbine engines and their related systems.

AFP 230   Engine Instrument Systems   3(2-2)

Prerequisite: Program approval. Covers study, analysis, service and repair of engine temperature, pressure and related system indicators.

AFP 231   Engine Troubleshooting and Inspection   4(3-3)

Prerequisite: Program approval. Covers inspection requirements of aircraft engines to meet established conformity and standards of airworthiness. Engine system operations and adjustments are conducted by use of FAA and maintenance publications.

AFP 235   Turbine Helicopter I   3(1-4)

Prerequisite: Program approval. Studies maintenance practices used in construction, inspections, repair and rigging of turbine powered helicopters.

AFP 240   Aviation Maintenance Intern   5(20-0)

Prerequisite: Program approval. Part-time occupational internship in Aviation Maintenance Technology. The internships will be at work stations as established by the intern coordinator.

AFP 241   Aviation Lab Technician Intern   5(25-0)

Prerequisite: Program approval. Part-time occupational internship in Aviation Maintenance Technology. The internship will be at the main Aviation facility airframe and powerplant laboratory.

AFP 242   Preventive Maintenance   3(2-2)

This course will cover the specific items allowed by the Federal Aviation Regulations with reference to preventive maintenance, its importance, its cost saving, its safety related implications and the responsibilities associated with such maintenance. Principles of operation of aircraft systems will be discussed.

Flight Technology (AFT)
Aviation Technology
Division of Technology and Applied Sciences

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 114   Aviation Meteorology   4(4-0)

Prerequisite: AFT 100 or private pilot. 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 116   Aviation Meteorology II   4(4-0)

Prerequisite: AFT 114. A second course in aviation meteorology. This course will emphasize the more practical aspects of meteorology as applied to aviation.

AFT 150   Instrument Pilot Ground School   6(6-0)

Prerequisite: Private pilot. Preparation for the FAA Instrument Rating written examination. Instrument ground school training in instrument flying practices and procedures.

AFT 155   Dual Seminar   .5(.75-0)

Prerequisite: AFT 100 or private pilot. This seminar will familiarize the participant with the use of a personal computer (PC) to access aviation weather service for pilot weather briefs.

AFT 156   Airline Transport Pilot Ground School   3(3-0)

Prerequisite: Commercial/Instrument rating. This course prepares the student for the FAA Written Exam for Airline Transport Pilot (Part 121). The topics include Federal Aviation Regulations, aviation weather and services, high altitude flight planning, IFR procedures, turbojet weight and balance and aircraft (turbojet) performance charts.

AFT 157   VFR Refresher Course   1(1-0)

Prerequisite: Private pilot. The course is designed to update the VFR Private Pilot in the areas of rules and procedures, aviation weather services and the use of aircraft performance charts.

AFT 158   IFR Refresher Course   1(1-0)

Prerequisite: Instrument rating. This course is designed for the instrument rated pilot desiring recurrent training in IFR procedures and flight planning. It is especially directed at the pilot who has not recently flown in the IFR environment.

AFT 159   Aviation Law Seminar   .5(.75-0)

This seminar is an overview of the legal considerations relevant to aircraft ownership and operation, legal liability and contracts.

AFT 165   LORAN-C   .5(.75-0)

This seminar covers theory of LORAN-C operation; application of LORAN-C to enroute and terminal operations; approval for use in the national airspace system under IFR; specific operation of LORAN-C receivers.

AFT 201   Flight Training I   6(6-0)

Prerequisite: Program 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: Program approval, AFT 212 concurrently. Preparation for the private pilot license flight test.

AFT 203   Flight Training III   6(6-0)

Prerequisite: Program 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: Program 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: Program 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: Program approval and AFT 205. Commercial and instrument written exam passed. Provides training in preparation for the FAA Commercial Pilot and Instrument Rating flight tests.

AFT 207   Instructor Flight Training   6(6-0)

Prerequisite: Program 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.

AFT 208   Instrument Instructor Flight Training   2(2-0)

Prerequisite: Program approval and flight instructor certificate. Prepares the Certified Flight Instructor (CFI) to achieve the Instrument Flight Instructor rating.

AFT 209   Multiengine Flight Training   2(2-0)

Prerequisite: Program approval. Provides the commercially licensed instrument pilot with the opportunity to obtain a Multiengine Pilot Rating. May be tailored to provide pilot refresher or Airline Transport Pilot Rating training.

AFT 211   Flight Simulator I   2(1-1)

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.

AFT 212   Flight Simulator II   2(1-1)

Emphasizes VOR and ADF navigational procedures. Includes review of applicable private pilot maneuvers.

AFT 213   Flight Simulator III   2(1-1)
Maneuvers and procedures necessary for an FAA Flight Instrument Rating. Emphasizes basic instrument flying including turns, climbs, descents, partial panel, steep turns, stalls, unusual attitudes and VOR navigational procedures.

AFT 214   Flight Simulator IV   2(1-1)
Includes VOR and ADF orientation; tracking and intercepts; VOR and ADF holding patterns at station and intersection; VOR and ADF approaches.

AFT 215   Flight Simulator V   2(1-1)
Reviews VOR and ADF holding, ILS front and back course approaches, ASR and no gyro approaches and out communication procedures.

AFT 216   Flight Simulator VI   2(1-1)
In-depth study of all instrument maneuvers and procedures.

AFT 217   Multiengine Flight Simulator   2(1-1)
Ten hours of instruction in the multiengine simulator and 10 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 multiengine aircraft.

AFT 219   Multiengine Flight Simulator II   1(1-0)
Prerequisite: Instrument Rating and Commercial Pilot Certificate (airplane). Offers five hours of instruction in the Flightmatic multiengine simulator and five hours of related ground instruction. A one-credit course for the Instrument Rated Commercial Pilot (airplane) who desires to obtain the knowledge and skills necessary to take the multiengine flight test.

AFT 220   Commercial Pilot Ground School   6(6-0)
Prerequisite: Private pilot certificate or AFT 100. This course assists the student in the transitional phase to professional pilot. Topics include: basic aerodynamic theory, aircraft operation and performance, meteorology and navigation. Preparation for FAA commercial pilot (airplane) written exam.

AFT 221   Flight Engineer, Basic and Turbojet   3(3-0)
Prerequisite: Commercial pilot and instrument rating. This course prepares the applicant who holds a commercial license with an instrument rating, for the flight engineer (Basic and Turbojet - B727) FAA written exam.

AFT 225   Multiengine Instructor   2(2-0)
Prerequisite: Program approval. This course provides instruction in preparation for the Flight Instructor Airplane, Multiengine practical test. Subjects covered include a review of lesson planning and the normal and emergency operation of multiengine airplanes, with emphasis placed on aircraft systems. The effective performance and teaching of multiengine training maneuvers and emergency procedures will be emphasized. Special concentration 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 15 hours of ground instruction.

AFT 226   Airline Transport Pilot   2(2-0)
Prerequisite: Program approval. Flight and ground instruction is given to prepare the student for the Airline Transport Pilot (Multi-Engine) Practical Test.

AFT 255   Flight Instructor Ground School   6(6-0)
Prerequisite: Commercial/Instrument. Preparation for the FAA Flight Instructor and FAA Flight Instructor Fundamentals written examination. Prepare for the FAA Advanced Ground School instructor's license.

AFT 259   Intern Flight Instructor   4(2-5)
Prerequisite: CFII airplane, single engine and program approval. 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.

Avionics Technology (AV)
Aviation Technology
Division of Technology and Applied Sciences

AV 102   Aircraft Orientation   6(4-4)
Prerequisite: Program approval. Communications skills test Level 9/program approval. Familiarization with air-frame design. Basic drawing applications as used in aviation maintenance. Included are reading and interpretation of drawings and schematics used in production of aircraft components, training in the use of basic hand tools, identification of the systems used in the production of aircraft hardware, familiarization with aircraft instruments and controls, weight and balance problems and maintaining required records.

AV 180   Avionics Installation   4(2-4)
Prerequisite: Program approval. This course includes familiarization with the various types of wires, plugs and jacks used in the construction of aircraft wiring harnesses. The student will develop skills in soldering and wire diagram reading. The student will become familiar with the rules, regulations and standard procedures used in the construction of aircraft wiring harnesses.

AV 190   Avionics Test Equipment   3(3-0)
Prerequisite: Program approval. AV 191 concurrently. Covers operational characteristics and proper operation of basic and specialized test equipment found in the Avionics industry. Student builds and calibrates own VOM. Equipment covered includes multimeters, oscilloscopes, power supplies, multifunction ramp and bench test generators, wattmeters, time domain reflectometers and spectrum analyzer.

AV 191   Avionics Test Equipment Lab   2(0-4)
Prerequisite: Program approval. AV 190 concurrently. AV 191 is a lab supplement for AV 190. Test equipment and theory discussed in AV 190 will be put to practical use in the laboratory. Student builds and calibrates own VOM. Common electronic and specialized avionics test equipment is used in the lab.

AV 195   Avionics Troubleshooting   3(3-0)
Prerequisite: Program approval. Familiarization with basic Superheterodyne receiver theory and operation using block diagrams and component level theory. Various logical troubleshooting techniques are discussed.

AV 196   Avionics Troubleshooting Laboratory   2(0-4)
Prerequisite: Program approval. AV 196 is a lab supplement for AV 195. Topics covered in AV 195 will be put to practical use in lab. Students construct, align and troubleshoot a five-stage AM Superheterodyne Receiver in lab.

AV 205   Avionics Flight Line Testing   3(3-0)
Prerequisite: Program approval. A study of the systems aboard modern aircraft, focusing on the flight line testing of such systems as VHF communications, VOR, LOC, ADF, ILS, radar, autopilots and others.

AV 206   Avionics Flight Line Laboratory   3(0-6)
Prerequisite: Program approval. AV 206 is a lab supplement for AV 205. A laboratory study of the electronics systems aboard modern aircraft, focusing on the flight line testing of such systems as VHF communications, VOR, LOC, ADF, ILS, radar, autopilots and others.

AV 213   Avionics Communications   3(3-0)
Prerequisite: Program approval. A study of communications systems used in aircraft, with emphasis on the transmitters, receivers, audio systems, transmission lines and antennae used in VHF and HF communications.

AV 214   Avionics Communications Laboratory   3(0-6)
Prerequisite: Program approval. A hands-on study of communications systems used in aircraft with emphasis on troubleshooting and repairing receivers, transmitters, audio systems, transmission lines and antennae.

AV 215   Avionics Flight Control Systems   2(2-0)
Prerequisites: Program approval. AV 216 concurrently. A study of aircraft flight control systems common to general aviation type aircraft including the operation and function of three axis autopilot systems, compass systems and gyros.

AV 216   Avionics Flight Control Laboratory   2(0-4)
Prerequisites: Program approval. AV 216 is a lab supplement for AV 215. A hands-on study of flight control systems common to general aviation type aircraft including the use of test equipment. Emphasis will be placed on the flight line testing of these systems.

AV 220   Avionics Navigation Systems   3(3-0)
Prerequisites: Program approval. AV 221 concurrently. A study of navigation systems including VOR/LOC, glideslope receivers, marker beacons, ADF, LORAN-C and other types of navigation equipment. Emphasis will be placed on acquiring factory certifications for the above equipment.

AV 221   Avionics Navigation Laboratory   4(0-8)
Prerequisites: Program approval. AV 220 concurrently. AV 221 is a lab supplement for AV 220. A hands-on study of navigation systems including VOR/LOC, glideslope, markers, ADF, LORAN-C and other navigation systems. Emphasis will be placed on troubleshooting and repair of this equipment.

AV 225   Avionics Certification   4(4-0)
Prerequisites: Program approval. Course covers various Federal Aviation Administration rules and regulations as they pertain to avionics shop operation. Federal Communications regulations are discussed to prepare the student to successfully complete the General Radiotelephone Operator exam.

AV 230   Avionics Pulse Systems   3(3-0)

Prerequisites: Program approval. AV 231 concurrently. A study of the avionics pulse systems used in modern aircraft, such as DME, radar and transponders. The student will learn the proper use of the specialized test equipment used with pulse systems. Emphasis will be placed on the acquisition of factory certifications for the repair of pulse equipment.

AV 231   Avionics Pulse Systems Laboratory   4(0-8)

Prerequisites: Program approval. AV 230 concurrently. AV 231 is a lab supplement for AV 230. A hands-on study of the avionics pulse systems used in modern aircraft. Systems studied will include DME, radar and transponders. The student will use the specialized test equipment necessary to troubleshoot and repair the above systems. Emphasis will be placed on actual troubleshooting and repair of DME, radar and transponder equipment.

AV 240   Avionics Simulator Technology   4(2-4)

Prerequisite: Program approval. An introduction to flight simulators used to train pilots in today's training environment. Various simulators will be studied in block diagram form. The student will learn the similarities and differences between analog and digital simulator systems. Troubleshooting techniques will be studied to prepare the student for an entry level position as a simulator technician.

AV 295   International Avionics Systems   4(4-0)

Prerequisite: Program approval. Familiarization with safety practices around large aircraft. Practice in identification of different airliners and manufacturers. Review of instrument systems and discussion on how these systems are designed in large aircraft. Discussion of navigation, communication and pulse systems in airliners. Discussion of different methods of troubleshooting used on large aircraft. Familiarization with international rules and regulations. Discussion of the differences and similarities between FAA regulations and various other countries.

AV 297   Avionics Internship   5(20-0)

Prerequisite: Program approval. Twenty hours per week as an Aviation Electronics Intern. Independent study. Part-time occupational internship in Avionics Technology. The internships will be at work stations as established by the intern coordinator.

AV 299   Advanced Avionics Laboratory   4(0-8)

Prerequisite: Program approval. Applications lab. May be concurrent with AV 210, AV 211 or AV 212. May be repeated once.

CONSTRUCTION AND ENGINEERING TECHNOLOGY

Director: Ronald D. Garthe
220-L Gannon Vocational-Technical Building

Construction and Engineering Technology offers instruction in the following areas, under the course codes indicated:

AT:	Architectural Technology
ATG:	Applied Technology General
ATM:	Applied Technology Mathematics
BR:	Building Related
BT:	Building Trades
BTA:	Building Trades Related (Apprentice)
BTJ:	Building Trades Related (Journeyman)
CG:	Computer Graphics
CIM:	Computer Integrated Manufacturing
CT:	Civil Technology
DT:	Industrial Drafting Technology
EQU:	Equine
FST:	Fire Science Technology
IAD:	Interior Architecture Design
LAT:	Landscape Architectural Technology
TEC:	Technology General

A student's training may consist of a single course to upgrade his or her present position or a complete curriculum of study to begin a new career. All courses are structured and taught by field trained professionals using the latest equipment and teaching techniques.

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 Degrees.

Architectural (AT)

The Architectural Technology Program curriculum offers a series of two-year Associate Degrees in Applied Science and other degree options designed to prepare students as technicians in the field of architecture. 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 Bachelor's or Master's degree.

Students enrolled in the various degree curricula or those students wishing to take individual specialty classes may choose from a wide variety of courses. These classes are supplemented by additional College courses in civil technology, art, interior design, mathematics, 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.

The two-year Associate in Applied Science Degree in Architecture is a curriculum directed to the total development of a paraprofessional—the architectural drafting technician. Required classes for the Associate in Applied Science Degree in Architecture are assembled from the areas of architectural drafting, graphics, structural design, materials of construction, landscaping, architectural history and building codes. Additional classes are selected from the areas of mathematics, English, technical and general electives. Please see curriculum code 540.

Building Trades Related (BR, BT)

The Residential Building Associate in Applied Science Degree and Certificate of Achievement are designed to provide a student with job-entry skills in the building trades area. The curriculum (codes 824 and 823) consists of practical hands-on courses that provide the skills needed to compete in today's job market. Curricular guides are available in the Construction and Engineering Technology office.

Civil Technology (CT)

The Civil Technology Program is a comprehensive two-year Associate Degree curriculum designed to prepare students as technicians in various fields of civil technology. Civil Technology technicians assist civil engineers in performing many of the tasks necessary in the planning, construction, maintenance and repair of highways, bridges, railroads, viaducts, dams, sewage disposal and water conditioning plants. Others become draftsmen, surveyors, soil testers, inspectors and estimators. These are a few of the many special jobs open to the graduates in this program.

In addition to the above two-year Associate Degree program Lansing Community College is offering a three-year Cooperative Education Civil Technology Program with the Michigan Department of Transportation. The program was initiated after the Michigan Department of Transportation (MDOT) determined there would be a serious shortage of Civil Technicians during the next decade to help build and maintain the state's transportation system.

Many senior level technicians are retiring and new developments in technology are demanding more sophisticated and higher-level skills in all areas. The LCC Co-op program was created to help fill this need.

Computer Graphics (CG)

Curricula offered by the Construction and Engineering Department have moved rapidly toward a factory-of-the-future concept since the acquisition of the CADAM system. Computer-graphics Augmented Design And Manufacturing (CADAM) is the trademark name for the software donated 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 the only community college in the nation to provide CADAM training as a regular part of its design program. By using 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 the keyboard to enter descriptive data, designers construct the design geometry on the computer screen, and the system automatically plots a scale drawing. A Certificate and an Associate Degree can be obtained through the Industrial Drafting Curricula.

Industrial Drafting (DT)

The curriculum is composed of various drafting courses which will familiarize an individual with product design, tool design and die design. The total concept of these courses is structured to prepare the student to enter a drafting and design environment, using conventional or micro and mainframe computer aided design technologies. Certificate and Associate Degree curricula are available in this area.

Fire Science (FST)

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 in 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 curriculum at Lansing Community College.

Constant changes in the environment and the growing complexities of modern living create demand for new materials and methods to be used in fire prevention and control. The Fire Science Technology curriculum prepares the student to accept these and other challenges from the world of business and industry.

Students who satisfactorily complete the curriculum will exhibit competency in the following areas: building construction and fire safety, physics, hydraulics, fire protection systems and equipment, handling of hazardous materials, arson in-

vestigation, fire prevention, fire strategy and administration. An Associate Degree in Fire Science will be awarded to those who complete the two-year curriculum.

Completion of the program will assist students in their search for employment in the Fire Science area and assists persons already employed in the field to earn formal credentials. Please see curriculum code 590 for details of course requirements.

Interior Architecture and Design Technology Program (IAD)

The interior design assistant is a person who: assists clients with the selection and arrangement of interior furnishings, materials and space planning; performs the basic skills necessary to implement a design, including taking measurements, providing cost estimates, preparing drawings and business documents, and consulting with workrooms, installers and other support specialists; and assists the professional interior designer, architect or builder.

In order to complete the requirements for an Associate's Degree, students should become proficient in the following areas: basic design, theory, interior elements, technical knowledge of codes and building systems, visual communication, business practice and history of interiors and furnishings.

The Interior Architecture Design Technology Applied Science Degree (curriculum 544) provides the education necessary to prepare for the positions of design assistants, merchandisers, delineators, estimators and related posts. This program is generally considered a terminal level. However, individual institutions may grant some credits from this program towards the achievement of the First Professional Degree. Please see the IAD faculty advisor for additional information.

Landscape Architecture (LAT)

Landscape Architectural Technology is a comprehensive two-year curriculum of professional study offered at Lansing Community College. This curriculum provides students with the essential skills and knowledge necessary to function as paraprofessionals in the landscape architecture profession. Advised and taught by professionally active landscape architects, designers and horticulturists, the Landscape Architectural Technology program offers individual courses of study which collectively focus on developing graphic, verbal and practical landscaping skills and techniques. Courses in the curriculum provide a working knowledge of residential landscaping, landscape construction, design, graphics, horticulture and office practices and procedures.

Students receiving an Associate Degree in Applied 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 emphasizes 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.

In order to fulfill the requirements for an Associate Degree in Landscape Architectural Technology, the student is required to take a minimum number of courses from each of the following areas: introduction to landscape architecture, landscape construction, landscape design, graphics, landscape horticulture, office practices and procedures, government, mathematics, English and general electives.

COURSE DESCRIPTIONS

Architecture (AT)
Construction and Engineering Technology
Division of Technology and Applied Sciences

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 are introduced. Students produce a basic floor plan at conclusion of class. Course fee.

AT 131   Residential Planning   3(2-2)

This course covers basic information for buying, building or remodeling a house: construction details, architectural styles and planning concepts; are some reading of blueprints and use of working drawings is emphasized. Course fee.

AT 135   Architectural Pictorial Illustration   4(2-4)

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. Course fee.

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 entourage is used. Course fee.

AT 137   Architectural Presentation   4(2-4)

Prerequisite: AT 136 or equivalent. Explores and develops new techniques in rendering. The use of a variety of color media is included. Course fee.

AT 150   City Planning I   3(3-0)

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 151   City Planning II   3(3-0)

Prerequisite: AT 150. Explores urban form and development in the Twentieth Century. Analyzes the relationship of individual buildings and groups of buildings, comparing sites and situations. Students will participate in several urban design studio problems.

AT 152   Visual Communications I   4(2-4)

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. Course fee.

AT 153   Visual Communications II   4(2-4)

Prerequisite: AT 152/AT 135 or equivalent. Introduces freehand drawing with charcoal, pencil, pen and ink media emphasizing and developing abilities for perspective sketching and rendering. Course fee.

AT 154   Visual Communications III   4(2-4)

Prerequisite: AT 153/AT 136 or equivalent. Representational composition exploring and refining the use of freehand drawing with felt tip markers, prismacolor pencil, pen and ink with a special emphasis on color. Course fee.

AT 160   Interior Graphics and Design I   4(2-4)

Prerequisite: AT 100 and AT 135 or equivalent. This is a basic course for kitchen and bath planning and design.

AT 202   Energy Efficient Design   4(4-0)

This course will investigate methods and materials from the architect's, builder's, and engineer's viewpoints for improving the energy efficiency of housing and other built environment sturctures. Recent innovations to reduce heat loss or gain to minimize energy storing devices, 2 x 6 and double walls, solar energy input, triple glazed windows, thermal shutters and new architectural concepts are some topics to be presented. Special emphasis will be placed on optimizing the thermal performance of the building envelope while considering energy flows and consumption within the internal environment. Students will apply the rational approach to the design and construction process and integrate these concepts in developing and building design.

AT 203   Residential Solar Heat Design   4(4-0)

Prerequisite: AT 201 or HAC 271. 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. Course fee.

AT 207   Applied Energy Engineering Economics   3(3-0)

Prerequisita: AT 210 or HAC 274. Designed to assist the architect, engineer, student and practitioner in applying sound economic and accounting principles to the practice of energy use, conservation and utilization for heating, powering and cooling the built environment. The course relates economic and social concerns to the increasingly important problems and opportunities in the production, distribution and wise use of scarce fossil fuel and alternative energy resources. Emphasis will be placed upon realistic cost-benefit analysis in determining the most efficient long and short-range application of economic principles to our energy-consuming and -producing systems. Course fee.

AT 211   Passive Solar Design   4(3-2)

Prerequisite: AT 202 or HAC 274. Students will investigate the fundamentals of efficient thermal design to study the techniques and materials that can be used to build solar-assisted, energy-efficient housing and buildings. Course fee.

AT 214   Commercial Solar Applications   4(3-2)

Prerequisite: AT 202, AT 210 and HAC 274. A study of the critical elements of design affecting the energy conservation and life cycle costs of building residential commercial developments. Topics include environmental technology, analysis of building energy use, passive solar heating, climatic design, window solutions, computer-aided design, energy for construction, solar laws, patterns of land use, solar envelope concepts, moderate density building layout and innovative conservation programs. Course fee.

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 moveable insulation. Calculations include solar savings fraction, estimating temperature swings and analyzing long term performance. Course fee.

LANSING
COMMUNITY
COLLEGE

AT 217   Energy Policy and Planning   3(3-1)

Developing energy policy, introducing state and local legislation, subdivision and community energy planning and implementing appropriate technology programs.

AT 218   Solar Greenhouses   3(2-2)

Design and construction of walk-in solar collectors. Greenhouse horticulture, moveable insulation techniques and design calculations are presented to assist in planning a heat and food producing greenhouse. Course fee.

AT 219 - Computer Assisted Solar Design   4(3-2)

Prerequisite: AT 202, AT 210, and HAC 274. Development of simplified proce-dures for the design and analysis of solar energy systems. Covers electronic analysis and computer simulation, programmable calculators, microprocessors, printer's information storage systems and available software. Course fee.

AT 220   Residential Energy Audit-Conservation   4(3-2)

Prerequisite: high school algebra. Covers conducting audits for energy conser-vation 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. Course fee.

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 proce-dures 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 223   Solar Interior Design   3(3-0)

Interior design techniques that promote energy efficiency and conservation em-phasizing window treatments and use of color, texture, pattern, lighting, plants and fabrics as contributors to thermal comfort.

AT 227   Facilities Design I   4(4-0)

Prerequisite: AT 233/equivalent. This course is intended to serve architecture students and practicing professionals with introduction to the subject of facilities. This course will provide an overview of the planning and design of structures used for production and processing. Students will be introduced to the history of facilities planning as a professional discipline and will be shown examples of various sizes and types of facilities with the use of lectures, instructional media and field trips.

AT 230   Architectural Drawing I (Residential Details)   4(2-4)

Prerequisite: AT 100 or drafting background. Identify component parts and cor-rectly draw various building details. The use of reference material in preparing detail drawings will be emphasized. Course fee.

AT 231   Architectural Drawing II (Residential Development)   4(2-4)

Prerequisite: AT 230 or equivalent. Offers essentials of designing and drawing floor plans. Begins a two-part series in residential development. Preliminary elevations and sections will be developed. Course fee.

AT 232   Architectural Drawing III (Residential Development)   4(2-4)

Prerequisite: AT 231 or equivalent. Floor plans and preliminary plans from AT 231 will be used to continue the development of residential working drawings. Work-ing elevations and sections will be completed. Course fee.

AT 233   Commercial Drafting-Design I   4(2-4)

Prerequisite: AT 232 or equivalent. Stresses the design and construction of com-mercial buildings. Students will produce a preliminary set of commercial working drawings. Course fee.

AT 234   Commercial Drafting-Design II   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. Course fee.

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. Course fee.

AT 236   Underground Shelter II   4(3-1)

Prerequisite: AT 235 or equivalent. Designed as a continuation of basic theories studied in AT 235. Students will have an opportunity to design and prepare draw-ings to complete an individual underground project. Course fee.

AT 237   Architectural Design Seminar I   4(2-4)

Prerequisite: Instructor approval. Designed to introduce the student to architec-tural design through the study of popular theoretical and philosophical view points in architecture, as well as reviewing major historical architectural precidents and their impact. The course shall be divided between seminar lecture discussion and studio sessions. Studio work shall concentrate on specific design programs to be solved through application of course material. Course fee.

AT 240   Architecture Model Building   3(2-2)

Introduces the use of models in architectural design and presentation. Each stu-dent will construct several examples of various types of models. Course fee.

AT 241   Office Practices and Procedures   4(4-0)

Covers general specifications, supplemental or job specifications, material spec-ifications, building codes, use of reference material, shop drawings, bidding prac-tices, office reduction of field data and field inspection procedures. Course fee.

AT 242   Building Utility Systems   4(4-0)

Prerequisite: AT 230 concurrently or equivalent. Investigates components and arrangement of residential and commercial plumbing and electrical systems. Heating and cooling systems introduced. Emphasizes code and specification requirements. Course fee.

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. Course fee.

AT 247   Architectural History I   3(3-0)

Explores the earliest forms of ancient architecture with emphasis on specific civ-ilizations and their contributions to the development of various styles of architec-ture. Highlights of the Egyptian, Minoan, Greek, Roman, Romanesque and Gothic periods will be presented, using a variety of visual media. Course fee.

AT 248   Architectural History II   3(3-0)

Prerequisite: AT 247 recommended. Examines the greatest examples of archi-tecture as built during the Gothic, Italian, French and English Renaissance pe-riods and follows with a look at the history of architecture. Course fee.

AT 249   Preservation and Adaptive Reuse   4(3-2)

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. Course fee.

AT 250   Urban Environment   3(3-0)

For United States cities: Examine the historical interrelationships of various cul-tural influences, theoretical concepts and urban design on contemporary pat-terns, trends and problems of urban design, development and renewal. Examine current issues and problems facing cities today.

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. Course fee.

AT 252   BOCA/Uniform Building Code II   3(3-0)

Prerequisite: AT 251 or equivalent. Offers depth in occupancy requirements based on types of construction such as exit requirements, protection of corridors and multiple dwellings, standards for apartment houses six stories and higher, fire standards and materials requirements. Course fee.

AT 253   Mechanical Building Code   4(4-0)

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 254   Uniform Mechanical Code   6(6-0)

A fundamental course designed to acquaint the student with the methods and techniques used in plan review and field inspection of mechanical system. Course fee.

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 practica 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 259 Interior Architecture I 4(2-4)

This course is designed to be the architectural student's 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 building's support systems. Students will have the opportunity to develop basic interior architectural design problems. Course fee.

AT 260 Architectural CADAM Basic 4(2-4)

Prerequisite: AT 230 or equivalent. This course is an informative computer graphics course which will explore the latest in software, and hardware used on the IBM CADAM workstation. The operator will use functions and menu items to create multi-view architectural drawings. Dimensions and notes will be created to complete the drawing. Emphasis will be placed on creating and editing drawings. Course fee.

AT 261 Architectural CADAM Drafting I 4(2-4)

Prerequisite: AT 260 or CG 201 or 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. Course fee.

AT 262 Architectural CADAM Drafting II 4(2-4)

Prerequisite: AT 261 or equivalent or department approval. This class will enable the advanced CADAM student to expand 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. Course fee.

AT 263 Architectural CADAM Project 2(1-2)

Prerequisite: Instructor approval. The project lab provides the advanced student with the opportunity to work on a specific architectural project of his/her own design. Lecture time will be devoted on a one-on-one exchange of ideas with the architectural CADAM instructor. The subject will be the design, development and production of this specific project. Course fee.

AT 264 Architectural CADAM Lab 4(1-6)

Prerequisite: Instructor approval. The project lab provides the advanced student with the opportunity to work on a specific architectural project of their own design. Lecture time will be devoted to a one-on-one exchange of ideas with the architectural CADAM instructor. The subject will be the design, development and production of this specific project. Course fee.

AT 265 Architectural Micro Computer Graphics 4(2-4)

This course is intended to give students a firm understanding of the basic concepts and skills necessary to use a microcomputer system in the design and implementation of architectural, interior design and related construction drawings using AutoCAD, a computer aided drafting package designed for these and many other applications. Course fee.

AT 266 Architectural Micro Computer Graphics II 4(2-4)

Prerequisite: AT 265 or equivalent. Designed as a continuation of AT 265. Students will learn and use remaining functions in a final design project. Course fee.

AT 268 Architecture Micro-Graphics Project Lab 2(1-2)

Prerequisite: Instructor approval. Research, design and construct a project with the guidance of an instructor. For students who have completed basic micrographics courses. Course fee.

AT 269 Architecture Micro Lab 4(1-6)

Prerequisite: Instructor approval. The project lab provides the advanced student with the opportunity to work on a specific architectural project of his/her own design. Lecture time will be devoted on a one on one exchange of ideas with the architectural instructor. The subject will be the design development and production of this specific project. Course fee.

AT 271 Structural Design 4(4-0)

Prerequisite: AT 230 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. Course fee.

AT 275 Interior Environment HVAC 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. Course fee.

AT 277 Architecture Data CAD I 4(2-4)

Prerequisite: AT 230 or equivalent. This is an intermediate level drawing course that incorporates computer-aided design and drafting skills. This course will introduce and familiarize the student with the basic concepts and skills necessary to work with a PC computer system. DataCAD, a computer-aided drafting and design package, will be used to create architectural designs and construction drawings. Course fee.

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, limitations and availability. Course fee.

AT 283 Security Systems Design 4(4-0)

This course is intended to familiarize the student with the terminology, products and design of safety and security systems for residential and commercial dwellings. Emphasis will be placed on the design of security system for new and existing structures.

AT 285 Residential Cost Estimating 4(4-0)

Covers estimating amount of material (lumber, brick and concrete) required for residential construction. Also involves the cost of the material and labor for carpentry, plumbing and excavating. Calculations are a major part of this course. Course fee.

AT 286 Advanced Construction Cost Estimating 4(4-0)

Prerequisite: AT 285 or equivalent. In-depth study of more complex residential construction and small commercial instruction, comparisons of labor costs, methods and materials to ensure minimum costs with high standards of quality. Course fee.

Applied Technology General (ATG)
Construction and Engineering Technology
Division of Technology and Applied Sciences

ATG 140 Gunsmithing 3(2-2)

Repairing and restocking rifles. Topics include installation of sights, scopes, rebarreling actions and repairs. Also, building a muzzle loading rifle from a kit or starting with basic components. Course fee.

ATG 145 Canoe Building 3(2-2)

Gives the student participation in building a canoe. Materials and processes using 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. Course fee.

ATG 146 Bicycle Repair and Maintenance 3(2-2)

Shows basic reconditioning techniques for 10-speed bicycles, including wheel respoking, truing wheels and general maintenance. Course 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. Course fee.

ATG 176 Graphics II 3(2-2)

Prerequisite: ATG 175. Covers offset techniques, stripping, layout and composition processes. Course fee.

ATG 177 Graphics III 3(2-2)

Prerequisite: ATG 175 and ATG 176. Further study of individual interest areas: press operations, process camera, halftones, etc. Course fee.

Applied Technology Math (ATM)
Construction and Engineering Technology
Division of Technology and Applied Sciences

ATM 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.

ATM 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. Course fee.

ATM 151   Applied Algebra   4(4-0)

Prerequisite: ATM 150 or equivalent. Introduces and/or reviews basic algebraic operations with emphasis on those operations essential in solving practical problems encountered in shop operations.

ATM 152   Applied Plane Geometry   4(4-0)

Prerequisite: ATM 151. Applications of geometric functions to the solution of practical shop problems. Introduction to trigonometry.

ATM 153   Applied Plane Trigonometry   4(4-0)

Prerequisite: ATM 152. Analysis of industrial problems utilizing trigonometric solutions by calculator.

ATM 154   Advanced Applied Trigonometry   4(4-0)

Prerequisite: ATM 153. Continuation of ATM 153. Provides broad experience in solution of problems taken directly from industry.

ATM 155   Compound Angles I   4(4-0)

Prerequisite: ATM 153 or ATM 154. Combination of solid geometry and advanced (solid) trigonometry enabling students to solve setup problems involving angles and tilted work.

ATM 156   Compound Angles II   4(4-0)

Prerequisite: ATM 155. Continuation of ATM 155. Emphasis on application of actual tooling setups for complex machining operations.

Building Related (BR)
Construction and Engineering Technology
Division of Technology and Applied Sciences

BR 101   Basic Woodworking   3(2-2)

Wood characteristics, hand and portable power tools, woodworking machinery, joint construction, fastening methods, woodworking techniques and procedures and technical information, to be applied to student-made projects. Course fee.

BR 102   Hand Tools For Wood   3(2-2)

The selection, use, and maintenance of tools used by the woodworker working by hand. This course examines the tradition of hand tools as it relates to woodworking today, and encourages a revitalized use of such tools to make one a better craftsman. Students learn how to sharpen and maintain tools in top form, how to select and sharpen and use tools for special purposes, how to make tools, and recondition old saws and planes so they are useful again. Consideration is given to the tool box and workbench, and concludes with making a project using hand-cut dovetails. Course fee.

BR 103   Woodworking With a Router I   3(2-2)

Prerequisite: BR 101 or department approval. An in-depth exploration of router applications and router techniques. A project is required. Student projects will be used to illustrate and demonstrate dovetail joints, decorative cuts, dadoes, rabbets, mortises and similar styles. Students furnish their own lumber for projects. Course fee.

BR 104   Woodworking With a Router II   3(2-2)

Prerequisite: BR 103. A continuation of BR 103 with emphasis on problem-solving and the design and construction of jigs and fixtures for special applications. Students should bring their own routers. Course fee.

BR 106   Furniture Making   3(2-2)

Prerequisite: BR 101 or equivalent. Design and construction of simple furniture, with emphasis on selection materials, options in joint and fastening methods, construction techniques, assembly procedures and problem-solving. Course fee.

BR 108   Shaker Furniture   3(1-4)

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. Course fee.

BR 109   Build Your Own Cabinets   3(2-2)

Prerequisite: BR 101. A hands-on experience in building vanities, base cabinets and wall cabinets. Not a furniture-making class. Covers use of tools and machines, cabinet construction, drawer construction, door style options and formica work. Students supply their own lumber. Course fee.

BR 110   Wood Projects   2(0-4)

Prerequisite: Instructor approval. Provides additional lab hours and individual instruction for students enrolled in BR and BT courses, with requirements for construction of a term project. Course fee.

BR 112   Furniture Finishing   3(2-2)

A course designed to give the average craftsman a basic knowledge of the furniture finishing process. The course will include sealing, staining, tinting, spray and brush application, French polishing and spot repair. The course will include both lectures and hands-on experience on the student's own projects. Course fee.

BR 113   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 upholstering are not included. Course fee.

BR 116   Paperhanging 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 and application of paper and vinyl. Course fee.

BR 117   Paperhanging II   3(2-2)

Prerequisite: BR 116. 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 and application of paper and vinyl. Course fee.

BR 120   General Home Maintenance I   3(2-2)

An introductory course in general home maintenance. Topics are furnace maintenance, humidifiers, painting, hot water heaters, basic plumbing and electrical repairs. Course fee.

BR 123   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. Course fee.

BR 126   Build Your Own Patio Deck   3(1-4)

Plan, estimate, layout, build your own patio floor or off the ground deck. Investigate materials, designs, structural considerations and costs. Course will include tips and techniques for getting the job done. Course fee.

BR 128   Build Your Own Home   3(3-0)

For persons who wish to buid 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.

Building Trades (BT)
Construction and Engineering Technology
Division of Technology and Applied Sciences

BT 100   Introduction to Construction   3(3-0)

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.

BT 103   Structural Blueprint Reading   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.

BT 104   Structural Blueprint Reading II   4(4-0)

Prerequisite: BT 103. 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.

BT 111   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.

BT 121   Residential Framing I   3(2-2)

Describes various types of frame construction but concentrates on platform framing. Includes stages of house construction from top of the foundation to top of exterior walls. Lab work covers layout and assembly for sills, joists, bridging, subfloor and exterior wall components. Course fee.

BT 122   Framing Square   3(2-2)

Prerequisite: ATM 150 or equivalent. Covers use of the framing square. Students will lay out common, hip, valley and jack rafters. Layouts will also include gable end studs, cross briding and stair stringers. Instruction will emphasize understanding of math and decimal conversions involved in using the square. Course fee.

BT 123   Residential Framing II   3(2-2)

Prerequisite: BT 121 and BT 122. A continuation of BT 121. Hands-on experience with ceiling joists, gable end studs, cornice construction, door and window installation and roof sheathing. Course fee.

BT 124   Remodeling   3(2-2)

Prerequisite: BT 121. A course on building of additions, restoring and renovations. Lecture and lab work will show how to measure up work, plan and draw, figure how to tear into building, and roof and foundations. Course fee.

BT 125   Shingling and Siding   2(1-2)

Prerequisite: BT 121 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 introduction to aluminum trim products. Course fee.

BT 126   Stair Building   3(2-2)

Prerequisite: BT 122. 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. Course fee.

BT 128   Pole Barn Construction   3(2-2)

Prerequisite: BT 121. An introductory course in the planning, layout and construction of a pole barn. Instruction will include terminology, materials, techniques, practices and procedures currently being used by pole barn contractors. Course fee.

BT 141   Floor, Doors and Interior Trim   3(2-2)

Prerequisite: BT 121. For the individual who wishes to build or remodel a home. Topics covered will be an introduction to interior trim and basic tool use. Course fee.

BT 231   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.

BT 232   Blueprint Reading for Plumbers II   4(4-0)

Prerequisite: BT 231. Continuation of BT 231 with emphasis on more complex prints. Actual construction prints are used whenever possible.

BT 235   Sheet Metal I   3(2-2)

Includes mathematics and pattern drafting related to sheet metal. Covers straight line, parallel line, radial line, triangulation pattern development and current techniques of fabrication. Course fee.

BT 236   Sheet Metal II   3(2-2)

Prerequisite: BT 235 Continuation of Sheet Metal I with more advanced problems. Course fee.

BT 237   Sheet Metal III   3(2-2)

Prerequisite: BT 236. Continuation of Sheet Metal II with specialty work. Course fee.

BT 251   National Electric Code I   4(4-0)

Students will review the entire code book using the index method in respect to locating and interpreting the National Electrical Code. Designed for individuals with little or no knowledge of the electrical code, but some on-the-job experience and basic electrical training and knowledge will help to succeed in this course.

BT 252   National Electric Code II   4(4-0)

Students will review the entire code book using the index method in respect to locating and interpreting the National Electrical Code. Designed for individuals with on-the-job experience and basic electrical training and knowledge who need a review for the State Journeyman's Exam. This course should be taken approximately six months before taking your state journeyman's exam.

BT 253   National Electric Code III   4(4-0)

Students will review the entire code book using the index method in respect to locating and interpreting the National Electrical Code. Designed for individuals with a state journeyman's license and basic electrical training and knowledge who need a review for the State Master's Exam. This course should be taken approximately six months before taking your State Master's Exam.

BT 271   Residential Estimating   4(4-0)

Prerequisite: BT 103. 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.

BT 275   Construction Estimating   4(4-0)

Prerequisite: BT 271. 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.

BT 280   Building Trades Training   6(1-10)

Prerequisite: Instructor 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 instructor. 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.

BT 281   Building Project   3(0-6)

Prerequisite: Instructor approval. These seminars are planned to assist any building trades group or groups to upgrade their skills or to review new and emerging techniques.

BT 285   Procedures For Residential Construction   4(4-0)

A course of study for persons who intend to contract their own home or to enter into the residential construction industry. Students will learn the procedures necessary to start and complete a residential project. This will include acquiring property, coordinating construction, tools needed, and inspections and insurance needed to cover the project and the contractor.

BT 290   Builders Review   3(3-0)

This class is designed to ready individuals for the State of Michigan Residential Builders Examination. The class will include concentrated instruction in blueprint reading, State regulations, building terms, basic math and construction codes — which are topics covered by the exam.

BT 295   Builder's License Review   1(1-0)

This is a two-day workshop designed to prepare individuals for the State of Michigan Residential Builder's Examination. The class will include concentrated instruction in blueprint reading, State regulations, building terms, basic math and construction codes — which are topics covered by the exam.

Building Trades Apprenticeship Program (BTA)
Construction and Engineering Technology
Division of Technology and Applied Sciences

BTA 100   Apprentice Bricklaying   4(4-0)

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   6(4-4)

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(3.9-3.9)

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(3.9-3.9)

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(3.9-3.9)
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.T.C.

Building Trades Journeyman Program (BTJ)
Construction and Engineering Technology
Division of Technology and Applied Sciences

BTJ 128   Journeyman Electricians Welding I   4(2-4)
Open to electrical journeymen. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. Course fee.

BTJ 129   Journeyman Electricians Welding II   4(2-4)
Prerequisite: BTJ 128 or Program approval. Open to electrical journeymen. Includes some fundamentals of oxyacetylene welding and cutting. Major emphasis on arc welding and skills needed by the electrician. Course fee.

BTJ 160   Journeyman Pipefitters Welding I   4(2-4)
Students who enter this class should be journeymen plumbers or pipefitters. Apprentices to the plumbing or pipefitting 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. Course fee.

BTJ 161   Journeyman Pipefitters Welding II   4(2-4)
Prerequisite: BTJ 160. Continuation of BTJ 160. Course fee.

BTJ 162   Journeyman Pipefitters Welding III   4(2-4)
Prerequisite: BTJ 161. Continuation of BTJ 161. Course fee.

Computer Graphics Center (CG)
Construction and Engineering Technology
Division of Technology and Applied Sciences

CG 131   AutoCAD: Industrial   4(2-4)
Prerequisite: DT 100 or equivalent. A computer graphics course designed to learn the software package called AutoCAD. Using AutoCAD, the student will draw a mechanical drawing complete with dimensions and notes. Emphasis will be placed on creating and editing mechanical drawings. Course fee.

CG 132   AutoCAD Industrial II   4(2-4)
Prerequisite: CG 131 or AT 265, or equivalent. This course is designed to apply and build upon the skills learned in CG 131. Advanced AutoCAD features will be stressed. Course fee.

CG 133   AutoCAD: Industrial 3-D   4(2-4)
The student will learn to use the 3-D features of Release 10 AutoCAD software. This will be accomplished through the use of industrial drawings. Course fee.

CG 141   CADKEY: Industrial   4(2-4)
Prerequisite: DT 100 or equivalent. A computer graphics course designed to learn the software package called CADKEY. Using CADKEY, the student will draw a mechanical drawing complete with dimensions and notes. Emphasis will be placed on creating and editing mechanical drawings. Course fee.

CG 201   CADAM Training: Basic   4(2-4)
Prerequisite: DT 101 or equivalent. This class will provide students with a basic understanding of how to use the Micro-CADAM software on an IBM PC-AT or the IBM PS/Z-80. The student will use functions and menu items to create multi-view mechanical drawings complete with dimensions and notes. Emphasis will be placed on mastering basic Micro-CADAM software applications related to an industrial environment. Course fee.

CG 231   Micro-CADAM Schematics I   4(2-4)
This course covers the creation, editing, and production of wiring diagrams and schematics on Micro-CADAM. The use of CADAM and its application to schematics is emphasized. Schematic diagrams are extensively used to describe hydraulic, air, lubrication and electrical systems. The course has no prerequisite. Course fee.

CG 232   CADAM Cadex   4(2-4)
This course combines lectures and discussions with hands-on practices. Topics covered in the course include: attributing CADAM geometry, creating part data bases, developing component sets and producing reports such as wire To-From lists and Bills of Materials. Course fee.

CG 241   CADAM Training: Industrial I   4(2-4)
Prerequisite: CG 201, DT 102 and DT 103 concurrently. 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. Course fee.

CG 242   CADAM Training: Industrial II   4(2-4)
Prerequisite: CG 241 and DT 106 concurrently. 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 with the down stream consideration of Computer Integrated Manufacturing. Course fee.

CG 271   CADAM 3-D I   4(2-4)
Prerequisite: CG 242. This class will introduce three-dimensional design concepts and practices used on the CADAM system. Using the 3-D interactive Module, wire frame modeling with surfaces will be completed on mechanical components. Course fee.

CG 272   CADAM 3-D II   4(2-4)
Prerequisite: CG 271. This course will expose full 3-D design conceptualization, working with many types of 3-D methods: filleting, blending using kan cut sections, section cutting and plane offs, surface networks, surface fairing and macro for light source shading. Course fee.

CG 273   Basic Solids   4(2-4)
Prerequisite: CG 271. This course is intended to introduce the experienced CADAM Operator to the 3-D interactive Solids Module. The purpose will be to generate components as 3-D Solids, to obtain clearances, volumes and mass properties, with given densities. The model will be utilized to create shop drawings and 3-D standard libraries. The solid will include all views, sections, partial views, projections intersections and script files. Geometric associativity with related CADAM files will be established, as well as maintained. Course fee.

CG 285   CADAM Project Lab Industrial   2(0-4)
Prerequisite: Program approval. A project lab gives the 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 and related topics. 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. Course fee.

Computer Integrated Manufacturing (CIM)
Construction and Engineering Technology
Division of Technology and Applied Sciences

CIM 250   Personal Computer Applications   3(2-2)
In this course the student is introduced to the use of microcomputers. Four software products are presented: the disk operating system (DOS), a word processor, a spreadsheet and a data base manager. The software used (except for DOS) is such that the student can legally take a copy of the programs for use at home or on the job, and are encouraged to do so. Extensive hands-on use of the personal computer is provided in the lab. Course fee.

CIM 251   Personal Computer Applications II   3(1-3)
Prerequisite: CIM 250. An in-depth study of the use and operation of the IBM or IBM compatible PC computer systems. There will be four major software programs representing the operating system, word processing, spreadsheets and data bases. The class will study the technique of building batch files, changing operating system prompts, setting paths, backing up and restoring, building hierarchial subdirectories and I/O piping. In the word processing portion, merging files and mail merge uses will be studied for the purpose of producing form letters. The spreadsheet portion will include complex formula construction, database uses and creating macros. Finally, the data base section will include report generation, menu construction and dBase programming techniques. Course fee.

CIM 260   DOS Applications   3(2-2)
This course provides an opportunity for studying the PC-DOS/MS-DOS operating system used on IBM and IBM compatible personal computers. All major DOS commands are covered. The student learns how to write batch files to customize and simplify the use of the PC. Extensive hands-on use of the PC is provided in the lab. Course fee.

CIM 270   Technical Publishing Using Ventura   3(2-2)
In this course the student learns to use the Xerox Ventura Publisher Edition program on the personal computer to create technical manuals, brochures, flyers, newsletters, books and other publications. These documents may include text along with diagrams, pictures, graphs and other graphic elements, all of which will be integrated and printed on a high quality laser printer. Extensive hands-on use of the PC is provided in the lab. Course fee.

LANSING COMMUNITY COLLEGE

CIM 272   Technical Publishing Using PageMaker   3(2-2)

In this course the student learns to use the Aldus PageMaker program on the personal computer to create technical manuals, brochures, flyers, newsletters, books and other publications. These documents may include text along with diagrams, pictures, graphs and other graphic elements, all of which will be integrated and printed on a high quality laser printer. Extensive hands-on use of the PC is provided in the lab. Course fee.

CIM 275   Survey of Desktop Publishing Systems   1(1-0)

This course provides the student with a comprehensive overview of the capabilities, costs and technology—both hardware and software—required for electronic desktop publishing. Students are given an understanding of the many uses for desktop publishing, hardware and software requirements and options, approximate costs, successful implementation factors, training options and literature available. The course will include demonstrations using IBM PC Microcomputers and Hewlett-Packard Laser Printers.

Civil Technology (CT)
Construction and Engineering Technology
Division of Technology and Applied Sciences

CT 101   Construction Materials I   4(2-4)

Prerequisite: TEC 151 concurrently. 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. Course fee.

CT 102   Construction Materials II   4(2-4)

Prerequisite: CT 101. Covers determination of properties of bituminous materials. Teaches methods of designing bituminous mixes for different uses and methods of sampling and testing. Course fee.

CT 103   Construction Methods   4(4-0)

Prerequisite: TEC 150. Studies techniques and equipment used in constructing bridges, buildings, highways and pipelines. Comparison of building codes and construction specifications.

CT 107   Civil Drafting   4(2-4)

Prerequisite: DT 100 or equivalent. Civil Drafting is a course which emphasizes traverse and topographical drawing problems. The course includes a short introductory review of previous mechanical drawing problems and includes a critique of previously acquired lettering skills and line techniques. Will equip the student with the skills and line techniques and the ability to prepare a clear, readable, graphical presentation of rough notes furnished by the survey party. Course fee.

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 and 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.

CT 123   Strength of Materials   4(4-0)

Prerequisite: CT 122 and 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: TEC 150 concurrently or Math Placement Test. Covers surveying, 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 and summer terms. Course fee.

CT 132   Basic Surveying II   4(3-2)

Prerequisite: CT 131 and 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. Course fee.

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. Course fee.

CT 135   Elementary Surveying I   4(4-0)

Prerequisite: DT 100. Introduction to surveying technology, use of tapes, levels, lasers, transits, theodolites and electronic distance measuring equipment for measuring distances, elevations and angles. The emphasis is on developing skills in operating, proper handling and field adjusting of instruments.

Industrial Drafting (DT)
Construction and Engineering Technology
Division of Technology and Applied Sciences

DT 100   Basic Drafting   3(2-2)

Focuses on basic concepts in orthographic projection, auxiliary projections and sketching, both orthographic and pictorial. Lettering techniques will be stressed; a brief approach to industrial dimensioning practices is presented.

DT 101   Industrial Drafting I   4(2-4)

Prerequisite: DT 100 or placement test. Emphasis is placed on orthographic projection, sections auxiliary views and dimensioning techniques. Each student will work on a set of drawings applying above mentioned drafting methods to accomplish tasks. Course 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. Conventional drafting techniques will be used to accomplish tasks. Course 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. Course fee.

DT 104   Jigs and Fixtures Design I   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. Course fee.

DT 105   Jigs and Fixtures Design II   4(2-4)

Prerequisite: DT 104. Design concepts and a problem-solving type approach will be utilized in designing tools for various product drawings. Course fee.

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. Course 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.

DT 111   Industrial Blueprint Reading II   4(3-2)

Prerequisite: DT 110. A continuation of DT 110 with emphasis on more complex prints. Shop processes will also be covered.

DT 135   Technical Illustration I   4(2-4)

Prerequisite: DT 101. Introduces methods of illustration currently used in industry: use of sketches, photographs and axonometric construction and introduction to the perspective grid. Use of line weights is emphasized to achieve desired finished drawing effects. Course fee.

DT 160   Body Design I   4(2-4)

This first course in Body Design starts with a general coverage of automotive styling and body design. Course fee.

DT 202   Die Design I (Detailing)   4(2-4)

Prerequisite: DT 101. This course will emphasize the proper steps to designing a die. Also will cover the names of various die components and understanding how they work. Course fee.

DT 203   Die Design II (Layout)   4(2-4)

Prerequisite: DT 202. Includes the design of blanking, piercing, basic forming, basic trim, progressive and transfer dies. Also, this course will emphasize the processing and estimating of sheet metal tooling. Course fee.

DT 209   Industrial Drafting Lab   2(0-4)

Prerequisite: Instructor approval. Gives additional lab time to industrial drafting students to fulfill extra requirements. This lab must be taken in conjunction with a drafting class.

DT 210 Industrial Dimensioning Practices   4(4-0)
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 Drafting Independent Study (Industrial)   4(0-8)
Prerequisite: Instructor approval. Further drafting skills in beginning layout and advanced detailing. Advanced problems and research in design application. Course fee.

Equine (EQU)
Construction and Engineering Technology
Division of Technology and Applied Sciences

EQU 101 Equine Health/Management   3(3-0)
This course is the introductory portion of a series of equine health and management courses. It will be of interest to the average horse owner or those interested in a career in the horse science or management field. Breeding, foaling, feeding, selection, conformation, housing and basic behavior of the horse will be covered. Course fee.

EQU 102 Equine First Aid Seminar   1(.6-1)
Equine First Aid will cover common injuries and ailments that require prompt action and attention by the horse handler. Included in the course will be recognition of common disorders, providing the veterinarian with pertinent information and appropriate treatment. Course fee.

EQU 103 Equine Hoof Care   1(1-0)
This course will cover the anatomy and physiology of the foot, preventive foot care, maintenance of the healthy foot and common foot ailments. A farrier will address selection of appropriate shoes, trimming, nailing and corrective shoeing. Course fee.

EQU 104 Study of Horses   2(2-0)
The history of horses; breeds; gaits of the horse; coat colors and markings; styles of riding and their origins; and equine terminology. Course fee.

EQU 106 Equine Feeding and Nutrition   1(1-0)
Prerequisite: EQU 101. Feeding and Nutrition will cover basic nutrient requirements, functions of the digestive system, types of feed, individualized feeding programs and feeding disorders — symptoms, treatment and prevention. Course fee.

EQU 107 Equine Farm Management   3(3-0)
This course is designed to cover management of the facilities, property selection and development and equipment. Topics included will be barn design and construction, ventilation, stabling, waste disposal and pasture management. Course fee.

EQU 108 Equine Psychology and Ethology   3(3-0)
Survey of the natural behavior of horses and its modification using principles of ethology and experimental psychology. Emphasis is placed on the use of principles in managing and training horses. Course fee.

EQU 109 Saddle Repair   .5(.6-0)
In this seminar the student will learn how to clean, recondition and make minor repairs on English and Western saddles. Course fee.

EQU 110 Basic Horse Handling   3(3-0)
This course will cover basic procedures necessary for the safe handling of horses. The horse's instinctual reactions to ordinary situations and how the handler can reduce the risk of injury to horse or handler will be covered. Basic procedures to be covered will include haltering, tying, leading, handling the feet, saddling, bridling, use of the grooming tools and basic safety. Course fee.

EQU 125 Horse Training   3(3-0)
This is the first of two courses dealing with the theory of horse handling and training. Topics included will be ground work, trailer loading, safety, clipping and starting the young horse under saddle. Correction and prevention of behavioral problems will be discussed. Course fee.

EQU 126 Equine Anatomy and Physiology   3(3-0)
Prerequisite: EQU 101. This course will provide an in-depth study of anatomy and physiology and emphasize the function of all equine body systems. Course fee.

EQU 127 Equine Genetics   2(2-0)
This course covers the basic mechanism of genetics, inheritance of major equine characteristics and equine genetic disorders. Course fee.

EQU 128 Show Your Horse   3(3-0)
This course is designed for horse owners interested in showing their horses. Preparation for the show ring will be discussed. Grooming, dressing and training for a maximum performance will be emphasized. Hunt Seat, Saddle Seat, Western, Halter and Showmanship class requirements will be covered. Students will take several field trips throughout the term. Course fee.

EQU 150 Equine Diseases   3(3-0)
Prerequisite: EQU 126 (ATG 154) Equine Anatomy and Physiology. Covers the concepts of disease processes and effects on the normal structure and functions of the body. Specific diseases will be covered including cause, disease process, treatment and prevention. Course fee.

EQU 151 Beginning Pleasure Driving   1(1-0)
This course is designed as a beginning course for those interested in pleasure driving. Topics included: selection, purchase and fit of appropriate harness, vehicle and related tack; safety measures; ground work; harnessing; driving; selection of appropriate horse. Course fee.

EQU 152 Conformation   2(2-0)
Prerequisite: EQU 101 and EQU 106. Conformation and selection will include basic anatomy of the muscoloskeletal system, conformation faults, action defects, breed standards and the application of previous concepts in purchasing a horse. There will be sessions also devoted to judging of conformation. Course fee.

EQU 153 Equine Reproduction   2(2-0)
This course will include anatomy and physiology of the mare and stallion reproductive systems, increasing conception rate, care of the pregnant mare, foaling process and care of the newborn foal. Course fee.

EQU 154 Equine Business Management   3(3-0)
This course will cover the aspects of establishing and conducting a small horse business. Course fee.

Fire Science (FST)
Construction and Engineering Technology
Division of Technology and Applied Sciences

FST 125 Arson Investigation   4(2-4)
Arson Investigation offers specialized training for insurance investigators and building operators, as well as firefighters and fire marshal 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. Course fee.

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 140 Chemistry For Fire Service   4(4-0)
Focuses on basics in general chemistry for the fireman. Topics include: atomic and molecular theory, bonding property of elements, oxidation reduction reactions, kinetic-molecular theory, solutions and electrochemistry applications are made to the field of fire protection.

FST 160 Fire Fighting Strategy and Tactics I   3(3-0)
Fire fighting strategy and tactics, planning methods of attack and preplanning fire problems are covered.

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 Training I-A   6(6-0)
Prerequisite: Active firefighter. Phase I of the Michigan Fire Fighters Association Training Program (66 hours).

FST 167   Fire Hydraulics I   3(3-0)

Prerequisite: Basic math. 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 principles of physics: solids and their characteristics, liquids in motion, gas laws and applications.

FST 176   Fire Training I-B   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 crew 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 2-C   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 2-D   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 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.

FST 220   Environmental Hazardous Materials Emergencies   3(3-0)

Prerequisite: Criminal Justice/Fire Science major. This course is designed so the student may develop the necessary skills to competently define and arrest the varied problems posed by hazardous materials involved in emergancy situations.

FST 263   Building Construction for Fire Security I   3(3-0)

Involves essentials of building design and construction; special features and considerations relating to fire security.

FST 264   Fire Investigation I   3(3-0)

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.

FST 266   Fire Investigation II   3(3-0)

Prerequisite: FST 264. Preservation of evidence and photographic coverage of fire, methods of interrogation related to fire investigation, and conduct for investigators; libel, slandar and court procedures related to evidence and statements, and the importance of cooperation between investigative agencies; records, reports and case histories.

FST 268   Hazardous Materials II   3(3-0)

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.

FST 269   Responding to Emergencies in Hostile Situations   4(4-0)

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 natura, emphasis will be placed on developing diverse skills which enhance the safety of the practitioner who 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.

FST 270   Advanced Fire/Arson Investigation   3(3-0)

Prerequisite: FST 125. Active member of fire department, law enforcement agency or private security. This is an advanced course in Fire/Arson Investigation for law enforcement and fire department personnel.

FST 275   Fire Claim Investigation for the Insurance Adjuster   3(3-0)

Prerequisite: Insurance Claim Adjuster or Representative. This is a special course for insurance claim personnel with interest in fire claim investigation.

FST 283   Building Construction for Fire Security II   3(3-0)

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.

FST 290   Fire Administration   3(3-0)

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.

FST 292   Instructor Training Methods   4(4-0)

Prerequisite: Experienced firefighter. Course is designed for training fire service and emergency services personnel to become instructors in the subject area they know best. Will sharpen 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 and building an effective lesson plan. Approved and recognized by the Michigan Fire Fighter's Training Council.

FST 293   Fire Science Project   3(0-6)

Prerequisite: Instructor approval. Undertake and complete an independent study or project under staff supervision. Consult with faculty advisor before enrolling.

Interior Architecture Design (IAD)
Construction and Engineering Technology
Division of Technology and Applied Sciences

IAD 101   Home Decorating   2(1-2)

This course is a survey of general information on decorating residential buildings and introduction to the use of principles of interior design. Course fee.

IAD 105   Antiques and Collectibles   2(2-0)

The student will learn to recognize, date and evaluate antiques and collectibles from the bases of materials, methods of construction, styles and periods.

IAD 110   Interior Architecture Design Sources   4(2-4)

This course examines specific furnishings and products used in the current interior architecture design industry. Course fee.

IAD 120   Housing Interiors   2(2-0)

This course will explore through lecture/discussion and sketching the planning and design of the American housing industry from past to present. The impact of government, finance, zoning ordinances, codes, aesthetics, construction technology, demographics, energy and sociaty will be studied. (Recommended for all majors).

IAD 131   Interior Architecture Design I   4(2-4)

This is an introduction to the profession of interior design and design theory. Principles and elements of design are used to communicate solutions to environmental interior problems. Design vocabulary, principles and elements of design in a composition such as space planning of various space and wall elevations will be covered. Course fee.

IAD 132   Interior Architecture Design II   4(2-4)

This course emphasizes furniture styles and materials used in designing interiors with special emphasis on floor coverings, accessories, window treatments and the effects of textiles. Design and drawing of interior elevations are also included. Course fee.

IAD 133   Interior Architecture Design III   4(2-4)

This course 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. Course fee.

IAD 141   Interior Architecture Design Drawing I   4(2-4)

This is a fundamental drafting course teaching techniques used by the interior designer which includes drafting terminology, drafting techniques in pencil and ink, principles of architectural lettering, interior elevations and one-point perspective. Course fee.

IAD 142   Interior Architecture Design Drawing II   4(2-4)

This course is an introduction to various media used by the interior designer. Emphasis is placed on techniques and practice in a variety of media, rendering perspectives of interior space in one-point and two-point perspective, eyeball sketching, isometrics, logos, different methods for reproduction of drawings. Course fee.

IAD 143   Interior Architecture Design Drawing III   4(2-4)

This course focuses on problem-solving and practice in all media and preparation of a professional portfolio of renderings. Course fee.

IAD 150   Applied Design   3(3-0)

This course is an introduction to designing for students who want to become professional designers. It includes basic elements and principles of 2-D design, color and 3-D design. Holistic and practical, this approach to design will complement all disciplines.

IAD 171   Textiles   4(2-4)

This course examines the basic fundamentals of textiles, their characteristics and identification, fabric weaves and uses, basic fiber weaves, currently used complex weaves, natural fibers, and man-made fibers. Course fee.

IAD 231   Interior Architecture Design IV   4(2-4)

This course emphasizes the architectural aspects of interior design, focusing on building materials, energy efficiency, building codes, efficient utilization of space and alternative housing design. Course fee.

IAD 232   Interior Architecture Design V   4(2-4)

This course emphasizes contract design. This includes designing commercial interiors, integrating clients's needs and the socio-plychological aspects of the environment; estimating and specifying a contract interior. Course fee.

IAD 233   Interior Architecture Design VI   4(2-4)

This course examines the fundamentals of the interior design business process: design responsibilities in the profession, incorporation of design ethics in the professional practice. Emphasis is on problem-solving situations simulating designer-client roles. Course fee.

IAD 238   History of Decorative Arts I   3(3-0)

This course is a survey of the history of decorative art periods including furniture, interiors, textiles and accessories, covering periods from Ancient through Renaissance and relating to modern day environments.

IAD 239   History of Decorative Arts II   3(3-0)

This course places emphasis on the Baroque to Modern periods with an examination of preservation principles.

IAD 250   Interior Architecture Design Business Practices   4(2-4)

This course provides an in-depth study of the business and professional practices of interior designers.

IAD 261   Workroom Practices I   4(2-4)

This course examines studio workroom methods for commercial and residential window coverings and the detailing used to enable the designer to communicate the design concepts to the workroom. Course fee.

IAD 262   Workroom Practices II   4(2-4)

This course emphasizes cost estimating and installation techniques for wall coverings, floor coverings and ceilings. Course fee.

IAD 275   Interior Arch Design Project   4(0-8)

This course allows for focus on individual pursuit of special projects that are not incorporated in regular course offerings.

IAD 279   Interior Architecture Design Internship   8(0-16)

This course is a field study. Students will gain pre-career experience by working in a studio environment under the supervision of a professional architect or interior designer. Regularly scheduled progress reports will be given and discussed with supervising faculty member.

IAD 285   Design Portfolio   2(2-0)

This course introduces the portfolio as a presentation vehicle, end provides students a comprehensive means of assessment.

Landscape Architecture (LAT)
Construction and Engineering Technology
Division of Technology and Applied Sciences

LAT 100   Intro Landscape Drafting   3(2-2)

No drafting experience required. The use of drafting equipment, emphasizing lettering, line convention and title blocks. Develop basic format for designing construction drawings. Provides essential skills for beginning LAT Program. Course fee.

LAT 102   Introduction to Horticulture   3(3-0)

This course is an introduction to the study of horticulture, highlighting the four major fields of interest: floriculture, woody ornamentals, vegetables and fruit and nuts. The job opportunities and the general role of horticulture will be discussed. Field trips and laboratory experiments will highlight the class.

LAT 105   Insects and Disorders of Plants   2(2-0)

This class is for the home gardener or professional person interested in a knowledge of the basic pest problems of trees, shrubs, perennials and turf. The course includes insect, disease, weed and vertebrate problems as well as those relating to culture and environment. Current relevant controls will be discussed in both general and specific terms. Key concepts will include total plant health, plant pest diagnosis and integrated pest management. Course fee.

LAT 107   Floral Design: Beginning   3(2-2)

The basic principles of floral design are taught with the student creating arrangements under the guidance of the instructor. This is a hands-on class with participants working with floral materials each week. Course fee.

LAT 108   Wild and Natural Floral Design   3(2-2)

Basic design principles will be applied to the use of natural materials collected from the wild and used in informal designs. This course will feature the identification and analysis of various plant material, naturally occurring or cultivated for floral design purposes and the use of common wildflowers, weeds and grasses in various decorating styles. Course fee.

LAT 109   Floral Design: Advanced   3(2-2)

The advanced principles of floral design are taught with the student creating arrangements under the guidance of the instructor. This is a hands-on course with participants working with floral materials each week. Speciality designs and theme designs will highlight the course.

LAT 130   Interior Landscaping   4(3-2)

The aim of this course is to acquaint the student with the identification, culture, placement and use of foliage and flowering plants in the home, office, mall or restaurant. Information relating to soil media, watering, light requirements, fertilizer, insect and disease control and management will be discussed in relation to the plant's placement and use within the interior landscape. Course fee.

LAT 132   Residential Landscaping   3(2-2)

Highlights a basic planning approach for improving your home landscape. The development of a basic design focusing on your own home including placement of plant material, decks, patios, water features and other landscape elements. A course for the new homeowner, homeowner renovating landscape or residential nursery landscaper. Course fee.

LAT 133   Residential Landscape Maintenance   4(4-0)

Basic insect and disease identification and control measures will be discussed. A course for the homeowner, nursery landscaper or maintenance contractor. Course fee.

LAT 134   Lawn Care   3(2-2)

A basic lawn care class for the homeowner or professional interested in proper site preparation, soils, seeding, sodding and maintenance. Gain valuable experience in proper turf varieties, equipment, insect and diseases and mowing techniques. Course fee.

LAT 140   Landscape Plant Materials
(Deciduous Trees and Evergreens)   4(2-4)

Explores a group of hardy ornamental plants emphasizing deciduous trees, shrubs, evergreens and ground covers. How to select the best and newest varieties will be highlighted. A good course for the landscaper, nursery worker or homeowner who would like to identify or refresh ones skills in identification. Course fee.

LAT 141   Landscape Plant Materials
(Flowering Trees, Shrubs and Ground Cover)   4(4-0)

The exploration of spring flowering trees, shrubs, broadleaf evergreens and ground-covers. Highlighting the time of bloom and special features such as fruit, bark, foliage color and buds as they relate to the landscape. Basic plant identification is developed and positive design characteristics of individual plants are stressed. Slides of individual plants will be presented, as well as walking labs to highlight these plants. Course fee.

LAT 145   Orientation to Landscape Architecture and Planning   4(4-0)

The course will be a general orientation to landscape architecture and planning. The student will learn about the different aspects of the field through discussion, field trips and slide presentations. Areas will include mapping, urban development, ecological systems, construction, municipal planning and related employment opportunities.

LAT 150   Introduction to Landscape Architecture   4(4-0)

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. Course fee.

LAT 152   Landscape Graphic Communication I   4(4-0)

Prerequisite: LAT 100 or equivalent. 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. Course fee.

LAT 153   Landscape Graphic Communication II   4(4-0)

Prerequisite: LAT 152. Explores the basic principles of perspective layout, acceptable landscape sketching techniques and preparation of graphic presentations. Primarily stresses black and white value drawing techniques. Course fee.

LAT 160   Planting Design I   4(2-4)

Prerequisite: LAT 100, 140 or 141. Provides an overview of the planting design process from site analysis to construction documentation. Covers the basic theoretical principles of planting design as well as the practical aspects of plants and design implementation. Projects cover a range of design situations and stress development of basic skills. Course fee.

LAT 161   Planting Design II   4(4-0)

Prerequisite: LAT 160, 140 or 141. 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. Course fee.

LAT 164   Landscape Design I   4(4-0)

Prerequisite: LAT 100 or equivalent. 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. Course fee.

LAT 165   Landscape Design II   4(4-0)

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. Course fee.

LAT 170   Site Grading I   4(2-4)

Prerequisite: LAT 100 or equivalent. 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. Course fee.

LAT 171   Site Grading II   4(2-4)

Prerequisite: LAT 170. 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. Course fee.

LAT 180   Landscape Ecology   4(4-0)

A course for the professional as well as interested individual covering the relatively new field of landscape environment. Develop a basic understanding of landscape communities, how they developed and how they function. Plant communities, native species, natural design and environmental impact are some of the topics covered. Course fee.

LAT 185   Arboriculture - Urban Forestry   4(4-0)

The care of trees and shrubs in the urban environment is thoroughly discussed. The course emphasizes tree physiology as it relates to plant selection, installation, decay prevention, pruning and fertilizing field demonstrations of arboricultural practices such as pruning, bracing and fertilizing will be offered. Course fee.

LAT 190   Landscape Nursery Operations   4(4-2)

The course will cover the basic nursery operations. It will deal with the process of set-up, planting and follow-up maintenance. Course will emphasize the how-to approach. Course fee.

LAT 195   Irrigation Design   4(4-0)

The course will cover the basic nursery operations. It will deal with the process of set-up, planting, and follow-up maintenance. Course will emphasize the how-to approach.

LAT 200   Workstation Basics   4(4-0)

This course will teach new users the skills needed to operate and maintain an Intergraph Unix Workstation on a daily basis. The student will learn the computer orientation necessary to begin development and utilization of the unix-based software packages for civil technology, G.I.S. and landscape planning. Course fee.

LAT 203   Introduction to Microstation   4(4-0)

This course is to introduce the student to the basics of Microstation. Microstation supports a range of commands for placing and manipulating elements in the design file. A student can apply these commands for either a Microstation 32 hardware setup or a Microstation personal computer setup or the INFOMIX-SQLnd Plus database packages. The class is designed for Intergraph Workstation lab use as well as the Microstation P.C.

LAT 205   Introduction to Geographic Information Systems   4(4-0)

This course will describe the components of a basic GIS system and how they are assembled. The acquisition of data, maps and other information to build a data base will be highlighted. The steps necessary to set up a basic project will be demonstrated through various applications in GIS.

LAT 230   Principles of Plant Propagation   4(4-0)

This course will cover fundamental aspects of plant growth, structure and physiology as it relates to plant propagation. Mechanical and technnical skills of sexual and asexual propagation will be covered extensively. Determination of propagation methods based on the plant type and situation will be stressed. Course fee.

LAT 250   Landscape Construction Methods   4(4-0)

Prerequisite: LAT 100 and ATM 150. Analyzes the comparative uses and methods of installing masonry, asphalt, wood, concrete and other landscape materials. Physical properties of landscape materials are studied. Course fee.

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. Course fee.

LAT 261   Planting Design IV   4(2-4)

Prerequisite: LAT 260. 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. Course fee.

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. Course fee.

LAT 265   Landscape Construction Details I   4(4-0)

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. Course fee.

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. Course fee.

LAT 276   Landscape Documents and Specifications   4(4-0)

Prerequisite: LAT 100. Elaborates the principles and relationships between specifications and working drawings. Emphasizes familiarization with bidding procedures and general contract conditions. Involves practical landscape specification writing. Course fee.

LAT 277   Landscape Office Practice   4(4-0)

Introduces the elements of office business practice and organization, record-keeping, on-the-job inspection and close out and initial proposal writing and contract formulation. Course fee.

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 and related topics. Course will feature hands-on use for plant selection, material inventory, site construction data and design assistance. Course fee.

LAT 283   LandCADD I   4(2-4)

Prerequisite: LAT 282 or Equivalent. A class for the individual with basic computer exposure interested in learning more about computer-aided design using the LandCADD software package. The LandCADD site planning package will be fully explored as well as the additional modules covering irrigation design, plant data base and simulated growth, E-Z estimate and quadrangles. Course fee.

LAT 284   LandCADD II   4(2-4)

Prerequisite: LAT 283. A class to continue learning computer-aided design using the LandCADD software package. Advanced options will be explored including 3-D. Course fee.

LAT 287   Site Layout I   4(4-0)

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. Course fee.

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 emphasized. Course fee.

LAT 294   Landscape Project (Landscape Architecture)   4(0-8)

Prerequisite: Program 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 drawing.

Applied Technical Math/Writing (TEC)
Construction and Engineering Technology
Division of Technology and Applied Sciences

TEC 102   Industrial Communications   4(4-0)

A practical approach to clear written communication, including organizational skills, a review of grammar and 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)

Prerequisite: High school algebra or placement test. 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   Technical Mathematics I   5(5-0)

Prerequisite: TEC 150 or 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   Technical Mathematics II   5(5-0)

Prerequisite: TEC 151. 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   Technical Mathematics III   5(5-0)

Prerequisite: TEC 152. Applies topics from algebra and trigonometry to architectural technology, civil technology, electronics and mechanical technology. Covers quadratic equations, trigonometry, vectors and j-operator.

TEC 201   Applied Physics   4(4-0)

Prerequisite: ATR 151. 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 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   Technical Internship Training   4(0-8)

Prerequisite: Program approval. 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 situation 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.

TEC 211   Mechanical Principles   2(2-0)

Includes basic principles of mechanical technology, electricity and electronics technology, civil technology, hydraulics, metal working and heating and air conditioning. Provides basic training in fundamental physical phenomena and emphasizes practical problems.

HEALTH CAREERS TECHNOLOGY

Director: Donna Price
175 Gannon Physical Education Center

Department Role and Objectives

Health Careers Technology provides initial and lifelong education opportunities for health occupations, health promotion and rehabilitation for individuals within the College and community.

Graduates of health occupations curricula are prepared to function as beginning practitioners in their specialty. Their participation assists the health care delivery system in providing safe, effective health care.

Credentialed health professionals are provided continuing education to update knowledge, learn new skills or retrain for re-entry into the health care delivery system.

Individuals in the community are provided educational opportunities to learn health promotion, wellness and rehabilitation for lifelong physical well-being.

The department continually monitors trends and changes in health care technology, advances in medical science and changes in the health care delivery system so that it can respond with appropriate courses and curricula in a timely manner.

Programs of Study

Health Careers Technology currently offers programs* leading to the Associate Degree in Applied Science with major emphasis in:

DA:	Dental Assistant
DH:	Dental Hygiene
DMS:	Diagnostic Medical Sonography
EMS:	Emergency Medical Services
MRI:	Magnetic Resonance Imaging
NUR:	Nursing (Career Ladder LPN-RN)
RAD:	Radiation Therapy Technology
RT/RTA:	Respiratory Therapy Technology
RXT:	Radiologic Technology

And one-year curricula leading to the Certificate in:

DA:	Dental Assistant
DMS:	Diagnostic Medical Sonography
EMT:	Emergency Medical Technician
ER:	Emergency Care
ESA:	Advanced Emergency Medical Technology (Paramedic)
MRI:	Magnetic Resonance Imaging
MA:	Medical Assistant
NUR:	Practical Nursing
RAD:	Radiation Therapy Technology
RT:	Respiratory Therapy Technician
ST:	Surgical Technician

And one or two-term curricula:

CHS:	Aide for Developmentally Disabled
CHS:	Central Supply Technician
CHS:	Dental Insurance Billing
CHS:	Health Unit Clerk/Coordinator
CHS:	Home Health Aide
CHS:	Hospital Food Service Supervisor/Dietary Assistant
CHS:	Pharmacy Technician
CHS:	Phlebotomy Technician
CHS:	Psychiatric Technician
DSC:	Dental Business 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 curricula also require more than the minimum 90 quarter term credits for graduation. Because Health Careers curricula 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 curriculum. Applicants are expected to satisfy requirements for the College as well as for the individual curriculum. 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:

LANSING COMMUNITY COLLEGE

American Medical Association Committee on Allied Health and Accreditation, and the respective Joint Review Committees on Accreditation of programs in Radiologic Technology, Radiation Therapy and Respiratory Therapy American Dental Association, Commission on Dental Accreditation National League for Nursing, Department of Associate Degree curricula 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 curricula, the department offers courses in Health and Fitness education. Fitness testing, exercise prescription and a variety of opportunities for physical exercise and health education are available to students 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 or other chronic conditions.

Courses are listed under:

HF: Health and Fitness
HFC: Health, Fitness/Cardiac

New Programs, Curricula, and Courses

In addition to the curricula and courses offered currently, the Health Careers Technology Department 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 curricula or the development of new technical programs. Therefore, prospective students are encouraged to contact the Department in addition to their review of the catalog.

Community Health Services
Director: Carol Phelan
Room 175 Gannon-Physical Education Building

Programs which meet a need in the community for training technicians in certain vocational areas are also offered. These technicians currently include Health Unit clerk/coordinator, 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.

Continuing Health Careers
Director: Carol Phelan
Room 175 Gannon Physical Education Building

Continuing Health Careers offers 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 regarding new offerings.

Dental Assistant
Director: Sally Deck
Room 175 Gannon Physical Education Building

This is a one or two-year career ladder curriculum. The first year combines basic dental assistant courses and science courses with minimal clinical experience. Upon students' completion of the one-year program, the College grants a Certificate and the student may apply for the second-year curriculum.

The second-year curriculum includes advanced dental assistant courses, comprehensive clinical experience and intraoral advance functions for dental assistants. 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 curriculum prepares one to function first as a Chairside Dental Assistant and then as a Registered Dental Assistant with the dental health team. The Dental Assistant curriculum (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 curriculum for persons interested in performing receptionist and office manager duties for the dental office.

Admission requirements for each of these dental assistant curricula and information about career options may be obtained from the Dental Advisor at the Dental Assistant Programs Office, 007 Arts and Science Bldg, phone (517) 483-1457. Admission requirements information may also be obtained from the Admissions Counselor for Health Careers Technology at the Admissions Office.

Dental Hygiene
Director: Sally Deck
Room 175 Gannon Physical Education Building

Lansing Community College offers a two-year* dental hygiene curriculum. Upon successful completion an Associate Degree is awarded, and the graduate is eligible for the licensing examination in dental hygiene administered by the Michigan 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 curriculum 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.

Admission requirements and information about career options may be obtained from the Dental Advisor at the Dental Hygiene Program Office, 007 Arts and Science Bldg., phone (517) 483-1457. Admission requirements may also be obtained from the Admissions Counselor for Health Careers Technology at the Admissions Office.

*Prerequisite courses generally require three additional terms prior to the six-term curriculum for Dental Hygiene.

Diagnostic Medical Sonography
Director: Ronald Griffith
Room 175 Gannon Physical Education Building

Graduates of the Associate Degree in Applied Science in Diagnostic Medical Sonography are eligible to write the Registry Examination as given by the American Registry of Diagnostic Medical Sonographers. Those who pass the examination are entitled to the privilege of carrying the insignia initials, R.D.M.S.

The four-term curriculum is open to those persons who are graduates of CAHEA approved Allied Health Programs (Radiologic Technology, Respiratory Therapy, Nursing, etc.). Because of the structure of the curriculum, individuals with questions should contact the Health Careers Technology, phone (517) 483-1412.

Emergency Medical Services
Director: Rexine A. Finn
Room 175 Gannon Physical Education Building

The Emergency Medical Services (EMS) Program offers Michigan Department of Public Health approved courses for First Responder, Basic Emergency Medical Technician Specialist (EMT Specialist), Paramedic, Emergency Medical Services Instructor/Coordinator (EMS I/C), EMT Refresher and EMS Continuing Education. Also offered are courses, seminars and workshops in American Red Cross First Aid, American Heart Association CPR, Basic Trauma Life Support and the Injured Child.

Students may attend courses on a part-time or full-time basis during the day and evening. Upon successful completion of the Basic EMT, EMT Specialist, Paramedic and EMS I/C certificate programs the students are eligible to take the State of Michigan licensing exam.

A three-term Basic EMT/EMT Specialist curriculum includes a series of courses designed to prepare the student in additional aspects of Emergency Medical Services for physical assessment, anatomy, terminology, medical legal aspects of EMS, EMS hazards and dangerous situations, psychological emergencies, extrication, communications, ambulance driving, pharmacology and EMS systems. An Associate Degree in Emergency Medical Services is awarded to those students who successfully complete the Basic EMT three-term curriculum, Paramedic curriculum and American Government.

Courses within the curriculum include classroom, lab and clinical instruction by nurses, paramedics, EMTs and physicians in cooperation with local hospitals and EMS agencies. A training ambulance is used for simulations to provide a realistic atmosphere for learning.

A video is available outlining the career of a Paramedic and the education offered at Lansing Community College to prepare students for that career. This "STARS OF LIFE" video can be viewed on campus or sent to you upon request. In addition, students may visit the campus and the EMS program by arrangement with the Program Director. For additional information call (517) 483-1448.

Health, Fitness and Rehabilitation
Director: Rosalie Walker
175 Gannon Physical Education Building

Health Careers Technology and Center for Health Education/Rehabilitation offers a Health, Fitness and Rehabilitation Program. The curriculum includes continuous aerobic exercise classes which are conducted under the guidance of a physician for students needing health improvement. Rehabilitation is directed at students (and their spouses) with heart disease.

Anyone wishing to increase fitness and decrease the risk factors which might cause disease is also welcome to participate. As with rehabilitation, adult fitness is health education which emphasizes aerobic exercise, proper nutrition, stress reduction, smoking cessation, cholesterol reduction and assessment of individual life styles. Staff members are experienced in the development and establishment of corporate fitness programs.

Magnetic Resonance Imaging
Director: Ronald Griffith
175 Gannon Physical Education Building

Magnetic Resonance Imaging is a four-term sequence curriculum. The program is designed for individuals who already have a formal background in Radiography or Ultrasonography. The curriculum combines both didactic and clinical education at the Michigan State University Clinical Center.

Because of the structure of the curriculum, individuals with questions should contact Health Careers Technology, phone (517) 483-1412.

Medical Assistant
Coordinator: Lisa Cypher
Room 175 Gannon Physical Education Building

The Medical Assistant Program is a four-term Certificate curriculum that begins every fall term. Upon successful completion of the program and one year of work experience, graduates are eligible to take the certification examination offered by the American Association of Medical Assistants.

Applicants to the program are required to meet the admission requirements of the College and the prerequisite course requirements established by the curriculum. The curriculum includes general health career courses and specific courses pertinent to Medical Assisting. Clinical experience is completed in a physician's office or a health care institution. Individuals with questions should contact Health Careers Technology, phone (517) 483-1412.

Practical Nurse-Associate Degree Nursing
(Career Ladder in Nursing)
Director: Patricia Lambert
Room 175 Gannon Physical Education Building

Nursing is a curriculum which builds on previous learning and experience. All qualified students will be admitted into the first year of the Nursing curriculum. Upon successful completion of required courses students may exit after the first year and are eligible to take the National Council Licensing Examination - Practical Nurse (NCLEX-PN).

Qualified students will be admitted into the second year to complete the requirements of Associate Degree Nursing. After successful completion of required courses students will be eligible to take the National Council Licensing Examinations - Registered Nurse (NCLEX - RN).

Courses in 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 curriculum, 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 after the first year is required to meet the Department of Health Careers Technology criteria for practical nursing students to be eligible for certification.

Licensed practical nurses may apply for advanced standing to the Associate Degree Nursing.

Upon completion of the second year of the curriculum, 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 curriculum and College requirements will be eligible to graduate with an Associate Degree in Applied Science - Nursing major.

The Associate Degree Nursing curriculum is approved by the Michigan Board of Nursing and is accredited by the National League for Nursing.

Applicants to the Career Ladder in Nursing 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.

Radiation Therapy Technology
Director: Ronald Griffith
Room 175 Gannon Physical Education Building

The Associate Degree in Applied Science 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. Those who pass the examination are entitled to the privilege of carrying the insignia initials, R.T.(T).

The five-term curriculum is open to those persons who are graduates of CAHEA-approved curricula in Radiologic Technology. Because of the structure

of the curriculum, individuals with questions should contact Health Careers Technology, phone (517) 483-1412.

Radiologic Technology
Director: Ronald Griffith
Room 175 Gannon Physical Education Building

The Associate Degree in Applied Science 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 Technologist. Those who pass the examination are entitled to the distinction 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 Center, Lansing General Osteopathic Hospital, Edward W. Sparrow Hospital and St. Lawrence Hospital, all of Lansing, Michigan and The Memorial Hospital, Owosso, Michigan.

Interested students are urged to contact the Admissions Counselor for Health Careers Technology Admissions Office, for specific requirements for program admission.

Respiratory Therapy
Director: Jerry Rocho
Room 175 Gannon Physical Education Building

The Lansing Community College Health Careers Technology offers a two-year curriculum designed to prepare therapist level personnel, and a five-term Certificate designed to train technician level personnel. Both curricula 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, 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 five terms in the curriculum for the Certificate, the student is awarded a Certificate in Respiratory Therapy. A Certificate graduate is eligible to take the National Certification Examination administered by the National Board for Respiratory Care. Also, Certificate graduates are eligible to apply for re-admission to the second year of the Associate Degree 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 Technology Admissions Office.

Surgical Technology
Director: Donna Price
Room 175 Gannon Physical Education Building

Upon completion of a nine-month (three terms) curriculum 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 curriculum 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 Technology Admissions Office.

COURSE DESCRIPTIONS

Allied Health Careers (AHC)
Health Careers Technology
Division of Technology and Applied Sciences

AHC 102   Nutrition   2(2-0)
Prerequisite: Allied Health Professional, BIO 101 recommended. Principles of nutrition including identification of the major nutrients, metabolism and 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 are 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 care practices with emphasis on physical and emotional aspects.

AHC 106   Introduction to Pathology   3(3-0)

Prerequisite: Allied Health Professional. Course includes concepts of disease processes and effect on normal structure and function of the body. To develop a new way of thinking about disease processes, general principles of pathology are discussed, rather than specific disease entities.

AHC 108   Body Systems   5(5-0)

Prerequisite: Allied Health Professional. 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.

Continuing Health Careers (CHC)
Health Careers Technology
Division of Technology and Applied Sciences

CHC 100   Nurse Refresher   12(7-12)

Prerequisite: Current Michigan License. For the inactive RN and LPN who would like to re-enter 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   .5(.55-0)

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)

Prerequisite: Pharmacology Math and PGY 212. 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 is NAPNES approved. A minimum grade of 2.5 is required for a Certificate.

CHC 103   Basic Psychiatric Technician Update   2(2-0)

Prerequisite: Basic psychiatric technician or equivalent. A course designed to update current mental health practices and to provide additional information for the practicing basic psychiatric technician. Course content will include: the borderline personality disorder, substance abuse, dual diagnosis, the developmentally disabled, signs and symptoms of depression, crisis intervention and psychotropic medications. The material will be presented through lecture, case studies and group discussions.

CHC 106   Cardiac Arrhythmia Interpretation   3.5(3-1)

Prerequisite: Nurse, AEMT or equivalent. This is a comprehensive level course designed for practicing RNs, but also open to other interested health professionals. Emphasis will be placed on the identification and treatment of major and/or lethal arrhythmias according to ACLS guidelines. Discussion of anatomy and physiology of the cardiovascular system will serve as a basis for analyzing the hemodynamic changes occurring with rhythm disturbances. Students will have opportunities to identify arrhythmias both on rhythm strips and on a monitor. Cardiac drugs commonly seen will be studied in relationship to their use in the treatment of cardiac arrhythmias.

CHC 107   Community Resources for Health Professional 1(1-0)

Prerequisite: Health professional. A course designed to help health care professionals identify and use community resources for their client population. Material will be presented through lecture by representatives of various local health care providers for clients and/or families.

CHC 108   Medical Emergencies in the Dental Office   .5(.55-0)

Prerequisite: Dental professional staff. This course will cover common medical emergencies that may occur in the dental office and treatment for such emergencies. The course also gives the student instruction in taking a blood pressure, clearing airways, evaluating medical history and emergency kits. Participants will be asked to formulate an office emergency plan.

CHC 109   Oral Radiography for Dental Auxiliaries   3(2-2)

Prerequisite: Dental auxiliary with one year experience. Upon completion of this course the dental auxiliary will have the knowledge and skills needed to produce a full mouth series of intraoral radiographs of diagnostic quality. Emphasis will be on the use of parallel perapical technique. The course content will include the production and emission of x-rays, the effects of factor variation on the image, radiation properties, radiation safety measures, processing procedures, mounting radiographs, evaluation and interpretation of radiographs and types and uses of extraoral exposures. Individualized laboratory sessions provide student practice in exposing, processing, mounting and evaluating radiographs.

CHC 110   Oral Radiography Update   1(1-0)

Prerequisite: Dental auxiliary X-ray experience. This course is designed for the dental hygienist and the dental assistant who desire to improve the diagnostic quality of the dental radiographs they expose. The course format includes a review of dental radiology concepts and hands-on instruction in using intraoral techniques. Lecture material includes: radiation physics, radiation safety and protection, quality assurance and intraoral techniques.

CHC 111   Forensic Dentistry Seminar   .5(.55-0)

Prerequisite: Dental professional. This seminar will emphasize the role the forensic dental professional plays as a member of the forensic science discipline; identification of unknown human remains; bite-mark and child abuse recognition; and civil litigation and mass disaster. The subject matter will be illustrated by the use of slides, videos and hands-on demonstrations.

CHC 112   Dental Auxiliary X-Ray   2(1.5-1)

Prerequisite: Dental auxiliary with one year experience. For dental auxiliaries to update their skills and knowledge of making intraoral radiographs. Includes theory and laboratory practice on a radiographic skull or DXTTR.

CHC 113   Physical Assessment Refresher   1(1-0)

Prerequisite: CHC 114 or equivalent. This seminar is designed for students who have already had formal training in physical examination skills. Course content is designed to help students recall important signs of pathology as well as normal physical findings. There is also ample opportunity, through supervised practice sessions, to improve specific techniques of physical examination.

CHC 114   Physical Assessment for Nurses   3.5(3-1)

Prerequisite: Active LPN or RN. 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 128   Cardiac Nursing Problems   3(3-0)

Prerequisite: RN, LPN or allied health professional. An introductory level course designed for RNs, but also open to LPNs and other health professionals. This course equips nurses with a 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 134   Neurologic Assessment Nursing   1(1-0)

Prerequisite: RN, LPN or allied health professional. 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)

Prerequisite: RN or allied health professional. 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   3(3-0)

Prerequisite: RN or allied health professional. 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 185   Laboratory Tests for Nurses   .75(.73-0)

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 188   Neuropathology for Nurses   1(1-0)

Prerequisite: Nurse or allied health professional. 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 190   Pharmacology Math   1(1-0)

Prerequisite: Allied Health professional. A six-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 192   Fetal Monitoring   2(2-0)

Prerequisite: RN or LPN. 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   Cardiac Interpretation for EKG Technicians   3(3-0)

Prerequisite: RN, LPN or technician. For technicians, EMTs, AEMTs 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)

Prerequisite: RN, LPN or allied health. This course is designed for registered nurses currently working in, or will potentially work in a mental health/psychiatric setting or with clients with emotional problems. Students are taught the content for a mental status assessment; therapeutic communication techniques; uses, side effects, adverse reactions and contraindications of psychotropic medications; patient teaching techniques; nursing interventions for psychiatric responses/behaviors; and the evaluation of client progress.

CHC 195   Effective Interaction and Problem Solving Techniques   1(11-0)

Prerequisite: RN, LPN or allied health professional. 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 198   Geriatric Nursing Seminar   1(1-0)

Prerequisite: RN or LPN. Designed specifically for nurses practicing in the field of geriatrics. Problems relating to administering care to the geriatric patient.

CHC 199   Pediatric Hospice Seminar   .75(.75-0)

The Pediatric Hospice Care Seminar will emphasize a holistic approach to the management of the terminally ill child in the home setting. The content will include: contrasting pediatric and adult hospice, an overview of state and national trends, assessment of the pediatric hospice patient and family, pediatric pain management, developmental issues specific to the patient's physical and emotional needs, fears and grief of the patient and family, strategies for bereavement. Those strategies include the presentation of at least two models for structuring a program and care for the caregiver.

CHC 200   Managing Aggression Seminar   2(2-0)

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 an 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 205   Intravenous Therapy   .75(.73-0)

Prerequisite: Nurse. This is a specialty seminar designed for nurses or health care professionals who care for clients receiving intravenous therapy in the home or extended care setting. Class content includes information about many types of IV therapy; solutions; and specialized infusion devices. Demonstrations and supervised practice sessions are included in each class session.

CHC 206   RN IV Therapy   .5(.55-0)

Prerequisite: RN or LPN. Up-to-date information on intravenous technique, solutions and intravenous medications. Various types of equipment used and hands-on experience included.

CHC 209   First Aid for Nurses   1(1-0)

Prerequisite: RN, LPN or allied health professional. 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 used in learning to deal with typical crisis situations such as management of fractures, bleeding, what to do at the scene of an accident and rapid assessment of the accident victim and more.

CHC 212   Pediatric Assessment II   .5(.55-0)

Prerequisite: Must be taken with CHC 215 concurrently. This course is appropriate for the nurse working with children in any setting, from acute care to home care or school nursing. Students learn specific tests to evaluate stages of development and to learn to recognize significant deviations from normal. Typical signs of pathology for common diseases and disorders are also included. Content covers the full pediatric age groups. It is taken concurrently with CHC 115.

CHC 215   Pediatric Physical Assessment   3(3-0)

Prerequisite: Must be taken with CHC 212 concurrently. Designed for the active RN or LPN. Gathering information about the physical status of infants and children. Concentrates on 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   .5(.55-0)

Prerequisite: CHC 206 recommended. 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 218   Nursing License Update   3(3-0)

Prerequisite: Diploma, ADN, BSN or nurse. 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)

Prerequisite: RN, LPN or allied health professional. For nurses in pediatric practice who require specific information about the normal functioning of the respiratory system; respiratory pathology and nurse's responsibilities in using respiratory therapy equipment.

CHC 220   Nurses Respiratory Workshop   1(1-0)

Prerequisite: RN, LPN or Allied Health professional. 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)

Prerequisite: CHC 106 or equivalent. 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 225   Pharmacology Update   3(3-0)

Prerequisite: Health professional. For nurses basic considerations of new and current drug therapy, and the mechanisms of drug actions, using 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 in Nursing Practice   .5(.55-0)

Prerequisite: Nurse. 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 emphasized.

CHC 228   Health Care Management   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 230   Advanced Cardiac Life Support   3(3-0)

Prerequisite: Department approval. 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 is awarded upon successful completion of the course.

CHC 231   Advanced Cardiac Arrhythmias   1(1-0)

Prerequisite: CHC 106 or equivalent. 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.

LANSING COMMUNITY COLLEGE

CHC 232   Health Care Marketing   3(3-0)
Prerequisite: Health professional. This course provides a basic understanding of the fundamentals of marketing. The emphasis of the course is an application of these marketing principles to the health care industry with emphasis on the non-profit health care segment.

CHC 233   RN Monitoring of Pacemakers   1(1-0)
Prerequisite: RN or allied health. For nurses. The normal functioning of permanent pacemakers. Focuses on: functions and types of pacemakers; care of patients with permanent pacemakers, and related topics. Also sensing, indications for pacing, and preoperative nursing care of patients with pacemakers; and demonstration to acquaint with pacemaker equipment, pacemaker EKG tracings, pacemaker leads and patient transmitter system.

CHC 235   ACLS Recertification Seminar   1(1-0)
Prerequisite: ACLS Certificate. 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   Impact of AIDS   1(1-0)
Prerequisite: Health professional. This is a seminar for all health care professionals to explore the numerous challenges of the impact of AIDS on the health care delivery system. This seminar will access the many resources available to support the AIDS patients, their families and the health care professional.

CHC 239   Emergency Nurse Update Preparation for
CEN Examination   2(2-0)
Prerequisite: RN or LPN. This three-day course is designed to provide the practicing registered emergency nurse with knowledge and an update of current practices and theories in the emergency setting. The class will be beneficial to the nurse preparing to write the CEN examination.

CHC 240   ACLS Director/Coordinator Workshop   1(1-0)
Prerequisite: ACLS course director. This course is designed to provide an update of current ACLS course requirements as well as helpful hints for prospective as well as present ACLS Course Directors and Coordinators. It is intended to provide a forum for interchange of ideas and for suggestions for improvement of Michigan ACLS courses. It is a required course for all physicians who intend to direct ACLS courses.

CHC 243   Geriatric Dentistry   .5(.55-0)
Prerequisite: Dental professional. This seminar is designed for dental and health professionals who provide care for the elderly. The specific objectives are to discuss factors characteristic of the elderly population that influence utilization of dental care, normal and pathological, physical and oral, changes associated with age, medications, nutrition, oral hygiene and management of the elderly dental patient. This course will also review the unique problems and challenges related to oral health and dental care presented by the homebound patient.

CHC 244   Hospice Administration I   4(4-0)
Prerequisite: Hospice administrator. This course combines current theory on quality assurance and leadership with application of concepts to hospice programs in all stages of development. Delegation and competencies under the administrative functions of planning, organizing, directing and controlling are presented specifically for administrative leadership and management of a quality assurance program.

CHC 245   Dental Hygiene Periodontal Management   1(1-0)
Prerequisite: Dental. This course is designed specifically for the dental hygienist and the dentist associated with a general practice, who are interested in developing and implementing comprehensive care for the patient. Special emphasis will be placed on periodontal concerns. Course topics include: dental hygiene and periodontics, patient history, periodontal diagnosis, periodontal charting, radiographic interpretation, treatment approaches for general practice, treatment evaluation/assessment, referral vs. treatment in a general practice, maintenance and re-evaluation, billing codes and future trends in therapy.

CHC 247   Dental Hygiene Periodontal Management II   .5(.4-.4)
Prerequisite: Dental hygiene or dentist. This course is designed for the licensed dental hygienist and general dentist who wish to develop and implement comprehensive periodontal care in their dental practice. Special emphasis will be on refining root planning skills and periodontal probing techniques. Students will receive clinical instruction in proper instrumentation techniques, instrument selection and instrument care. Also included will be a close look at the effectiveness of chemotherapeutic agents, treatment planning and methods to accomplish thorough recording of data. This is the second in a series of courses on Dental Hygiene Periodontal Management.

CHC 248   Hospice Administration II   4(4-0)
Prerequisite: Hospice administrator. This course combines current theory on leadership, supervision and management with application of concepts to hospice programs in all stages of development. Delegation and competencies under the administrative functions of planning, organizing, directing, and controlling are presented for staffing, personnel and fiscal management.

CHC 249   Hospice Administration III   4(4-0)
Prerequisite: Hospice administrator. This course combines theory on marketing, public relations and leadership in meeting the needs of the hospice patient/family and the community for all stages of program development. Emphasis is on delegation and competencies under the administrative functions of planning, organizing, directing and controlling. In addition, this course will also focus on patient/family rights, communication and increasing community, physician, clergy and governing board awareness/participation in hospice care.

CHC 250   Patient Dental Anxiety   1(1-0)
Prerequisite: Dental personnel. 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, biofeedback and thought control.

CHC 253   Dental Team Utilization   1(1-0)
Prerequisite: Dental professional staff. 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 255   Herpes, AIDS and Hepatitis   .5(.55-0)
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 256   New Dimensions in Dental Hygiene   1(1-0)
Prerequisite: Dental hygienist. An on-going series of day-long seminars designed to update dental hygienists on topics of current interest in the dental field and dental hygiene practice. New products, techniques, knowledge regarding etiology, diagnosis and treatment of periodontal disease and political topics will be stressed.

CHC 257   Oral Cancer Symposium   1(1-0)
The focus of this symposium is to provide the dental health care professional with the knowledge and expertise necessary for early oral cancer detection and team management of patients with oral cancer. The program content includes: etiology, epidemiology, observation and detection, staging systems, treatment plan alternatives and treatment modalities. Prosthetic rehabilitation and continued dental care will be discussed. Special considerations for rehabilitation will include: nutritional counseling, psychological issues, social considerations and identifying community resources to assist in the management of this patient population. A practical experience in detection techniques is included.

CHC 258   RDA Utilization   .5(.55-0)
Prerequisite: Dental. 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 Udate   .5(.55-0)
Prerequisite: RDH or RDA. Seminar is designed especially for registered dental assistants who wish to update themselves on new procedures that they can now legally perform in Michigan. Topics include, but not limited to: periodontal dressings, suture removal and pit and fissure sealants through lectures and laboratory sessions.

CHC 260   Oral Radiology I   2(22-0)
Prerequisite: Dental auxiliary with one year office experience or course that includes dental anatomy and hands-on experience. A course designed for dental auxiliaries to update their skills and gain knowledge of making intraoral radiographs. Emphasis is on the paralleling periapical technique.

CHC 261   Respiratory Therapy Update   3(3-0)
Prerequisite: Respiratory therapist. Selected topics in respiratory care have 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(1-0)
Prerequisite: Respiratory therapist with six months experience. 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 264   Neonatal Respiratory Care   2(2-0)

Prerequisite: Respiratory therapist or nurse. 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   2(2-0)

Prerequisite: Nurse. 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 266   Focal Problems in Geriatric Nursing Practice   2(2-0)

Prerequisite: Nurse. In-depth study of selected patient problems in geriatric nursing practice. Students learn specific physical assessment skills to evaluate the geriatric patient while developing a broader medical vocabulary to accurately describe their physical findings. Additional emphasis is placed on related pathophysiologic concepts.

**CHC 267   Therapeutic Communication for
            the Health Professional**   1(1-0)

Prerequisite: Health professional. This course is designed for nurses and health professionals in any setting. Emphasis is on application of communication theory to practice in health care. Communication techniques useful in everyday interactions, as well as crisis and difficult situations, are included. Videotape simulations; film clips; slides; structured role playing and a written assignment are utilized to enhance the student's learning in this fast-paced course.

**CHC 268   Influence Interactions With Power
            for Health Professionals**   3(3-0)

Prerequisite: Health professional. This course is designed to help the health professional take responsibility for the quality of his/her relationships with others in the Health Care Delivery System. The sessions are informal and will aid the participant to gain self-esteem and confidence in expressing themselves effectively and forthrightly. Lecture, group discussion, role-playing and assignments will be included.

CHC 270   Computers for Health Care Professionals I   2(2-0)

Prerequisite: Health professional. 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   .5(.65-0)

Prerequisite: CHC 270 or equivalent. 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 272   Pulmonary Function Test Update   1(1-0)

Prerequisite: Respiratory therapist. A one-day seminar designed primarily for the respiratory therapist who is interested in preparing for the Pulmonary Function Technologist Exam offered by the NBRC. Topics will include pulmonary functions equipment, data management and calculation, arterial blood gas laboratory instrumentation, diagnostic application of test results and pulmonary stress testing.

CHC 273   RN Critical Care   4(4-0)

Prerequisite: Registered nurse. This is a four-credit course designed for registered nurses practicing in the field of critical care or preparing to work in critical care. Emphasis will be placed on the CCRN core course content which includes anatomy and physiology, pathophysiology of selected common conditions, related nursing interventions and medical management.

CHC 276   Respiratory Diseases Update   1(1-0)

Prerequisite: Respiratory therapist or nurse. This seminar focuses on four diseases that are of major concern currently. Discussion of anatomy and physiology, clinical presentation and course, lab tests and other diagnostic procedures will be discussed as they relate to SIDS, BPD, Legionnaires Disease and AIDS. An x-ray lab with case history presentation will also be made available.

CHC 280   TMJ Dysfunction   .5(.55-0)

Prerequisite: Dental professional. This course deals with the detection and management of the TMJ patient. Topics to be discussed include: 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 will be used.

CHC 282   Dental Sealants   1(1-0)

Prerequisite: DDS; RDH; RDA. This course presents a study of pit and fissure sealants through lecture, product comparison and clinical experience. The lecture includes advantages and disadvantages of sealant use, procedure, application techniques and current research on pit and fissure sealants. The clinical experience offers the student individual instruction and clinical practice in placing pit end fissure sealants on extracted teeth and on patients.

CHC 283   Intraoral Photography   1(1-0)

Prerequisite: Dental professional. 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 Directions for the Dental Hygienist   .5(.55-0)

Prerequisite: Dental hygienist. This seminar is designed specifically for dental hygienists interested in the exciting changes taking place in the dental hygiene profession. It will identify future roles of the hygienist and encourage discussion from participants. Seminar topics will include: Dental Hygiene: past, present and future issues and trends, role definitions and responsibilities, opposition, is this really new? and How do we make the transition?

CHC 287   New Dental Products and Instruments   .5(.55-0)

Prerequisite: Dental professional. This seminar is designed to inform the dental assistant and dental hygienist about new products and instruments that are currently being used clinically in dental offices. A comparison of dental products and instruments and discussion of changes in major categories is included.

CHC 289   Dental Radiology Educators Workshop   .5(.55-0)

An intense dental radiology course for dental radiology instructors which focuses on "What Should We Teach?" and "How We Teach?" Format includes lecture, round table discussions, demonstration and laboratory experience.

CHC 291   Dental Insurance Billing Update   .5(.55-0)

Prerequisite: Dental professional. 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 293   Disinfection/Sterilization   .5(.55-0)

Prerequisite: Dental professional. The goal of this course is to inform dental health professionals of effective barrier techniques, aseptic procedures and materials recommended to decrease the possibility of transmitting disease and inducing infection. Discussion will include: Hepatitis B, Herpes simplex and AIDS, and why these diseases are of concern to dental professionals. Disinfection procedures utilized in preparation and aseptic maintenance of the operatory will also be extensively considered.

CHC 294   Dental Auxiliary in a Specialty Office   .5(.55-0)

Prerequisite: Dental auxiliary. Acquaint the dental auxiliary with the six dental specialities: periodontics, endodontics, oral maxillofacial surgery, pedodontics, prosthodontics and orthodontics. Emphasis on defining the duties and responsibilities of the auxiliary in each area.

CHC 296   Dental Instrument Sharpening   .75(.73-0)

Prerequisite: Dental professional. 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)

Prerequisite: Dental professional. Case histories will be 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 also include a review of human embryology as it relates to developmental disturbances.

CHC 298   Dental Stress Management   1(1-0)

Prerequisite: Dental professional. This course is designed to assist dental professionals in developing strategies and skills for lifelong career and personal survival. The seminar will focus on the four C's of stress management: causes, cues, consequences and cures. A special emphasis will be placed on specific types of stressors common to members of and support staff for the dental profession. Proven strategies to combat the physical and cognitive effects of stress will be presented. Motivational factors that affect total well-being and success will also serve as the core to this process of self-management for job and life survival.

CHC 299 ACLS Instructor Course 3(3-0)

Prerequisite: ACLS provider. 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.

Community Health Services (CHS)
Health Careers Technology
Division of Technology and Applied Sciences

CHS 101 Acute Care Nurse Assistant 9(4-9)

This course will prepare an individual for employment as a nursing assistant/ orderly in an acute care hospital or clinic. Upon completion, this course will provide an individual with the knowledge and skills needed in order to provide basic patient care safely. Course content consists of lecture, laboratory, as well as clinical experience.

CHS 104 Developmentally Disabled Assistant 6(5-1)

Prerequisite: CHS 101 or equivalent. 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. Student 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 2.5 grade or better.

CHS 105 Chiropractic Assistant 10(7-4)

This course is designed to prepare students for immediate employment opportunities as an assistant in a chiropractic office.

CHS 106 Long-Term Care Nurse Aide Update 2(2-0)

Prerequisite: Nurse aide. Designed for men and women who have had previous experience as a nurse aide, this course will help prepare students for compentency evaluation testing needed for state certification. The update course is comprised of 16 hours of lecture and six hours of independent study.

CHS 108 Long-Term Care Nurse Aide 6(3-4)

This course is designed to teach men and women to function as trained long term care nurse aides. It will provide specific knowledge and skills required for a nurse aide to function as a member of the long term care health team.

CHS 111 Medical Insurance Billing I 3(3-0)

Prerequisite: CHS 121, or six months experience with insurance billing. Preparation 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-ICDA coding plus federal, commmercial and independent billing forms and procedures. Upon successful completion, students may progress to CHS 112.

CHS 112 Medical Insurance Billing II 3(3-.36)

Prerequisite: CHS 111. This one-term course is designed to teach the student in-depth medical billing procedures and the use of medical billing modifiers. Presentation of materials will be lectures, discussion, case studies and work sessions. Upon successful completion, students may progress to CHS 113.

CHS 113 Medical Insurance Billing III 3(3-.36)

Prerequisite: CHS 112. Upon completion of this final course, in a sequence of three, students should have a full understanding of the entire insurance billing process for an out-patient office setting. They will be prepared to work in a physician's office and be able to correctly complete all current forms that would be presented to them. Rebilling skills will be emphasized. Students may have an optimal opportunity for an observation class session for computerized billing.

CHS 121 Medical Terminology Allied Health 3(3-0)

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.

CHS 122 Medical Terminology Allied Health II 3(3-0)

Prerequisite: CHS 121 or equivalent. 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. Builds on medical terms in CHS 121.

CHS 132 Health Unit Clerk/Coordinator I 6(6-0)

Prerequisite: CHS 121. Introduce basic ward secretary skills. Include communication skills, chart forms, computers and death and dying. Clinical component included. Upon successful completion, students may progress to CHS 133.

CHS 133 Health Unit Clerk/Coordinator II 6(6-0)

Prerequisite: Department approval. Advanced ward secretary skills. Includes pharmacology, laboratory tests, transcribing physicians' orders and job application skills. Clinical component will be included.

CHS 143 Phlebotomy Technician 4(4-1)

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.

CHS 145 Central Service Technician 6(4-4)

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.

CHS 146 Central Service Update .5(.55-0)

Prerequisite: Central service personnel. This course shall provide an update of current concepts and practices and new information within the central service department, provide needed education for Central Service personnel to perform with competence and maintain established standards as outlined by regulatory agencies (Joint Commission on Accreditation of Hospitals, Michigan Department of Public Health, Occupational Safety and Health Administration).

CHS 201 Dietary Manager I 6(3-6)

Prerequisite: Department approval. Entry level skills for a dietary supervisor, particularly in a 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.

CHS 202 Dietary Manager II 6(3-6)

Prerequisite: CHS 201. Includes meals planning, therapeutic diets, cooking principles, cooking for large numbers, budgeting, cost accounting and purchasing.

CHS 203 Dietary Manager III 6(3-6)

Prerequisite: CHS 202. 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.

CHS 205 Advanced Diet Therapy 3(3-0)

Prerequisite: dietary assistant. 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.

CHS 207 Dietary Managers Update .75(.73-0)

Prerequisite: Dietary manager. A seminar designed for Dietary Managers to include data gathering on patient/client nutrition, hiring and supervising food facility personnel, managing supplies, equipment use, sanitation, safety, production and the facility itself. This seminar would be helpful to a dietary manager in preparation for the DM Credentialing examination.

CHS 213 Basic Psychiatric Technician 5(4-2.2)

Prerequisite: Department approval. The Basic Psychiatric Technician Program teaches students meaningful ways of caring for patients with emotional disturbances. Students also develop self-understanding while attempting to understand the behavior and difficulties of others. Concepts of personality development, identification of maladaptive behavior patterns, and therapeutic interventions are integrated into the course content. Additional emphasis is placed on understanding the patient's rights, legal and ethical aspects of confidentiality issues and specific means of evaluating the care given by each student. Blocks of supervised clinical experience are included to provide opportunities for students to apply classroom material to practical situations.

CHS 231 Pharmacology of Substance Abuse 3(3-0)

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 and identification of physiological responses specific to various substances. Designed for the allied health professional.

CHS 232 OD Crisis Intervention 2(2-0)

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.

CHS 235 Pharmacy Technician I 4(4-0)

Prerequisite: MTH 009 competency. First of 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 CHS 236.

CHS 236   Pharmacy Technician II   4(4-0)
Prerequisite: CHS 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.

CHS 240   Dietary/Housekeeping Aide I   18(9-16)
This course is designed to educate the student in the principles of both dietary
and housekeeping job responsibilities. In the dietary component the student will
learn knowledge of diets, food preparation, and sanitation and safety techniques.
In the housekeeping component the student will gain knowledge of various clean-
ing techniques and their application in specialty clinical areas. Body mechanics
will also be covered. The campus/clinical lab component will cover both areas.

CHS 241   Dietary/Housekeeping Aide II   7(0-14)
This course is designed as a continuation of CHS 240, Dietary and housekeeping
aide. The student will learn advanced techniques in both dietary and housekeep-
ing aide job responsibilities, application of appropriate Medical terminology and
development of job search related skills.

CHS 245   Executive Housekeeper   1(1-0)
Prerequisite: Housekeeping employee. A series of courses on required or elective
topics defined by the National Executive Housekeepers Association, Inc. Topics
include introduction to housekeeping techniques, safety, work controls, chemical
controls, microbiology, pest control, management of budgets, purchasing, staff
and related topics. At the successful completion of these courses, the student
will be eligible for executive housekeeper certification by the National Executive
Housekeepers Association, Inc.

Dental Assistant (DA)
Health Careers Technology
Division of Technology and Applied Sciences

DA 110   Dental Assistant Seminar   2(1.5-1)
Prerequisite: Admission to program. Lectures, worksheets, 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 organizations, dental specialty practices and dental
history.

DA 120   Introduction to Clinical Dental Assisting   5(3-4)
Prerequisite: DHA 110, DHA 111 and DHA 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 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   7(1-12)
Prerequisite: DA 120. Practice four-handed chairside dental assisting procedures
with emphasis on general restorative procedures (i.e., amalgams and compos-
ites). Seminar sessions are planned to correlate clinic practice and procedure
information with private practice and field experience participation.

DA 131   DA Ethics and Jurisprudence   2(2-0)
Prerequisite: DA 110 and DA 120. A discussion of interviewing techniques, em-
ployment opportunities, insurance protection, continuing education, law and
professional ethics as they relate to dental assisting and dentistry.

DA 210   Clinical Dental Assisting II   7(1.5-11)
Prerequisite: Admission to program. 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 program. Lecture and laboratory sessions will address
the selection, manipulation and evaluation of materials used in dentistry. Labo-
ratory 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 techniques, 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 tech-
niques 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.

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.

Dental Hygiene (DH)
Health Careers Technology
Division of Technology and Applied Sciences

DH 110   Dental Hygiene Seminar   2(2-0)
Prerequisite: Admission to program. Lectures, worksheets and self-instruction are
used 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 em-
bryology 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, DHA 111 and DHA 112. Introduction to selection and
application of prophylaxis instruments, taking medical and dental histories and
performing oral examinations. Small group clinic instruction includes implemen-
tation of procedures on student partners.

DH 122   General Oral Pathology   3(3-0)
Prerequisite: DHA 110, DHA 111 and 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 in-
fections, oral injuries and neoplasms.

DH 123   Dental Emergency Procedures   3(2-2)
Prerequisite: DHA 111 and DHA 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 simulations and Cardio-Pulmonary
Resuscitation treatment.

DH 130   Clinical Dental Hygiene I   7(1-12)
Prerequisite: DH 120, DH 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 ses-
sion introduces 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, instru-
ment 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 and DH 130. Study advanced clinical dental hygiene pro-
cedures with emphasis on root planing, nutritional counseling, soft tissue curet-
tage 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 and 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 and 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 and 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 and DH 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 and DH 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 dental hygienist.

DH 222   Registered Dental Assistant Procedures   2(.8-2.5)

Prerequisite: DH 210, DH 211 and DH 212. A specially-designed course for dental hygiene students wishing to learn ancillary dental hygiene procedures and those intraoral functions delegated only to the licensed registered dental assistant in the State of Michigan. Instruction is emphasized in the laboratory setting to prepare the student for practical application of these procedures.

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 and Inventory   2(2-0)

Prerequisite: Admission to dental hygiene 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 through 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 sessions 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 and 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   DH 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, DH 220 and DH 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.

Dental Assistant and Dental Hygiene (DHA)
Health Careers Technology
Division of Technology and Applied Sciences

DHA 110   Oral Health Practices   4(2-4)

Prerequisite: Admission to program. Introduction to dental operatory, 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 and 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 121   Oral Anatomy II   3(2-2)

Prerequisite: DHA 111 program. A descriptive anatomical study of the head and neck regions including the skeletal, muscular, circulatory, lymphatic and nervous systems. Lecture, small group laboratory and AVT sessions relate anatomical structures to clinical procedures.

DHA 122   Dental 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.

DHA 131   Dental Radiography   5(3-4)

Prerequisite: DHA 111 and DHA 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.

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.

Diagnostic Medical Sonography (DMS)
Health Careers Technology
Division of Technology and Applied Sciences

DMS 201   Sonographic Anatomy I   6(6-0)

Prerequisite: Allied health. Provides the student with cross-sectional anatomy and pathology as it relates to sonographic scanning of the abdomen and vascular system.

DMS 202   Sonographic Anatomy II   6(6-0)

Prerequisite: Allied health. Provides the student with cross-sectional anatomy and pathology as it relates to gynecological and obstetrical sonography. Fetal cardiac anatomy and appearance will be presented.

DMS 203   Sonographic Anatomy III   4(4-0)

Prerequisite: Allied health. Presentation of cross-sectional anatomy and pathology with interpretation of scans as it relates to the thyroid, scrotum and breast. In addition, neurology of the neonate will be presented.

DMS 219   Sonographic Imaging   2(2-0)

This class will provide the soon-to-graduate imaging technologist with an update of positioning, physics, exposure, instrumentation and interpretation knowledge. In addition, the use of a comprehensive test will assess the student's level of knowledge in the aforementioned subjects.

DMS 234   Sonographic Physics   3(3-0)

Prerequisite: Allied health. The student will study the fundamental principles of acoustical physics: how sound is produced, manipulated and how it reacts in various mediums.

DMS 245   Sonographic Instrumentation   3(3-0)

Prerequisite: Allied health. The student will be introduced to the mechanics of A-Mode, B-Mode, M-Mode, Doppler and real-time equipment. Accessary equipment such as the camera, transducer, and cathode ray tube will be presented. Methods of quality assurance will also be presented.

DMS 265   Sonographic Interpretation I   4(4-0)

Prerequisite: Allied health graduate. The student will be presented with the identification of and interpretation of anatomy and pathology on sonographic exams as it relates to the abdomen and vascular system.

DMS 266   Sonographic Interpretation II   4(4-0)

Prerequisite: Allied health. The student will be presented with the identification of and interpretation of anatomy and pathology on sonographic exams as it relates to the obstetric and gynecologic patient.

DMS 280   Introduction to Clinical Experience   6(1-15)

Prerequisite: Admission to program. First course in a four-term sequence of clinical application in medical diagnostic sonography. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of one credit hour to three clinical clock hours.

DMS 281   Clinical Experience I   9(1-23)

Prerequisite: DMS 280. Third course in a four-term sequence of clinical application in medical diagnostic sonography. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of one credit hour to three clinical clock hours.

DMS 282   Clinical Experience II   9(1-23)

Prerequisite: DMS 281. Third course in a four-term sequence of clinical application in medical diagnostic sonography. The course is programmed with specific performance activities. Credit is arranged for each individual term with a ratio of one credit hour to three clinical clock hours.

DMS 283   Clinical Experience IV   14(1-40)

Prerequisite: DMS 282. Building on material in DMS 282, this is the fourth course in a four-term sequence of clinical application in diagnostic medical sonography. The course is programmed with specific performance objectives. Credit is arranged for each individual term with a ratio of one credit hour to three clinical clock hours.

Dental Service Courses (DSC)
Health Careers Technology
Division of Technology and Applied Sciences

DSC 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.

DSC 002   General Dental Procedures   3(1.5-3)

Prerequisite: DSC 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.

DSC 010   Dental Office Methods   4(2-6)

Prerequisite: DSC 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.

DSC 020   Dental Claims Methods   3(2-2)

Prerequisite: DSC 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 experiences for these procedures.

Emergency Medical Services (EM)
Health Careers Technology
Division of Technology and Applied Sciences

EMS 101   EMS Continuing Education 1   .5(6-0)

Prerequisite: EMS Personnel. 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 102   EMS Continuing Education 2   .5(3-6)

See EMS 101 course description.

EMS 103   EMS Continuing Education 3   .25(3-0)

See EMS 101 course description.

EMS 104   EMS Continuing Education 4   .25(3-0)

See EMS 101 course description.

EMS 105   EMS Continuing Education 5   .25(3-0)

See EMS 101 course description.

EMS 106   EMS Continuing Education 6   .25(3-0)

See EMS 101 course description.

EMS 112   Automated Defibrillator Training Seminar   .5(6-0)

Prerequisite: Basic EMT. This course will equip all levels of licensed EMTs to quickly and efficiently terminate ventricular fibrillation through the use of an automated external defibrillator. Essential course content includes basic anatomy and physiology of the heart, recognition and treatment of cardiac arrest.

EMS 222   EMT Instructor Coordinator   8(8-0)

Prerequisite: Admission to program. Designed for persons interested in becoming an EMT instructor coordinator, and is approved by the Michigan Department of Public Health. 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 20 hours in an EMT class or CE program.

EMS 223   The Injured Child   2(2-0)

Prerequisite: EMS personnel. A course based on the educational program developed by the Children's Hospital National Medical Center, Washington, D.C. It is designed to expand on the limited time spent on pediatric emergencies in the initial EMS educational courses and to relate to pre-hospital care principles specifically to the child or infant patient.

EMS 224   BTLS for Basics   2(2-0)

Prerequisite: Admission to course. A course which provides instruction and intense evaluation of the current skills used in pre-hospital care of the trauma victim. Proper preparation is required to successfully complete the course.

EMS 225   BTLS Provider   2(2-0)

Prerequisite: Admission to course. This course provides instruction and intense evaluation of the current skills used in prehospital care of the trauma victim. Prior preparation is required to successfully complete the course. The BTLS text is provided to assist in pre-preparation.

Emergency Medical Services Technology (EMT)
Health Careers Technology
Division of Technology and Applied Sciences

EMT 103   Extrication   3(2-2)

Prerequisite: EMT or admission to program. Designed to provide skills in light and heavy extrication. Includes backboards, power tools and extrication in emergency situations.

EMT 104   EMS Communications   3(3-0)

Prerequisite: EMT or admission to program. Introduction to types, methods and use of emergency communication. Telemetry systems defined and use discussed.

EMT 105   Ambulance Driving   3(2-2)

Prerequisite: EMT or admission to program. 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 106   EMS Hazards and Dangerous Situations   3(3-0)

Prerequisite: Admission to program or licensed EMT. This course is designed to enhance awareness of special situations and hazardous materials. It will help the student to recognize and cope with confrontations, rescues and exposure to chemicals and other toxins. Treatment of the patient, management of the scene and self-protection will be emphasized.

EMT 108   Emergency Pharmacology   2(2-0)

Prerequisite: EMT or admission to program. 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 114   EMT Refresher   4(4-0)

Prerequisite: EMT. Designed to provide the EMT an opportunity to meet licensure requirements. Required content includes CPR, airway management, oxygen administration, patient assessment, diagnositic 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.

LANSING
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COLLEGE

EMT 116 EMT Physical Assessment   3(2-2)

Prerequisite: EMT or admission to program. 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)

Prerequisite: EMT or admission to program. Designed to improve psychological approach to emergency and crisis situations. Includes both psychological and communications theory. Practical application of communications techniques stressed.

EMT 124 Basic EMT Clinical   4(1-8)

Prerequisite: Admission to program. 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 using skills previously learned. Majority of time will be spent in various clinical locations involving direct patient contact. Upon successful completion of this three 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)

Prerequisite: Department approval. Currently available only to successful candidates of the basic EMT program, having completed EMT 141, EMT 142, EMT 143 and EMT 144, plus first year of EMS Associate Degree Program. Offers the licensed EMT an opportunity to obtain actual field experience by completing a minimum of eight 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)

Prerequisite: EMT or admission to program. 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.

EMT 141 Emergency Medical Technician I   4(4-0)

The first course of four that prepares the student as a basic EMT. The course focuses on the didactic material required to provide a specialized level of care at the scene of an emergency and during transportation to a hospital. Successful completion of the course requires passing a comprehensive written exam. Students learn to recognize the type of emergency involved, administer appropriate care, use equipment properly and use appropriate communication with hospital emergency departments. EMT 141, EMT 142, EMT 143 and EMT 144 collectively are approved by Michigan Department of Public Health as a Basic EMT course. Upon successful completion of each component, students are eligible for the State of Michigan licensure exam.

EMT 142 Emergency Medical Technician II   3(0-6)

Prerequisite: Concurrent enrollment in EMT 141. The second course in a series of four that prepares a student as a basic EMT. The course focuses on the practical skills and knowledge required to provide a specialized level of care at the scene of an emergency and during transport to the hospital. Successful completion of the course requires passing a practical exam utilizing various practical skills and successful completion of the supervised clinical component. EMT 141, EMT 142, EMT 143 and EMT 144 collectively are approved by Michigan Department of Public Health as a Basic EMT course. Upon successful completion of each component, students are eligible for the State of Michigan licensure exam.

EMT 143 Emergency Medical Technician III   4(4-0)

Prerequisite: EMT 141 and EMT 142. The third course of four that prepares the student as a basic EMT. The course focuses on the didactic material required to provide specialized level of care at the scene of an emergency and during transportation to a hospital. Successful completion of the course requires passing a comprehensive written final exam. EMT 141, EMT 142, EMT 143 and EMT 144 collectively are approved by Michigan Department of Public Health as a basic EMT course. Upon successful completion of each component, students are eligible for the State of Michigan licensure exam.

EMT 144 Emergency Medical Technician IV   3(0-6)

Prerequisite: EMT 141, EMT 142 and EMT 143. The final course in a series of four courses which prepares the student as a basic EMT. The course focuses on practical skills and knowledge required to provide a specialized level of care at the scene of an emergency and during transport to the hospital. Successful completion of the course requires passing a practical exam utilizing various practice skills and successful completion of the supervised clinical component. Students learn to recognize the type of emergency, administer the appropriate care, use equipment properly and communicate with hospital emergency departments appropriately. Simulated emergencies will be utilized extensively in this course.

EMT 150 EMS Systems   2(2-0)

Prerequisite: Admission to program or current EMT. 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 201 EMT Specialist I   4(3-2)

Prerequisite: EMT 143 and EMT 144. First in a two-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(2-5)

Prerequisite: EMT 201. The second course in a sequence of two courses which prepares the basic EMT as an emergency medical technician specialist. The course provides the skills and knowledge necessary to provide a specialized level of care at the scene of an emergency and during transport to a hospital. Successful completion of the course requires passing written and practical exams and successful completion of the supervised clinical component. Students learn advanced airway skills. Together, EMT 201 and EMT 202 are an approved EMT Specialist program by the Michigan Department of Public Health.

EMT 210 EMT Specialist   .5(.55-0)

Prerequisite: EMT specialist. 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. MDPH continuing education points have been issued for this seminar.

EMT 225 Ambulance Clinical   1(0-2)

Prerequisite: Enrollment in EMT 144. This course offers the second term EMT 144 student an opportunity to obtain actual field experience by doing clinical (ride-along) time at an agency which provides prehospital emergency care. The student will be required to work a minimum of 20 hours per term with the assigned agency. The agencies selected are those that have expressed a willingness to supervise the student and provide the necessary experience in order that he/she may round out his/her educational training. The assigned agency will evaluate the students on attendance.

Emergency Care (ER)
Health Careers Technology
Division of Technology and Applied Sciences

ER 100 Red Cross Standard First Aid and Red Cross CPR   3(3-0)

Designed to provide skills to treat emergency situations until professional help arrives. A Red Cross Certificate issued upon successful completion.

ER 101 American Heart Association CPR for Bystanders   .5(.55-0)

Designed for CPR instruction of the general public and adheres to American Heart Association guidelines. The course will include information about heart disease, risk factors, prudent heart living, heart and lung functions, one-person cardiopulmonary resuscitation (CPR) and foreign body airway obstruction management. At completion the student will meet all performance and skill objectives as outlined for certification as provider "A" through the American Heart Association.

ER 102 American Heart Association CPR Seminar   1(1-0)

Prerequisite: Health professional. Designed for CPR instruction of health professionals and adheres to the American Heart Association guidelines. The course will include information about heart disease, risk factors, prudent heart living, heart and lung function, one and two-person cardiopulmonary resuscitation (CPR), foreign body airway obstruction management and pediatric resuscitation. At completion the student will meet all performance and skill objectives as outlined for certification as Provider "C" through the American Heart Association.

ER 103 American Heart Association CPR Recertification   .5(.55-0)

Prerequisite: Current provider "C" card. This course is a recommended program for health professionals who have a current American Heart Association Provider "C" card for recertification.

ER 110 First Responder   4(4-0)

The First Responder training is a four-credit course designed to educate individuals in recognition and basic treatment of emergency conditions, and to stabilize patients until the arrival of a more definitive care provider. Successful completion of this course and a valid CPR card allows the student to apply to the Michigan Department of Public Health for licensure as a medical first responder.

ER 111 CPR Instructing   1(1-0)

Prerequisite: BCLS and admission to program. Instruction in methods of teaching CPR. An instructor-trainer from the American Heart Association teaches the course. Students must have current BCLS certification.

ER 112   CPR Instructor's Recertification   .5(.55-0)
Prerequisite: CPR instructor certificate. Instruction in current concepts of American Heart Association for recertification of instructors. Must have current BCLS card and instructor's card.

Advanced Emergency Medical Technology (ESA)
Health Careers Technology
Division of Technology and Applied Sciences

ESA 209   Paramedic Concepts   4(4-0)
Prerequisite: Paramedic. A course which provides the Paramedic with the required and elective continuing education points needed for relicensure.

ESA 221   Medical Trauma I   6(6-0)
Prerequisite: Admission to program. First in a series of three lecture courses within the paramedic curriculum which provide recognition and treatment of medical emergencies and trauma, general theory and legal implications of paramedic practice.

ESA 222   Medical Trauma II   5(5-0)
Prerequisite: ESA 221. Second in a series of three courses, see ESA 221 for description.

ESA 223   Medical Trauma III   5(5-0)
Prerequisite: ESA 222. Third in a series of three courses, see ESA 221 for description.

ESA 231   Cardiology I   2(2-0)
Prerequisite: Admission to program. All aspects of cardiology for paramedics are presented in this series of three courses within the paramedic curriculum.

ESA 232   Cardiology II   3(3-0)
Prerequisite: ESA 231. See ESA 231 for description.

ESA 233   Cardiology III   3(3-0)
Prerequisite: ESA 232. Sae ESA 231 for description.

ESA 241   Pharmacology I   2(2-0)
Prerequisite: Admission to program. Pre-hospital emergency drugs, dosages, methods of administration, side effects and drug calculations are presented in this series of three courses within the paramedic curriculum.

ESA 242   Pharmacology II   2(2-0)
Prerequisite: ESA 241. See ESA 241 for description.

ESA 243   Pharmacology III   2(2-0)
Prerequisite: ESA 242. See ESA 241 for description.

ESA 251   Skills I   3(0-6)
Prerequisite: Admission to program. This course introduces the student to the manual skills needed to perform at the level of an advanced EMT/paramedic. It includes demonstrations, supervised practice and testing of skills. Also included will be review, updating and testing of the basic EMT skills, which the student is presumed to have mastered prior to admission to the program.

ESA 252   Skills II   3(0-6)
Prerequisite: ESA 251. See ESA 251 for description.

ESA 253   Skills III   3(0-6)
Prerequisite: ESA 252. See ESA 251 for description.

ESA 261   Clinical I   5(0-10)
Prerequisite: admission to program. The clinical portions of the paramedic program allows application of theory in actual situations. The students often practice in the skills labs. The clinical courses run concurrent with medical trauma, cardiology, pharmacology and skills labs.

ESA 262   Clinical II   5(0-10)
Prerequisite: ESA 261. See ESA 261 for description.

ESA 263   Clinical III   5(0-10)
Prerequisite: ESA 262. See ESA 261 for description.

Health and Fitness (HF)
Health, Fitness/Cardiac (HFC)
Health Careers Technology
Division of Technology and Applied Sciences

HF 145   Nutrition: Critical Issues   2(2-0)
Nutrition and its role in promoting better health; concepts and controversies in nutrition; vitamin supplements, natural foods, fats, salt and other topics of interest.

HF 146   Choice for Change - Weight Control Program   2(2-0)
Diet program utilizing moderate caloric intake and recommended food guidelines of the American Dietetic Association. Principles of permanent, nutritionally sound weight loss are stressed.

HF 148   Staying on Track: Lifelong Weight Management   1(1-0)
Prerequisite: HF 146. A continuation of the Choice for Change Weight Control Program. Designed to help students continue to lose weight or maintain their goal weight. Principles of permanent, nutritionally sound weight loss and maintenance are strassed. Professionally trained staff assist students in establishing healthy habits.

HF 149   Cholesterol Management - 6 Weeks to a Lower Level   1(1-0)
A six-week cholesterol lowering dietary program which begins with a computerized dietary analysis and cholesterol test and ends with a cholesterol test. A practical, nutritionally sound, deliciously satisfying food plan is described and to be followed. Professionally trained instructors assist students in identifying high cholesterol and saturated fat foods in their diet and establish healthy eating habits.

HF 163   Healthy Living for Health Care Professionals   1(1-0)
A course designed to inform and discuss with health care professionals basic fitness concepts, healthy nutritional habits, positive stress reduction habits, as wall as identification of risk factors for coronary artery disease.

HF 166   Caring For Your Back   1(1-0)
Designed for individuals without pathological back problems. For those who have experienced back discomfort and want to prevent it through a combination of lectures and slow progressive exercise sessions. Students will learn ways to reduce back discomfort and prevent back injuries.

HF 167   Wholistic Health   3(3-0)
This course will concern itself with the study of health from a wholist perspective (body-mind-spirit) - seeing the human life as a total system.

HF 168   Un-Smoking for Life   1(1-0)
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.

HF 170   Fit for Life Exercises   1(0-2)
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.

HF 172   Basic for Exercise Instruction   1(1-0)
A seminar designed for those involved in teaching exercise courses. Through lecture and laboratory components the student will be given the basic knowledge necessary to teach exercise safely and effectively, and increase the awareness of potential problems in adult exercises.

HF 246   Positive Approaches to Stress   1(1-0)
A stress management course in which participants learn about the nature of stress and understand the effects of stress. Each participant explores personal stress profiles and develops new individual coping strategies as well as finding relaxation techniques that feel comfortable for each student.

HF 248   Stress Management   1(1-0)
A stress management course in which participants learn about the nature of stress and understand the effects of stress. Each participant explores personal stress profiles and develops new individual coping strategies.

HF 261   Aerobic Groups   3(1-4.3)
Prerequisite: Department approval. 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.

HF 270   Massage Therapy-Beginning   3(3-0)
Introduction to history, techniques and theory of massage therapy.

HF 271   Massage Therapy-Intermediate   3(3-0)
Prerequisite: HF 270. This course will cover specialized massage techniques such as advanced foot massage; exploration of other aspects of Swedish massage acupressure.

HF 272   Independent Study   3(0-6)
Prerequisite: HF 271. This is the final massage course in a three-course sequence. Advanced techniques and practice will be covered.

HF 280   Touch for Health I   3(3-0)
This course combines ancient oriental disciplines with the modern practice of applied kinesiology. The student will improve postural balance and reduce physical and mental pain and tension. Athletes can improve performance and decrease the risk of muscle injury.

HF 281   Touch for Health II   3(3-0)
Prerequisite: HF 280. This course teaches additional techniques and applications including additional muscles, balancing using wheel and five element theory and pain tapping.

HFC 140   Cardiac Education   1(1-0)
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.

HFC 151   Adaptive Physical Rehabilitation Cardiac Exercise   4(1-6.4)
Prerequisite: Department approval. 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. Continuing students enrolled for 13 week terms.

Medical Assistant (MA)
Health Careers Technology
Division of Technology and Applied Sciences

MA 100   Administrative Medical Assisting   4(4-0)
Prerequisite: Admission to program. Introduction to role of medical assistant administrative/clerical functions: professionalism, written communication, telephone communication, scheduling, referrals, filing, medical records management, processing incoming and outgoing mail, pegboard system and basic banking functions.

MA 103   MA Communication Skills   3(3-0)
Prerequisite: Admission to program. Provides students with an understanding of interpersonal skills necessary to work in a medical facility including verbal and non-verbal communications, listening and responding to patients and family, dealing with ill and dying patients and empathy.

MA 105   MA Transcription   3(2-2)
Prerequisite: Admission to program. This course is designed to develop skills in defining, writing and transcribing medical words, phrases and reports with the use of a transcriber and self-correcting typewriter or word processor. Emphasis is on development of speed, accuracy and knowledge of medical terminology for the transcription of reports. The class will be comprised of lecture, group discussion and transcription of assignments. The lecture sessions will cover various aspects of terminology and transcription. It will also include a discussion of the cases to be transcribed.

MA 107   Medical Assistant Insurance Billing   4(4-0)
Prerequisites: Admission to program. This course will introduce basic insurance terminology, teach billing skills needed to successfully bill BCBSM, Medicare, Medicaid and other payments using the pegboard system, rebilling of rejected claims and billing patients for co-payments and deductibles due.

MA 114   Legal/Ethical Concepts   2(2-0)
Prerequisite: MA 110. Designed to familiarize the student with the basic concepts relating to medical ethics, legal medicine and professional liability.

MA 124   Microcomputers in Health   3(2-2)
Prerequisite: Admission to program. Using IBM microcomputers, students are offered a basic understanding and practical application of hardware and software used in medical offices. This includes extensive hands-on training with DOS and applications including word processing, data base management and medical office management.

MA 131   Clinical Skills I   5(3-4)
Prerequisite: CHS 121 and AHC 108. Designed to cover a sequence of clinical duties the Medical Assistant will perform. The student will gain knowledge in and become adept in performing skills relating to the following topics: physical measurements; health history and physical examinations; infection control; instrument sanitation, disinfection and sterilization; health care process; problem oriented medical records; physical therapy; and universal precautions.

MA 132   Clinical Skills II   5(3-4)
Prerequisite: MA 131. Designed to cover both in theory and campus lab the more advanced technical skills necessary to perform in the clinical setting. Skills and procedures covered will include surgical asepsis, minor surgery assisting, electrocardiography, medication administration, pulmonary function screening and collection of specimens.

MA 141   Basic Lab Procedures   2(1-2)
Prerequisite: MA 131. Basic principles and procedures for laboratory tests performed in medical offices including: collection/preparation of specimens, venipunctures, capillary puncture, urinalysis, hemoglobin and hematocrit measurement and microbiology. Equipment, requisitions and safety procedures are discussed. Quality assurance issues reviewed.

MA 142   Advanced Laboratory Procedures   3(2-2)
Prerequisite: MA 141. Advanced principles and procedures for laboratory tests performed in medical offices including: 1) pregnancy testing, 2) hematological testing (white blood cell counts, erythrocyte sedimentation rates and differential cell counts), 3) chemical testing (blood glucose and cholesterol levels), and, 4) immunological testing (strep screen and mononucleosis antibody screen). Collection and preparation of specimens including venipuncture and micropuncture will be reviewed. Quality assurance issues will be emphasized.

MA 143   Introduction to Radiography   3(2.5-1)
Prerequisite: Admission to program. This course is designed to give the medical assistant an overview of the field of radiology. The course will include both lecture and observational time.

MA 151   Medical Assistant Pharmacology   3(3-0)
Using basic anatomy, physiology and pharmacology concepts, medications will be presented as they affect various body systems. The medical assistant's responsibilities to pharmacology in the office setting will be emphasized.

MA 181   Administrative Externship   6(0-12)
Prerequisite: Department approval. Administrative externship is designed to provide application of administrative theory. This course is programmed with specific performance objectives and activities.

MA 182   Clinical Externship   6(0-12)
Prerequisite: Department approval. Clinical externship is designed to provide application of theory and practice relevant to the clinical skills required of a medical assistant. The course is designed with specific performance objectives and activities.

Nursing (Career Ladder LPN-RN) (NUR)
Health Careers Technology
Division of Technology and Applied Sciences

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, NUR 122 and PGY 212. 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 and NUR 219. 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 125   Nursing Care Child I   5(3-6)
Prerequisite: Department approval. 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: Department approval. 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   1(1-0)
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. Required for those taking the Practical Nurse-National Council/Licensing Examination.

NUR 210   Computers In Nursing Today and Tomorrow   3(3-0)

Prerequisite: Allied Health. This course is designed to facilitate a comfortable beginning knowledge of the computer for the nurse in a variety of practice settings. It will explore the impact of information technology systems on patient care as well as nursing practice. Guided computer lab experiences will supplement lecture presentation/discussion and provide positive first experiences in computer use.

NUR 219   Pharmacology   3(3-0)

Prerequisite: Admission to program and PGY 212. 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 220   LPN-ADN Transition Course   2(2-0)

Prerequisite: Department approval. Introduces the returning Licensed Practical Nurse (LPN) student to the nursing process, POR 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: NUR 125, NUR 126 and CEM 165. Introduces psychiatric-mental health concepts. Development of therapeutic nurse-client relationships is emphasized.

NUR 222   Nursing Care Adult III   10(6-12)

Prerequisite: NUR 221, NUR 224 and 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 and WRI 122. 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 125, NUR 126 and CEM 165. 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(1.8-12.5)

Prerequisite: NUR 222 and WRI 122. 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   .5(.5-0)

Prerequisite: NUR 222 and WRI 122. 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.

NUR 300   Introduction to Nursing Management   3(3-0)

Prerequisite: Admission to LCC Nursing Management Certificate Program, RN having current Michigan license and one year of current clinical practice.

NUR 301   Nursing Management In the Health Care Setting   3(3-0)

Prerequisite: Registered nurse. Provides an introduction to financial management and to selected contemporary nursing management strategies. The nursing unit will be considered as a cost control center and will be used as a basis for study. Topics will include: developing and defending a budget, cost-benefit analysis, cost estimations, patient classification systems, staffing and scheduling, recruiting and selecting staff, performance appraisals, nursing standards, quality control, nursing audits, risk management, legal and ethical considerations, assertiveness skills and how to survive as a nursing manager.

NUR 302   Nursing Management Seminar   3(3-0)

Prerequisite: NUR 300 and NUR 301. The student will study the use of microcomputers as management tools. Focus will be on the ways computers provide nurse managers with information for decision-making. Management information systems, nursing office automation systems and current issues such as sources of resistance to computer use, privacy, confidentiality and security will be discussed. Students will have opportunity for hands-on computer experience. Students will also participate in an individually selected project. The overall program emphasis on direct application of nursing management theory to practical skills will allow students to select issues or problems central to their interest, current experience or future career goals for their projects.

Radiation Therapy Technology (RAD)
Health Careers Technology
Division of Technology and Applied Sciences

RAD 105   Introduction to Radiation Therapy   4(4-0)

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.

RAD 106   Clinical Oncology Seminar   2(2-0)

Prerequisite: RAD 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.

RAD 204   Principles of Oncology I   3(3-0)

This course will provide the student with a review of anatomy and physiology, medical terminology related to oncology patients and examination of attitudes toward dying, death and cancer patients.

RAD 205   Principles of Oncology II   4(4-0)

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.

RAD 221   Technical Radiation Oncology   1(1-0)

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.

RAD 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.

RAD 232   Radiation Therapy Physics II   4(3-2)

Prerequisite: RAD 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.

RAD 233   Radioactive Materials   3(3-0)

Prerequisite: RAD 232 and RAD 270. Provides the student with the principles of radioactivity. Medical uses of radioactive material and technical considerations of application are discussed.

RAD 234   Quality Assurance Radiation Therapy   3(3-0)

Prerequisite: RAD 231/232. Upon completion of this course, the student will be able to discuss and identify the optimal parameters for a functioning radiation oncology department in line with the requirements of the JCAH standards in these areas: quality assurance for patient scheduling and the treatment chart; quality assurance for treatment simulation; image quality and X-ray equipment; film processor performance; MPD for patient and technologist and patient alignment devices; usual and voice communication during simulation and treatment; ideal radiation therapy department conditions (work load and occupation factors); and beam calibration devices and treatment equipment.

RAD 235   Clinical Dosimetry I   4(4-0)

Prerequisite: RAD 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.

RAD 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.

RAD 270   Radiobiology   2(2-0)

Prerequisite: RAD 231. 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.

RAD 285   Clinical Experience I   9(1-23)

Prerequisite: Admission to program. See description under RAD 288.

RAD 286   Clinical Experience II   6(1-16)

Prerequisite: RAD 285. See description under RAD 288.

RAD 287   Clinical Experience III   9(1-24)

Prerequisite: RAD 286. See description under RAD 288.

RAD 288   Clinical Experience IV   11(1-24)

Prerequisite: RAD 287. 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 one credit hour to three clinical clock hours. The ratio for lecture or discussion group is consistent with the one-to-one ratio.

Respiratory Therapy (RT)
Health Careers Technology
Division of Technology and Applied Sciences

RT 100   Orientation to Respiratory Therapy Science   4(4-0)

Prerequisite: Admission to program. Covers science topics associated with respiratory care; a review of physical and chemical principles applicable to respiratory therapy; biology and microbiology.

RT 101   Clinical Respiratory Therapy I   8(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 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, O2 and CO2 transport, acid-base balance, controls of ventilation, O2 and CQ2 abnormalities, blood gas interpretation, work of breathing and respiratory/ventilatory failure.

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 and pulmonary vascular pathology.

RT 104   Clinical Respiratory Therapy II   8(0-16)

Prerequisite: RT 101. Re-emphasizes the principles of clinical practice discussed in RT 114. More emphasis in critical patient care areas.

RT 105   Introduction to Clinical Respiratory Therapy   8(0-16)

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 106   Clinical Practicum - Certificate   16(0-29)

Prerequisite: RT 104. Ten one-week rotations. Includes pulmonary function lab, non-invasive cardiology 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 107   Clinical Practicum - Associate Degree   6(0-12)

Prerequisite: RT 104 or admission to AD program. 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.

RT 108   Respiratory Pharmacology   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 105. Extends procedures and equipment in RT 115. Emphasis on IPPB Therapy (principles and theory), IPPB equipment, beginning patient assessment, patient charting, mechanical aspiration of secretions, percussion, vibration and coughing, respiratory home care, incentive spirometry and breathing exercises.

RT 114   Respiratory Therapy Techniques III   5(4-2)

Prerequisite: RT 111. Continuous mechanical ventilation (covering initial setup, indications, contraindications and weaning), use of mechanical ventilators (volume, time and pressure cycles), adjunctive support (PEEP, IMV and Optimal PEEP), advanced CPR, artificial airways and airway management and thoracic suction principles.

RT 115   Respiratory Therapy Techniques I   5(4-2)

Prerequisite: Admission to program. 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 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 and physical assessment.

RT 117   Respiratory Therapy Techniques - Associate Degree   4(4-0)

Prerequisite: RT 114 or admission to AD program. A preparatory course for the 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 and basic biomedical concepts and safety.

RT 120   Language of Cardiopulmonary Care   2(2-0)

Prerequisite: Admission to program. Explores the terms and patterns of communications necessary to function as a respiratory therapist in modern clinical practice. Places emphasis on organizations, general medicine and cardiopulmonary therapy.

RT 121   Respiratory Therapy Sciences II   2(2-0)

Prerequisite: RT 100. This course is designed to cover biology, especially cellular biology and microbiology needed for respiratory therapy.

Respiratory Therapy - Advanced (RTA)
Health Careers Technology
Division of Technology and Applied Sciences

RTA 201   Advanced Respiratory Physiology and Testing   4(4-0)

Prerequisite: RT 117. 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 202   Clinical Respiratory Therapy III   8(0-16)

Prerequisite: RT 107. Six five-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 and 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 204   Clinical Respiratory Therapy IV   8(0-16)

Prerequisite: RTA 202. Continuation of clinical instruction rotation as listed for RTA 202.

RTA 205   Respiratory Therapy Management   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 206   Clinical Respiratory Therapy V   8(0-16)

Prerequisite: RTA 204. Continuation of clinical instruction rotation as listed for RTA 202.

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 managment (including physiology, pathology and related equipment).

RTA 214   Advanced Respiratory Therapy Techniques II   4(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 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.

Radiologic Technology (RXT)
Health Careers Technology
Division of Technology and Applied Sciences

RXT 100   Introduction to X-Ray Services   3(2-2)

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 or RXT 111. Application of principles learned in previous courses. Introduction to the physical environment of the radiology department, the student practices interrelationship skills, basic patient care and radiographic positioning.

RXT 111   Radiographic Positioning I   6(4-4)

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. Included are the nomenclature of positioning, bones of the extremities, pelvic girdle, thorax and basic abdominal viscera.

RXT 112   Radiographic Positioning II   8(6-4)

Prerequisite: RXT 111 or AHC 104. 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. Includas spine, skull, general characteristics of contrast media, organs of the gastrointastinal tract, biliary tract, urinary tract and procedures in obstetrics.

RXT 113   Radiographic Positioning III   4(3-2)

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   RXT Independent Study I   2(2-0)

Prerequisite: Department approval. 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. Biweekly meetings required to assess progress.

RXT 124   RXT Independent Study II   3(3-0)

Prerequisite: Department approval. 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. Biweekly meetings required to assess progress.

RXT 131   Radiologic Physics I   3(3-0)

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   3(3-0)

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 160   Radiologic Emergencies   2(2-0)

This course is designed to prepare the student to meet a variety of emergency situations encountered in the radiology department. The theory provided will enable the student to recognize when an emergency exists, determine the situation and develop a plan for immediate action.

RXT 200   Introduction to Radiologic Pathology   2(2-0)

Prerequisite: AHC 106 or equivalent. 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 212   Clinical Practice I   6(1-15)

Prerequisite: Admission to program. First in a four-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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 213   Clinical Practice II   6(1-15)

Prerequisite: RXT 212. Second course in a four-term sequence of clinical applications 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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 214   Clinical Practice III   6(1-15)

Prerequisite: RXT 213. Third in a four-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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 215   Clinical Practice IV   9(1-23)

Prerequisite: RXT 214. Fourth course in a four-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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 216   Comprehensive Experience I   9(1-23)

Prerequisite: RXT 215. First in a three-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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 217   Comprehensive Experience II   9(1-23)

Prerequisite: RXT 216. Second in a three-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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

LANSING COMMUNITY COLLEGE

RXT 218   Comprehensive Experience III   9(1-23)

Prerequisite: RXT 217. Third in a three-term sequence of clinical applications 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 one credit hour to three clinical clock hours. The ratio for lecture is consistent with the one-to-one ratio.

RXT 219   Imaging Seminar   2(2-0)

Prerequisite: Allied health professional. This class will provide the soon-to-graduate imaging technologist with an update of positioning, exposure and physics knowledge. In addition, the use of a comprehensive test will assess the student's level of knowledge in the aforementioned subjects.

Surgical Technology (ST)
Health Careers Technology
Division of Technology and Applied Sciences

ST 101   Introduction to Operating Room Technology   7(5-4)

Prerequisite: Admission to program. 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. 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(0-16)

Prerequisite: ST 102. 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 103. Advanced and special areas of surgery: obstetrics and gynecology, thoracic, genito-urinary, ear, nose, throat, plastice, eye orthopedics and neurosurgery.

ST 105   Applied Operating Room Techniques II   8(0-16)

Prerequisite: ST 104. Clinical session at an assigned hospital - two full days a week. Participate and assist in selected surgical procedures.

ST 107   Surgical Pharmacology   2(2-0)

Prerequisite: Admission to program. Medication frequently used in the operating room; local and general anesthetics, drugs used for surgical patients, procedures for handling in sterile and non-sterile areas, mixing and measuring medications.

ST 110   Surgical Asepsis   2(2-0)

Prerequisite: Allied health professional. For Surgical Technology Program. Basic course on hospital infections including definitions, pathogenic organisms and bacteria, fungi, viruses, protozoa, helminths and transmissions of infectious agents. Covers sterilization and disinfection of equipment and supplies in the operating room.

INDUSTRIAL OPERATIONS TECHNOLOGY

Director: Helen Webb
220-D Gannon Vocational-Technical Building

Industrial Operations Technology directs its study toward preparing manufacturing staff to examine concerns as wide ranging as process design, redesign of facilities for more effective production and tooling improvements. This area of study is ideal for the person interested in manufacturing applications, specifically manufacturing methods and technology.

Individual courses and curricula are designed for the person interested in one or a combination of the individual fields of electronics, electrical technology, industrial automation, quality engineering and production and inventory management.

Industrial Operations Technology offers courses under the following course codes:

CIM: Computer Integrated Manufacturing
EM: Electrical Technology
ET: Electronics Technology
IA: Industrial Automation
LMS: Labor Management
PIM: Production and Inventory Management
QC: Quality Control and Reliability

Electrical (EM)

The Electrical Technology curriculum provides education and training in electrical control of mechanical systems. This curriculum has been developed to provide course work for people who are interested in becoming industrial electricians, maintenance personnel, testing technicians, machine control circuit designers and construction electricians. The curriculum will prepare students to enter the advanced technology process and manufacturing environment. Graduates may be employed by original equipment manufacturers of components or systems, testing facilities and end users in light to heavy manufacturing, food processing and warehousing industries or electrical contracting firms.

For the employed electrician, maintenance person or control circuit designer, the Electrical Technology curriculum includes courses that provide in-depth knowledge of documentation systems used in industry, electrical codes and standards, theoretical foundation for how systems and components work and information about how to create electrical control systems using relays, programmable controllers, off-the-shelf electronic units and computers.

To ensure that graduates can perform in the modern automated and programmable environment, the Electrical Technology Associate Degree requires related courses in Electronics Technology, Industrial Automation, Computer Technology and other curricula of CIM.

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 Class 3 electrician's license.

Electronics (ET)

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 curriculum leading to an Associate Degree. The College also provides a one-year Certificate curriculum in Computer Repair.

Job opportunities in electronics technology are many and varied. Students may follow one of several "tracks" developed to emphasize specialty areas of electronics. The following specialties are for the two-year Associate Degree curricula: digital, biomedical and communications.

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 curriculum will prepare the student to maintain, troubleshoot, repair and often design 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 or 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 curriculum helps the graduate quality for BMET Certification.

The Communications Service Technician installs and maintains transmitting and receiving equipment. Lansing Community College offers courses that focus on electronic communications, circuitry and systems.

The Electronics Technology curriculum at Lansing Community College also offers a one-year Certificate in computer repair. This curriculum emphasizes a practical hands-on approach to computer repair using the most modern test equipment associated with computer troubleshooting.

Industrial Automation (IA)

The field of industrial automation is in an interesting stage of development. The Associate Degree curriculum will cover all types of hard and flexible automation technology, such as vision systems, bar coding, robotics and system integration. It is focused on the creation of a general automation technician who may work on a robot one day, a numerical control machine the next, and a conveyor line on another. The student will select a concentration from three tracks: managerial, technician or design.

Labor Management Studies (LMS)

Unions and companies interested in better managing the rapid pace of changes in manufacturing processes and workplace organization often recognize the need for competent management decisions and effective union representation. The course work offered in the Labor and Management Studies curriculum at Lansing Community College is designed to provide salaried and hourly paid employees with the knowledge and skills necessary to succeed in the increasingly complex field of labor relations. The curriculum includes the study of labor history, the structure of unions, collective bargaining in the public and private sectors, and labor law.

Production and Inventory Management (PIM)

This curriculum will assist production schedulers, inventory planners, manufacturing supervisors, MRP II project team members, purchasing staff and materials managers. It will also interest distribution, data processing and financial staff in manufacturing firms.

Current computer software offers staff in manufacturing firms new and powerful tools for the management of production and inventory functions. The integration of manufacturing information by a computerized communication system will provide most managers in manufacturing organizations with the ability to closely and accurately manage and direct scheduling, material management and other production functions.

The study of production and inventory management will cover the theory of the discipline in a practical manner based on manufacturing operations. Emphasis will be given to manufacturing applications and company-wide implementations of manufacturing systems. This will make the curriculum advantageous to those responsible for managing and planning the resources in a manufacturing company.

Extensive customized training in manufacturing systems may be conducted for companies in manufacturing, in addition to the degree classes. Special seminars also are scheduled.

Quality Control and Reliability (QC)

Current demand for better quality and reliability has become increasingly challenging in recent years. The task of controlling the quality and reliability of goods and services for industry has become a professional discipline. Quality management, instrumentation and statistical methods have been proven effective.

Firms need quality control and reliability engineers, managers, inspectors, technicians and analysts to assist them in their task of improving the quality and reliability of goods and services. The performance of these tasks requires specialized training in the theory and application of quality assurance.

The Quality Control and Reliability curriculum at Lansing Community College is designed to provide the training to meet industry and government needs for proficient persons in this field. The curriculum provides the core concentration in statistical methods and elective concentration in quality management and metrology.

COURSE DESCRIPTIONS

Computer Integrated Manufacturing (CIM)
Industrial Operations Technology
Division of Technology and Applied Sciences

CIM 100   Introduction to Computer Integrated Manufacturing   2(2-0)
Manufacturing businesses are generally complex forms of businesses and basic to a nation's 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.

Electrical (EM)
Industrial Operations Technology
Division of Technology and Applied Sciences

EM 100   Electrical Safety Practices   1(1-0)
Covers basic electrical safety practices in construction and industry. Prerequisite or co-requisite for all Electrical Technology (EM) classes that have a lab. Course fee.

EM 102   Basic Wiring Installation   3(2-2)
Prerequisite: EM 100 and EM 104. 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. Course fee.

EM 103   Electric Motor Maintenance   3(2-2)
Prerequisite: EM 104 or EM 131. Diagnose and test single- and three-phase alternating 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. Course fee.

EM 104   Practical Electricity   3(2-2)
Prerequisite: EM 100 concurrently/algebra recommended. This course introduces the student to electricity on a practical level. The student will learn to use meters to measure electrical quantities, do basic circuit calculations, install basic household wiring, investigate the behavior of motors and transformers and review local electrical codes and standards. Course fee.

EM 121   Math for Electricians I   4(4-0)
Prerequisite: One year of high school algebra. Basic mathematic review beginning with arithmetic operations, fractions, decimals, scientific notation, ratio and proportion and elementary algebra. Majority of problems deal with practical electrical theory. Math placement test required.

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.

EM 123   Math for Electricians III   4(4-0)
Prerequisite: EM 122. Review single-phase power including power factor. Applies phasor skills to the solution of three-phase circuits. Time is also available for special selected topics.

EM 131   Electric Circuits for Machine Control   4(3-2)
Prerequisite: EM 100 and EM 104. A course in relay controls using industrial standards. Construct and understand the operation of three-phase motor control circuits. Learn the symbols for and understand the operation of machine control components including limit switches, pneumatic timers, latch relays and related topics. Use wiring and ladder diagrams to connect circuits. Develop circuits to control simple manufacturing machines. Course fee.

EM 132   Electric Circuits for Automated Machinery   4(3-2)
Prerequisite: EM 131. This course is a continuation of EM 131, covering more on components and on larger, more complex machine control diagrams, automation interlocking and automatic continuous cycling of machinery. Course fee.

EM 135   Electrical Prints for Residential
**   and Commercial Buildings   3(2-2)**
Prerequisite: EM 104, ET 111 or EM 121 or 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. Course fee.

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, continuous power supplies, energy management. Continuing use of the National Electrical Code. Course fee.

EM 161   Introduction to Programmable Controllers   4(3-2)
Prerequisite: 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 on both Allen Bradley and Modicon programmable controllers. Course fee.

EM 163   Allen Bradley Programmable Controllers I   5(3-4)
Prerequisite: EM 161 and EM 132 concurrently. This course covers programming and system connections for Allen Bradley programmable controllers, beginning with timers, counters, and math through subroutines. Students will learn logic for machine control. System documentation. Troubleshooting Lab fee.

EM 164   Modicon Programmable Controllers I   5(3-4)
Prerequisite: EM 161 and EM 132 concurrently. Programming and system connections for MODICON programmable controllers, beginning with timers, counters and math. Learn to configure PC, I/O and traffic cop. Learn logic design for machine control. System documentation. Troubleshooting. Course fee.

EM 211   DC Motors and Generators   4(3-2)
Prerequisite: EM 100, 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. Course fee.

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. Course fee.

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. Course fee.

EM 240   Electrical Estimating   3(2-2)
Prerequisite: EM 102 and 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. Course fee.

EM 264   Modicon Programmable Controllers II   5(3-4)
Prerequisite: EM 164. Write programs using R to T and T to R, sequencers and drum controller instructions. Learn about intelligent cards, analog, ASCII and related systems. Network two or more PCs on Modbus. Course fee.

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EM 266   Allen Bradley Programmable Controllers II   5(3-4)

Prerequisite: EM 163. Write programs using file, block transfer, sequence, logic and bit manipulation instructions. Learn about intelligent cards; ASCII, analog and related systems. Network two or more similar PCs on data highway. Course fee.

EM 291, 292, 293   Project Labs   1(0-2), 2(0-4), 3(0-6)

Prerequisite: Instructor approval. Use of the electrical 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 Electrical Technology curriculum before attempting a project lab.

Electronics (ET)
Industrial Operations Technology
Division of Technology and Applied Sciences

ET 100   Electronics for Non-Majors   4(2-4)

Prerequisite: High school algebra. Covers the fundamental concepts of electricity to electronic amplification, using transistors. Emphasis on laboratory work. Course fee.

ET 101   Electronics Math I   5(5-0)

Prerequisite: High school algebra. Covers the mathematics necessary for electronics technology. Emphasis is placed on developing skills required for DC and AC circuit analysis. Topics include: algebraic manipulation and use of electronic formulas, efficient use of the scientific calculator, basic trigonometry and its application to AC circuits and the application of complex numbers to AC circuits.

ET 102   Electronics Math II   3(3-0)

Prerequisite: ET 101 or departmental approval. A continuation of ET 101 covering the mathematics required for electronics technology. Topics include exponential and logarithmic functions, binary, octal and hexadecimal number bases, basic logic and Boolean algebra.

ET 111   Electrical Circuits I (DC Circuits)   6(4-4)

Prerequisite: ET 101 concurrently. 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 DVM, 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. Course fee.

ET 112   Electrical Circuits II (AC Circuits and Diodes)   6(4-4)

Prerequisite: ET 111 or departmental approval. 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. Course fee.

ET 113   Electrical Circuits III (Transistors)   6(4-4)

Prerequisite: ET 112 or departmental approval. 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. Course fee.

ET 115   Basic Schematics   3(2-2)

This course provides students in Electronics Technology, Electrical Technology and hydraulics curricula with an opportunity to develop skills necessary to produce accurate schematics. Students will use both CAD and manual methods for producing schematics. No prior drafting experience is required.

ET 120   Digital Programming Concepts   4(2-4)

Prerequisite: CIM 250, ET 111 or ET 160. 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 engineer. 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. Course fee.

ET 121   Machine Language Programming   3(2-2)

Prerequisite: ET 120 and ET 102. For electronics majors planning to study digital electronics. Covers fundamentals of machine language programming for the 6802 microprocessor; emphasis on number systems, addressing modes, machine instructions, branching and interrupts. Lab work in writing and debugging programs in machine language. Course fee.

ET 131   Digital Basics   3(2-2)

Prerequisite: ET 112 and ET 102. 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. Course fee.

ET 151   Computer Systems Repair I   3(2-2)

Prerequisite: Department approval. A basic troubleshooting course intended for students in the computer repair Certificate program. This course stresses logical troubleshooting procedures and thought processes as related to computer repair. The student will troubleshoot and diagnose digital circuitry. Course fee.

ET 152   Computer Systems Repair II   3(2-2)

Prerequisite: Department approval. A course intended for students in the computer repair Certificate program. This course includes topics on computer systems diagnosis and repair. Board swap troubleshooting is stressed. Use of computer self-diagnostic programs are discussed. Lab work includes disassembly and assembly of systems and efficient diagnosis of system problems. Course fee.

ET 160   Math for Computer Repair   5(5-0)

Prerequisite: Department approval. A mathematics course intended for students in the computer repair Certificate program. This course deals with arithmetic and algebra concepts related to electronics. Basic logic circuits, truth tables, Boolean algebra and conversion between different number bases are discussed along with the use of a scientific calculator.

ET 161   Soldering and Desoldering   2(1-2)

A course intended for students in the computer repair Certificate program. This course deals with theory and practice of soldering and desoldering processes. Lab work includes practice in soldering, desoldering, parts removal, and board repair of printed circuit boards. Course fee.

ET 170   Electronics for Computer Repair   6(5-2)

Prerequisite: ET 160 and ET 180 concurrently. A basic electronics course intended for students in the computer repair Certificate program. This course deals with basic electricity: resistive, inductive and capacitive circuits. Bipolar and field effect transistors and transistor circuits. Course fee.

ET 171   Digital Electronics and Computer Systems I   6(4-4)

Prerequisite: Department approval. A course intended for students in the computer repair Certificate program. This course includes topics in basic digital electronics, multivibrators, read/write and read only memory, magnetic storage and an introduction to microprocessors. Lab work includes breadboarding and testing digital circuitry. Course fee.

ET 172   Digital Electronics and Computer Systems II   6(5-2)

Prerequisite: Department approval. A course intended for students in the computer repair Certificate program. This course includes topics on computer systems and the internal operation of the computer, computer expansion boards and peripherals such as: disk drives, monitors, printers and modems. Lab work includes disassembly and testing of the computer. Course fee.

ET 180   Test Equipment for Computer Repair I   3(2-2)

Prerequisite: ET 170 concurrently. A course intended for students in the computer repair Certificate program. This course introduces the student to the basic operation of test equipment such as the digital multimeter, the volt/ohmmeter and the oscilloscope. Course fee.

ET 182   Test Equipment for Computer Repair II   3(2-2)

Prerequisite: ET 180. A course intended for students in the computer repair Certificate program. This course includes topics on test equipment used in computer systems diagnosis and repair and peripheral adaptor chips. Logic analysis and signature analysis are discussed along with computer diagnostic routines. Lab work includes using a logic analyzer and other computer troubleshooting test equipment. Course fee.

ET 200   Certified Electronics Technician Examination   3(3-0)

Prerequisite: ET 113. This course is designed to prepare the student to take the Associate-level of the Certified Electronics Technician examination.

ET 206, 207, 208   Project Laboratory   1(0-2), 2(0-4), 3(0-6)

Prerequisite: ET 113 and instructor 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. A continuation of ET 113 with emphasis upon discrete solid state devices such as field effect transistors, triacs, silicon controlled rectifiers. Class A and B power amplifiers are also studied. A portion of the laboratory activity in this course is devoted to the construction of an electronic project including printed circuit board design using the computer. Course fee.

ET 212   Electronic Applications II   4(3-2)

Prerequisite: ET 211. An introduction to the characteristics and applications of operational amplifiers. Course fee.

ET 213   Electronic Applications III   4(3-2)

Prerequisite: ET 212. A continuation of ET 212 with units on digital to analog and analog to digital conversion, data acquisition, active filters and other applications to analog electronics. A portion of the laboratory activity is devoted to an electronic construction project including printed circuit board design. Course fee.

ET 231   Digital Electronics I   5(4-2)

Prerequisite: ET 113, ET 121 and ET 131. Covers logic gates, combinational logic, pulsed logic, flip flops, digital counters, electronic displays, D/A converters, timers, TTL, CMOS and ECL circuitry. Lab work in breadboarding and measuring digital circuits. Course fee.

ET 232   Digital Electronics II   5(4-2)

Prerequisite: ET 231 and ET 121 concurrently. Covers electronic memories, magnetic memories, analog interface devices and an introduction to microprocessors and microcomputers, including the 6802 and 8085 processors. Lab work in breadboarding electronic circuits and using a microcomputer. Course fee.

ET 233   Digital Electronics III   5(4-2)

Prerequisite: ET 232. This course deals with advanced topics in microprocessors, including the 8086, 68000, 68020 and other microprocessors. Lab work includes a microprocessor based computer design project. Course fee.

ET 241   Test Equipment I   4(3-2)

Prerequisite: ET 113. The first of a series of two courses for second-year students that deals with modern test equipment and instrumentation application and theory. The course covers analog and digital instrumentation, including function generators and oscilloscopes. Laboratory work utilizes digital and analog breadboarding and emphasizes the calibration and standardization of various test equipment. Course fee.

ET 242   Test Equipment II   4(3-2)

Prerequisite: ET 241 and ET 232. This course is a continuation of ET 241 and deals with sophisticated instrumentation. Storage oscilloscopes, spectrum analyzers and dual time base delayed sweep oscilloscopes are covered. In the latter part of the course the emphasis is on digital and computer based test equipment. Students spend time using logic analyzers and ICE (in-circuit-emulator) equipment in problem solving exercises using Intel and Motorola Microcomputers. Course fee.

ET 243   Peripheral Devices   4(3-2)

Prerequisite: ET 232 and ET 242. This course is intended for the second-year student interested in computer peripheral devices. The course deals with circuit components within the computer system such as address decoders, memory components, parallel and serial peripheral support chips, CRT controllers, disk drives, printers, data terminal, modems and data communications protocols. The laboratory work covers interfacing configuration and the use of data communications test equipment, emulators and logic analyzers to solve system problems. Course fee.

ET 251   Digital Troubleshooting I   3(2-2)

Prerequisite: 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. Course fee.

ET 252   Digital Troubleshooting 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 and diagnostic routines for microcomputer equipment. Course fee.

ET 260   Introduction to Servicing   5(3-4)

Prerequisite: ET 113 or instructor approval. An introductory level servicing course for students who do not plan on taking the radio-TV servicing sequence. Topics covered are: general troubleshooting and repair techniques, superheterodyne receiver, B & W TV sweep circuits, B & W CRT and tape recorder mechanical system. Course fee.

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 hand tools and radios for repair. Course fee.

ET 262   Television Servicing   5(3-4)

Prerequisite: ET 261. Explores principles of operation of black and white television receivers; troubleshooting techniques. Students provide own hand tools and televisions for repair. Course fee.

ET 263   Advanced Television Servicing   5(3-4)

Prerequisite: ET 262. Troubleshooting and alignment of color circuits. Students provide own hand tools. Course fee.

ET 267   VCR Servicing   3(2-2)

Prerequisite: ET 113 or instructor approval. Basic servicing of VCRs and microwave units. Course fee.

ET 271   Communications I   4(3-2)

Prerequisite: ET 113. First of a three-term sequence of courses dealing with electronic communication theory. Topics include active and passive filter networks, rf power amplifiers and oscillator circuits. Course fee.

ET 272   Communications II   4(3-2)

Prerequisite: ET 271. Phase locked loops, amplitude modulation, single sideband, frequency modulation and receiving systems are covered. Course fee.

ET 273   Communications III   4(3-2)

Prerequisite: ET 272. Investigates antennas, transmission lines, microwave devices and transmitting systems. Course fee.

ET 282   Biomedical Safety Standards   2(1-2)

Prerequisite: ET 211. An introductory course in biomedical safety standards and regulatory agencies. Preparation for the Certified Biomedical Electronic Technician examination will begin here. Students will perform safety checks and preventative maintenance on biomedical equipment.

ET 283   Biomedical Instrumentation   3(2-2)

Prerequisite: ET 282 and ANT 152. Transduction of physiological variables to electrical signals and the measurement of these signals with emphasis on instruments used in a hospital.

ET 290   Biomedical Internship   3(0-6)

Prerequisite: Second-year student — after successful completion of basic courses with minimum grade point average of 2.0 and approval of department. This is the first of two terms of internship. This course will allow students to be placed in hospitals and earn credits for satisfactory work performance. Their occupational interests are considered along with their background or related classes to determine placement.

ET 291   Biomedical Internship II   3(2-9)

Prerequisite: ET 290. This is the second term of internship generally at the same hospital.

Industrial Automation (IA)
Industrial Operations Technology
Division of Technology and Applied Sciences

IA 100   Introduction to Industrial Automation   3(1-4)

Operate industrial robots, complete electronic circuits to control 110 volt appliances, use artificial intelligence in operating machine vision, operate personal computers and electrically control the position of a manipulator.

IA 101   Introduction to Robotics   4(4-0)

Prerequisite: CIM 100. An introduction to the history and internal workings of robotic and automation devices. Students will be introduced to electric, electronic, mechanical, hydraulic and pneumatic components and their operations.

IA 102   Applied Robotics I   4(2-4)

Prerequisite: IA 101. Logical thinking and robotic programming are presented in this course. Although AML will be used in the lab work, other languages and programming methods will be discussed. An introduction to using the IBM personal computer will also be given. Course fee.

IA 103   Applied Robotics II   4(3-2)

Prerequisite: IA 102. An introduction to the application of robotic devices. Students will study system components, such as tooling and end effectors, position sensors and servo control systems. Course fee.

IA 135   Introduction to Fiber Optic Communications   4(4-0)

Prerequisite: IA 101. An introduction to fiber optic communications including; vocabulary, fundamentals of light energy, fundamentals of wave guiding, power requirements, optic fiber construction, light sources and light detectors.

IA 136   Fiber Optic Installation, Termination, and Repair   4(3-2)

Prerequisite: IA 135. Practical experience in installing, testing and repairing fiber optic systems. The student will use state of the art equipment including: an inspection microscope, an automatic polisher, an optical time domain reflectometer (OTDR) and a microprocessor controlled fusion splicer. Course fee.

IA 150   Introduction to OS/2   1(1-1)

A hands-on guided tour of the multitasking operating system OS/2. Students will use the graphical interface, Presentation Manager, to start and stop application programs as well as move files and control the print spooler. OS/2 commands will be presented with exercises to practice their use. Students will learn to use the OS/2 screen editor to create batch programs that will start automatically and run concurrently.

IA 151   Pascal Programming for Industry   4(3-2)

Utilizes Turbo Pascal and the IBM PC to provide basis skills required to plan, write, compile and run unique computer programs. Reading and creating disk files, translation of disk files and serial communications. Course fee.

IA 201   Robotic Systems I   4(3-2)

Prerequisite: IA 103. Vision systems, bar coding and stepper motors are among the topics to be discussed and used in this class. Course fee.

IA 204   Robotic Project I   4(3-2)

Prerequisite: IA 201. Students will work on several projects with the instructor's guidance. These projects will involve using industry literature and components to solve manufacturing problems. Course fee.

IA 206   Robotic Project II   4(2-4)

Prerequisite: IA 204 and instructor approval. This is a self-study lab where the students work on projects of their own choosing (with instructor approval). Examples of projects: build an end-effector to pick up a specialized part; design a position sensing system for a hydraulic bang-bang robot; or design a work cell. Students should be prepared with a problem statement when asking for instructor approval. Course fee.

Labor Management Studies (LMS)
Industrial Operations Technology
Division of Technology and Applied Sciences

LMS 101   History of American Labor   4(4-0)

An overview of the history and development of labor in the United States from the Colonial period to the present day. Philosophy of trade unionism and its effect on the lives of working people, the quality of work life and working conditions. Included are discussions of political and governmental influences on labor.

LMS 102   Structure and Administration of Unions   3(3-0)

Designed to familiarize students with the structure and functions of American unions. Reviews of local, regional, national and international union structures are presented. American labor law is reviewed to analyze its impact on union procedures such as constitutional conventions, election procedures, office tenure and standing committees.

LMS 104   Collective Bargaining - Private Sector   3(3-0)

Study of the collective bargaining process in the private sector, focus on the history, philosophy and impact of collective bargaining and what it has accomplished for the American worker. Economic factors, as well as major legislation which affects collective bargaining, will be analyzed.

LMS 105   Collective Bargaining - Public Sector   3(3-0)

The conditions that give impetus to public sector unionization will be examined. Differences between private and public sector bargaining will be analyzed. Recent court decisions and their applicability to bargaining and negotiation goals of government will be discussed.

LMS 106   Contract Administration   4(4-0)

The administration, nature and scope of collective bargaining agreements in the public and private sector are examined. The rules and rights of the employer and the employee are discussed. Common contract administration problems are identified. Focus on grievance administration techniques in the public and private sectors.

LMS 108   Labor Law   3(3-0)

An overview of labor law, the course will include both State and Federal laws that affect labor directly, as well as those laws which affect labor as a segment of society. Laws examined will have a bearing on collective bargaining, safety, worker's compensation and unemployment compensation, consumer legislation, pensions, equal employment opportunity, social security and environmental law.

LMS 201   Arbitration   3(3-0)

Reviews grievance administration procedures and applies these principles to analyze a grievance in preparation for arbitration. Skills are developed for successful investigation, interviewing, writing and preparing arbitration cases. Also analyzes arbitration and mediation clauses in collective bargaining contracts.

LMS 217   Equal Employment Opportunity (EEO)   3(3-0)

Employment practices as regulated by equal employment opportunity laws are examined. Protected classes of society are identified and record keeping is discussed. ERISA laws, rules and regulations are studied.

LMS 250   Quality of Life Seminar   .5(.7-0)

Work is discussed as a process of interactions between the employer and the employee. Joint labor and management problem solving techniques are examined as a way to encourage the initialization of an employee involvement program within an organization. Explores the utilization of human resources in a way that increases job satisfaction, pride in performance and respect for the individual.

Production and Inventory Management (PIM)
Industrial Operations Technology
Division of Technology and Applied Sciences

PIM 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.

PIM 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.

PIM 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.

PIM 225   Capacity Management   3(3-0)

This course examines the function of establishing, measuring, monitoring and adjusting limits or levels of capacity in order to execute all manufacturing schedules.

PIM 230   Plant Maintenance   3(3-0)

This course will include instruction in preventive maintenance scheduling, on-line reporting of maintenance activities, and the study of how these activities interface with the main production plan to ensure that the required resources are available.

PIM 235   Production Activity Control   3(3-0)

Covers the principles, approaches and techniques used by managers to plan, schedule control and evaluate the effectiveness of shop production operations.

PIM 240   Inventory Management   3(3-0)

This course will encompass the principles, concepts and techniques for deciding what items to order, how much to order, when they are needed, when to order and how and where to store them.

Quality Control and Reliability (QC)
Industrial Operations Technology
Division of Technology and Applied Sciences

QC 100   Introduction to Quality Control   3(3-0)

An introduction to the quality field, this class provides an understanding of what quality control is and why it is important. It covers quality control applications in different industries and companies, the role of statistics, concepts of management, job opportunities in the quality field, a history of the field and definitions of many of the terms. Course fee.

QC 101   Charts and Graphs for Statistical Process Control   3(3-0)

This course is an introduction to basic statistical control. It covers the philosophy and an overview of basic problem solving techniques using statistical methods. Topics include the normal curve and its relationship to control charting, process capability, and basic control chart construction and use.

QC 102   Total Quality Assurance   3(3-0)

Basic managerial techniques and functions of running a quality control department. This class explores the area of managing for quality, using a total quality control approach. Topics include quality costs, organizing for quality, commitment to quality, marketplace demands and responsibilities for quality. The engineering technologies basic to the modern program will be reviewed. Course fee.

QC 103   Probability and Statistics for SPC   4(4-0)

Basic probability and statistics and an introduction to the normal Poisson and binomial distribution as related to statistical process control. Material covered includes probability, counting techniques, binomial distribution, hypergeometric sampling plans, Poisson distribution and normal distribution. Course fee.

QC 104   Shop Floor Data Collection   2(2-0)

This class will cover the use of electronic hand-held collectors, primarily the Datamyte. Areas to be covered are how to set up and use a Datamyte, use of data collectors and SPC, accessories available with data collectors for use on various applications and interfacing of data collectors with computers. Course fee.

QC 105   Cost of Quality   3(3-0)

Explains the definitions and philosophy of quality costs and covers quality improvement using cost of quality (cost collection, trend analysis, problem-solving and cost reductions) and reporting to management.

QC 108   Quality Systems Management   3(3-0)

This course will focus on developing, managing and implementing quality assurance systems. Course materials and assignments are designed to develop skills in intercompany, vendor and customer relations including communication requirements, certification programs, sample submission, quality planning and quality manual developments. Course fee.

QC 109   Manufacturing Supervision   4(4-0)

A course to develop skills for supervising production personnel in the manufacturing environment consistent with current quality engineering principles. Topics include employee selection and development, task analysis, leadership, equipment utilization and continuous improvement of quality and productivity utilizing employee involvement. Course fee.

QC 112   Quality Consensus Management   3(3-0)

Prerequisite: QC 101. This course is designed to direct individuals in the preparation, formation and operation of quality circles and the management practices required to accomplish a successful program.

QC 120   Equipment and Lab Management   2(2-0)

The study of tools found in quality assurance lab environments relating to their use, calibration, storage, maintenance and management.

QC 121   Instrument Interfaces   3(2-2)

Prerequisite: QC 120 concurrently. The practices utilized in industry to proficiently use digital measurement equipment and interfacing computer systems.

QC 122   Geometric Tolerancing   3(3-0)

Prerequisite: DT 101 or DT 110 or industrial experience. The course aligns an industrial dimensioning system with quality assurance considerations for the relationships of variable data usage. Course fee.

QC 123   Computer Interfaces   3(2-2)

Prerequisite: QC 121. The application of data translation from the Mitutoyo DP-3DX to a PC computer, formatting of data reporting and the use of optical comparators. Course fee.

QC 124   Quality Assurance Instrumentation   3(2-2)

Prerequisite: QC 123 or DT 210. Develop proficiency in the use of the coordinate measurement machine to make basic measurements, operator interfacing computer systems; work with optical comparator and surface test machines. Includes wiring reports on assigned projects. Course fee.

QC 200   Control Charts   3(3-0)

Prerequisite: QC 103. Application, design and selection of control charts. The students will learn to plan the implementation of control charts for their processes, construct X to R charts, numerically analyze a process from a chart, distinguish between capability and control, determine when to react to a process based on a control chart, analyze control chart patterns in terms of probabilities and construct attribute charts. Course fee.

QC 201   Sampling for Process Control   3(3-0)

Prerequisite: QC 103. Acquaints students with the design and selection of sampling plans for variables and attributes. Material covered includes acceptance sampling, fundamental concepts of sampling and military standards. Course fee.

QC 202   Basic Reliability   4(4-0)

Prerequisite: QC 103, ATH 151 or equivalent. Introduction to fundamental reliability definitions and concepts, such as probability density function, reliability function and hazard/failure rates. Covers the mortality curve and reliability modeling. May include maintainability.

QC 203   Advanced Control Charts   3(3-0)

Prerequisite: QC 200. This course continues to develop the concepts learned in QC 200. Many different types of control charts will be presented.

QC 204   Computer Programming for Quality Engineers   4(4-0)

Prerequisite: QC 209. This course is an introduction to computer programming the TURBO PASCAL language, with an emphasis on statistical computing methods. The course will cover the elementary principles of computer programming in PASCAL for the first part of the course and progress into specific applications in probability and statistics in the second part of the course. Course fee.

QC 205   Introduction to Biostatistics I   3(3-0)

Introduction to basic concepts of statistics with practical application in the biological and health sciences. Materials covered include descriptive statistics, probability, probability distributions (binomial and normal), random sampling, estimation, hypothesis testing, chi-square, student-t and nonparametric tests.

QC 208   Design of Experimentation-I (Applied Stats)   4(4-0)

Prerequisite: QC 103. Introduction to various tests to analyze data: hypothesis testing, chi-square, student-t and so on. At the conclusion of the class, the student should be able to use the characteristics of the normal curve to analyze processes, understand the concept of hypothesis testing and apply it with various tests to means, differences in means, variances and percentages, establish confidence intervals around estimates and determine necessary sample sizes.

QC 209   Design of Experimentation-II (ANOVA)   3(3-0)

Prerequisite: QC 208. Exploring the use of analysis of variance and regression analysis for problem-solving. Covers correlation and regression analysis, confidence interval and ANOVA.

QC 210   Design of Experimentation-III (Experiments)   3(3-0)

Prerequisite: QC 209. Exploring the different methods of performing a design of experiment, including nested and block. This class introduces the student to the concept of planned experimentation, gives the student the ability to work through basic designs manually and explains the importance of planned experimentation to statistical process control.

QC 211   Statistical Problem-Solving   3(3-0)

Prerequisite: QC 103. This course will concentrate on methods for both detecting chronic variation in a process and for tracing it back to its root causes. Course fae.

QC 212   Design of Experiments - Taguchi Method   3(3-0)

Covers experimental design methods with an emphasis on the Taguchi Method, including the Loss Function concept, factorial designs, analysis of variance, orthogonal arrays, parameter design, signal to noise ratios and graphic analysis methods.

QC 220   Weibull Analysis   4(4-0)

Prerequisite: QC 202, ATM151 or equivalent. This course is an introduction to Weibull Analysis and its application to reliability analysis.

MANUFACTURING TECHNOLOGY

Director: William F. Denardo
220-G Gannon Vocational-Technical Building

Manufacturing Technology offers courses under the following course codes:

ATR:	Machine Trades
CED:	Cooperative Education
CNC:	Computerized Numerical Control
HAC:	Heating and Air Conditioning
SAF:	Safety Courses
WLD:	Welding

Manufacturing has been going through an evolution. Today as never before this "evolution" is at a pace which is uncomprehendable. Today's complex world requires sophisticated manufacturing processes that need computers to control them.

Manufacturing Technology curricula have been designed to provide each student with a meaningful educational experience with direction. Every course has been developed using current technological data from industry representatives from our advisory committees and our skilled instructors.

Students will receive individualized counseling into curricula based on their interests and skills. These curricula follow a logical sequence of experience which can be adjusted to individual needs yet provide minimum efficiency in learning essential concepts.

Emphasis is placed on hands-on activities and problem-solving.

Machine Trades (ATR)

We are living in an age of metal. There has been a rapid change in the way we design, form, fabricate, assemble and inspect metal. This rapid change has created a cluster of job opportunities for men and women.

The machine trades curriculum has been designed to meet the current and future needs of industry by providing students with the basic skills and technical knowledge necessary to manipulate modern machines, tools, instruments and materials safely and productively.

This curriculum provides a comprehensive treatment of all metal working procedures with a special emphasis on computerized numerical control.

A wide variety of Certificate and Associate Degrees are offered in this area.

Cooperative Education (CED)

Cooperative Education is a career-focused, practical hands-on experience, integrated with the student's academic training. Alternating periods of study and paid work are carefully supervised, monitored and evaluated by both employers

and instructors. Cooperative Education can be used as an elective in every curricula offered by the Division of Technology and Applied Sciences.

Computerized Numerical Control (CNC)

Numerical Control (NC), Computerized Numerical Control (CNC), and Direct Numerical Control (DNC) are the "cutting edge" of modern machining processes. These sophisticated machines linked with powerful CAD/CAM (Computer Aided Drafting/Computer Aided Manufacturing) graphics systems open a very bright future for those who choose this high-tech field. Computerized Numerical Control Programming is the critical link that takes part designs and makes them a reality. Students in this field will learn the following major topics:

1. Machine Code used to drive CNC machine tools.
2. CADAM NC 2 and SMARTCAM are graphics systems that enable programming directly from computer drawings and graphically verifies tool motion.
3. Advanced tooling systems and special machining techniques.
4. Uses of machine controls and set-up techniques to prepare a CNC machine to run programs.
5. CIM (Computer Integrated Manufacturing) systems.

To qualify, the student must first acquire solid machining, blueprint reading and mathematical skills. This curriculum provides job entry skills and enough related knowledge to work effectively with other personnel in this area. Associate Degree available.

Heating and Air Conditioning (HAC)

The Heating and Air Conditioning curriculum is designed to teach students how to install and service 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 heating, air conditioning and refrigeration, and a sound background in troubleshooting of related equipment. Specialized advanced courses in pneumatics, hydronics and power plants as it pertains to heating, ventilation and air conditioning are also offered. The combination of theory and lab practices prepares students for employment and advancement in today's heating, ventilation and air conditioning industry. Certificate and Associate Degree available.

Industrial Safety (SAF)

Increasing emphasis on safety inspection, training and record keeping is due largely to federal and state laws and regulations on safety and health standards. Many federal, state and local government agencies, as well as the National and Michigan Occupational Safety and Health Act, need professionally trained people to carry out the functions of these standards. Industry also needs trained people to implement safety practices within companies and departments.

Welding (WLD)

The field of welding has become one of the most important skilled trades in our present technical society. Welding Technology is universally recognized as the principle joining process in manufacturing, maintenance, construction and agriculture. With the need for greater production economy and more effective metal bonding, a variety of welding processes have been developed to meet these increasing demands. This curriculum has been designed to provide comprehensive coverage of all current welding practices, including testing and inspection. Certificate and Associate Degree available.

COURSE DESCRIPTIONS

Machine Trades (ATR)
Manufacturing Technology
Division of Technology and Applied Sciences

ATR 100   Machine Tool Survey   5(2-6)
Prerequisite: ATM 151. Lecture covers machine and hand tools used by an industrial machinist. Laboratory offers a variety of hands-on experience on all modern day machining tools and equipment. For maintenance people, supervisors, mechanical engineers, students of Engineering Technology, machinery sales and quality control. Course fee.

ATR 101   Machine Shop I   5(2-6)
Prerequisite: ATM 151 and ATR 100. Theory and practice in the operation and setup of machine tools with emphasis on lathe, drill press, bench work and measuring instruments. Course 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. Course 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). Course fee.

ATR 104   Tool and Cutter Grinding   4(2-4)
Prerequisite: ATM 151. Operations and setup in tool and cutter grinding of drills, reamers, single point tools and 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. Course fee.

ATR 105   Project Laboratory (Machine Shop)   4(0-8)
Prerequisite: ATR 103 or 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. (Approval may be given to take this course twice for a maximum of eight credits.) Course fee.

ATR 107   Insert Tools - Selection and Use   3(2-2)
Prerequisite: ATR 102. 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. Course fee.

ATR 108   Model Engine Building   4(1-5)
Prerequisite: ATR 101 or department approval. The student will machine and assemble a model engine of his/her own choosing, although completion of the engine will not be a necessary criteria as extremely difficult or complex projects may be chosen by the students. Course fee.

ATR 113   Die Construction I   3(2-2)
Prerequisite: DT 100 and ATM 150. 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: ATR 113 or department approval. 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)
Prerequisite: ATR 102 and ATM 150. Involves theory, fundamentals and practice of electric discharge machining; programming the control console, machining of electrodes, practical applications and estimating time of operation. Course fee.

ATR 127   Machinery Handbook I   4(4-0)
Prerequisite: ATM 151. The Machinery's Handbook has been recognized as the "Bible" for all phases of the metal working industry. This course will familiarize each student with the effective utilization of information contained in the Machinery Handbook.

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 and die setup employees. Course fee.

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. Course fee.

ATR 139   Rigging   3(2-2)
Prerequisite: ATM 150. 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. Course fee.

ATR 142   Applied Metallurgy   4(4-0)
Prerequisite: ATM 150. Explains physical and mechanical properties of metals, identification, selection, atomic structure, crystal structure, phases in metal systems, phase diagrams and metallography.

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. Course fee.

ATR 144   Basic Hydraulics and Pneumatics I   3(2-2)
Prerequisite: ATM 151. Introduces the theory of fluid power and basic circuits, using cylinders, valves, accumulators, filters, pumps and motors, as they are used in current industrial applications. Hands-on experience will be given, using cutaways, standard components and test stands. Course fee.

ATR 145   Hydraulics and Pneumatics II   3(2-2)
Prerequisite: ATR 144. Continuation of ATR 144. Emphasis on applications of hydraulic and pneumatic circuitry, ANSI symbols and troubleshooting. Course fee.

ATR 160   Precision Inspection I   3(2-2)
Prerequisite: ATM 150. Techniques of tool and gauge inspection: micrometers, verniers, gauge blocks, fixed dial and thread gauges, test indicators, gear and comparator measurement, and hardness testing. Course fee.

ATR 161   Precision Inspection II   3(2-2)
Prerequisite: ATR 160. Continuation of ATR 160. Precision in-depth layout work related to gauges and inspection problems. Course fee.

ATR 170   Fork Lift Truck Driver Training   1(.5-1)
A course intended to teach the safe operation of industrial lifting and touring trucks. All instruction leads toward a State of Michigan lift truck certificate. Course fee.

ATR 218   Machine Maintenance I   4(2-4)
Prerequisite: ATM 150. 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. Course fee.

ATR 219   Machine Maintenance II   4(2-4)
Prerequisite: ATR 218 and ATM 151. Emphasizes problem-solving, replacement of parts, scraping ways, machining and the use of parts and service manuals. Establishing preventive maintenance programs is also covered. Course fee.

ATR 220   Machine Alignment and Balancing   4(2-4)
Prerequisite: ATR 219 or department approval. This course gives an in-depth hands-on application of the proper procedures of installing, leveling, balancing and alignment of industrial equipment. Special emphasis is given to problem solving and quality control. Course fee.

ATR 224   Industrial Pump Repair   4(2-4)
Prerequisite: ATM 150. Fundamentals and operating principles of pumps and pump controls, applications of pump equipment in industry, along with installation, alignment, operation and maintenance procedures. Course fee.

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. Course fee.

Cooperative Education (CED)
Manufacturing Technology
Division of Technology and Applied Sciences

CED 211, 221, 231, 241, 251, 261 Cooperative Education   3(1-15)
Prerequisite: Department approval. Cooperative education enables the student in technical programs to gain work experience on a job-related to the field of study. The co-op student reports to the work site for a minimum of 15 hours per week (165 clock hours per term), and one hour in classroom activities (11 clock hours per term). Classroom instruction is a required part of the co-op experience and includes verbal and written activities relating to job-related objectives. Evaluation of the co-op student is conducted cooperatively by both on-the-job and College personnel. (Enrollment in this course requires approval of the co-op Coordinator and/or the instructors in your major areas.)

Computerized Numerical Control (CNC)
Manufacturing Technology
Division of Technology and Applied Sciences

CNC 101   Numerical Control I   4(3-1)
Prerequisite: ATM 153 and ATR 100 or ATR 101. Introduction to NC programming. Course covers basic principles of NC programming. Students will write, run and edit NC programs on modern industrial three-axis machining center. Course fee.

CNC 102   Numerical Control II   4(3-1)
Prerequisite: CNC 101. Continuation of CNC 101 covering advanced techniques of manual programming including complex contours, machining cycles and subroutines. Course fee.

CNC 104   CNC Lathe   4(3-2)
Prerequisite: CNC 102. This course is designed to teach students programming and machining operations of CNC Lathe equipment with primary focus on the functions of advanced lathe machining processes. Methods of program storage and editing and tool management will be taught using a contouring three-axis CNC turning center. Course fee.

CNC 120   APT Programming   4(3-1)
Prerequisite: CNC 102. Introduction to APT commands and terminology. Topics covered will include basic motion commands, pocket functions, pattern generation and macro functions. Students will use microcomputers to enter and edit programs and to connect with mainframe system for program execution and post processing. Part programs will be run on three-axis machining centers. Course fee.

CNC 121   Advanced APT Programming   4(3-1)
Prerequisite: CNC 120. A continuation of CNC 120 APT Programming featuring the advanced capabilities of APT-AC. Course fee.

CNC 130   Machine Controls and Setup   6(2-8)
Prerequisites: CNC 102 and CNC 104. This course will give students hands-on experience in CNC machine setup. The student will mount and align fixtures, calibrate and load tooling and prepare programs for execution. The student will also be exposed to a variety of CNC machine controls ranging from simple three-axis to sophisticated five-axis conversational controls. Course fee.

CNC 200   CADAM NC   4(4-0)
Prerequisite: CG 201 and CNC 102. Introductory course in adding Numerical Control data to the CADAM model geometry. Cutter diameter, path, feedrates, spindle speeds and related systems will be developed for three-axis milling machines and lathes. Procedures for producing the NC program will be discussed. Course fee.

CNC 201   Advanced CADAM NC   4(4-0)
Prerequisite: CNC 200. This class is a continuation of CNC 200 CADAM NC and exposes the student to multi-axis tool control which includes the use of 3-D surfaces, surface net, flange angle splines, etc. Selected programs will be run on a five-axis mill to give the student a better understanding of multi-axis machining. Course fee.

CNC 202   CADAM Lathe   4(4-0)
Prerequisite: CNC 201. This is an enhanced module of CADAM NC that specifically addresses programming of CNC Lathe. This system provides many automatic tool path generation functions that greatly reduce programming effort. Students will run selected programs on a three-axis full contouring CNC lathe.

CNC 293   Project Lab: Computerized Numerical Control   3(0-6)
Prerequisite: Department approval. Further skills are pursued involving modern concepts of numerical control of machine tools including the interrelationship of these new manufacturing methods in the various departments of a company. Course fee.

Heating and Air Conditioning (HAC)
Manufacturing Technology
Division of Technology and Applied Sciences

HAC 100   Applied Electricity I   4(3-1)
An introduction to basic electricity (AC and DC) using both theory and applied study methods. Topics will include: electrical components and their symbols, basic schematic diagrams, Ohm's Law applied to series, parallel and series-parallel circuits, motor types and usages, and basic residential wiring practices. In conjunction with lab exercises, meters and their proper usage will be covered. Course fee.

HAC 101   Heating and Cooling Fundamentals   4(4-0)
A brief study of thermodynamics (heat energy) prepares the student for the 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 compressors, evaporators, condensers and metering devices are covered in detail. Also covered is a brief overview of residential central air conditioning, exercises in psychrometrics and an introduction to system design and sizing. Course fee.

HAC 105   Heating and Cooling Schematics   4(4-0)
Prerequisite: HAC 100 and HAC 101. An in-depth study into the cause and effect aspects of schematic diagrams. The student will learn to simplify complicated schematics to obtain the sequence of operation necessary for the proper troubleshooting of heating, ventilation and air conditioning equipment. Course fee.

HAC 106   Systems Design and Code   4(4-0)
Prerequisite: HAC 240. This class deals with heat loss and heat gain calculations needed for sizing of HVAC equipment, design considerations, equipment selection and some emphasis on duct design. The basics of mechanical codes are also discussed. Course fee.

HAC 110   Refrigeration Servicing I   4(2-4)
Prerequisite: HAC 231. 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. Course fee.

HAC 122   Power Plant Fundamentals   5(3-3)
Prerequisites: Department approval. This course will provide basic information about high pressure boiler/turbine theory and operation that applies in coal-fired power stations. When completed, the student will understand more thoroughly, the equipment necessary to operate and maintain a steam-electric power plant. Course fee.

HAC 200   Applied Electricity II   4(3-1)
Prerequisite: HAC 100. The study of motors with emphasis on theory, troubleshooting and servicing. Motor controls, control circuits and protection devices will also be covered. Course fee.

HAC 210   Refrigeration Servicing II   4(2-4)
Prerequisite: HAC 231 or department approval. Beginning course in light commercial refrigeration servicing and an introduction to reach-ins and display cases. A major emphasis on electrical controls and system operation. Students receive practical work in adjusting and servicing refrigerant valves and controls in troubleshooting defrost systems and pressure controls. Course fee.

HAC 211   Refrigeration III   4(2-4)
Prerequisite: HAC 210. Servicing of commercial units such as reach-ins, walk-ins, display cases, ice makers and soft-serve machines. Heat load calculations for component selections and special valve applications are discussed. Piping procedures, EPR valves, head pressure control devices, defrost timers and different types of defrost circuits will be discussed and covered in the lab. Course fee.

HAC 222   Hydronics   3(2-2)
Prerequisite: HAC 225. Covers gas fired hot water and steam residential heating systems, piping and all accessories, safety controls, expansion tanks, zone valves, installation procedures and codes. Students perform testing, troubleshooting, adjusting and servicing of components to insure maximum efficiency. Course fee.

HAC 224   Pneumatic Control   3(2-2)
Prerequisite: HAC 105 or department approval. 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. Course fee.

HAC 225   Gas and Oil Heating   4 (2-4)
Prerequisite: HAC 100 and HAC 101. Basic construction and function of components in residential gas and oil fired furnaces, with detail on theory, application, troubleshooting and servicing standard heating systems. Installation procedures and codes are also covered. Additional equipment studied includes: humidifiers, air cleaners and vent dampers. Course fee.

HAC 230   Gas Heating II   4(2-4)
Prerequisite: HAC 225. Fundamentals and principles of electronic ignition systems including troubleshooting and servicing. The major emphasis is placed on high efficiency and condensing furnaces to include: sequence of operation, troubleshooting, servicing and proper installation. Course fee.

HAC 231   Air Conditioning I   5(4-2)
Prerequisite: HAC 100 and HAC 101. Fundamentals and principles of residential air conditioning systems. Students will learn soldering and brazing of tubing, wiring, component testing, evacuation procedures, charging and maintenance of both split systems, as well as small packaged units. Course fee.

HAC 232   Air Conditioning II   4(2-4)
Prerequisite: HAC 231. Advanced air conditioning, light commercial equipment, water cooled units, cooling towers, and wiring both control and line voltage circuitry. The latest in test equipment and meters will aid the student in becoming proficient in servicing and maintenance of commercial equipment. Course fee.

HAC 233   Air Conditioning III   4(2-4)
Prerequisite: HAC 232. This course deals entirely with heat pumps (air-to-air, water-to-air), installation, servicing and proper application of heat pump components and extensive wiring schematics. Course 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 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. Course fee.

HAC 241   Sheet Metal II   4(2-4)
Prerequisite: Department approval. This course is designed to aid all service, shop and installation persons in the skills and techniques for understanding the basics of sheet metal layout, shop development and general working knowledge of everyday residential, light commercial and commercial heating and air conditioning systems. Course fee.

HAC 244   Uniform Mechanical Code   4(4-0)
Prerequisite: HAC 225 or department approval. A fundamental course designed to acquaint the student with the methods and techniques used in field inspection of mechanical systems. Major emphasis will be on the Uniform Mechanical Code with mention of the BOCA codes.

Industrial Safety Courses (SAF)
Manufacturing Technology
Divison of Technology and Applied Sciences

SAF 205   Safe Practices and First Aid   3(3-0)
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 on machines and how to identify and use them. Course fee.

SAF 291   OSHA/MIOSHA Safety Seminar (AVT)   1(1-0)
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.

SAF 292   Safety Seminar   2(2-0)
Covers methods used in the development of an Occupational Safety Program. Student performs an independent project.

SAF 293   OSHA/MIOSHA Safety Seminar (AVT)   2(2-0)
Covers methods used in the development of an Occupational Safety Program. Complete 22 hours instruction in AVT. Prepare a paper outlining a safety hazard, a proposed solution and/or a complete solution to the problem.

Welding (WLD)
Manufacturing Technology
Division of Technology and Applied Sciences

WLD 100   Combination Welding   4(2-4)
Introduces basic principles, safe operation and application of the oxyacetylene welding, cutting and electric arc processes. Each process consists of butt, lap and corner joints in the flat and horizontal positions. Course fee.

WLD 101   Arc Welding I   4(2-4)
Prerequisite: WLD 100. Develops skills and confidence in producing quality type multiple pass fillet and groove welds in steel plate. Conventional and iron-powered electrodes and recommended procedures are presented in preparation for passing performance tests in all positions. Course fee.

WLD 102   Advanced Gas Welding and Brazing   4(2-4)
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. Course fee.

WLD 103   Gas Metal Arc Welding (MIG)   4(2-4)
Prerequisite: WLD 100. 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. Course fee.

WLD 105   Blueprint Reading for Welders   3(3-0)
Prerequisite: WLD 100. 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 drawn and/or interpreted. Course fee.

WLD 108   Creative Welding   2(1-3)
Prerequisite: WLD 100. This is a class for people with an interest in artwork in a metal medium. Participants will become familiar with welding and cutting processes for the opportunity to explore creative expression. Course fee.

WLD 115   Structural Fabrication   4(2-4)
Prerequisite: WLD 201 and ATM 151. 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. Course 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)
Prerequisites: WLD 100. Study of the principles and fundamentals of Tungsten inert Gas (TIG or Heliarc), 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 can seek a proficiency certificate in welding. Course fee.

WLD 205   Tool and Die Welding   4(2-4)
Prerequisite: WLD 101 or WLD 202 and ATR 142. 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. Course fee.

WLD 210   Pipe Welding   4(2-4)
Prerequisite: WLD 101 or WLD 201 or department approval. Applies welding skills acquired in prerequisite courses to welding all kinds of pipe, using the shielded metal arc method. Course fee.

WLD 211   Pipe Welding II   4(2-4)
Prerequisite: WLD 210. Continuation of WLD 210, Pipe Welding I. This course will focus on welding pipe with low hydrogen electrode in 5G and 6G positions and socket welds. Course fee.

WLD 212   Automated Welding with Robots   4(2-4)
Prerequisite: WLD 100 or department approval. This course familiarizes people with the GMF welding robot. Time will be devoted to practical hands-on experience in programming, setup and adjustment of automated and semi-automated equipment, weldment, design and fixture building. Course will be offered fall and spring terms only. Course fee.

WLD 214   Aircraft Welding   3(1-4)
Prerequisite: Department approval. Presents welding applications and methods used in repairs and inspection of aircraft structures in accordance with approved aviation maintenance techniques. Course fee.

WLD 220   Welding and Inspection   4(2-4)
Prerequisite: WLD 100. This course provides the fundamental principles of weld testing and inspection. Proper procedures of destructive and non-destructive testing of welds along with a knowledge of codes, standards and procedures will be stressed. Course fee.

WLD 293   Welding Project Lab   3(0-6)
Prerequisite: department approval. Further welding skills in maintenance welding, production welding, resistance welding and/or tool and die welding, depending on the direction the student would like to take his/her welding skills. Course fee.
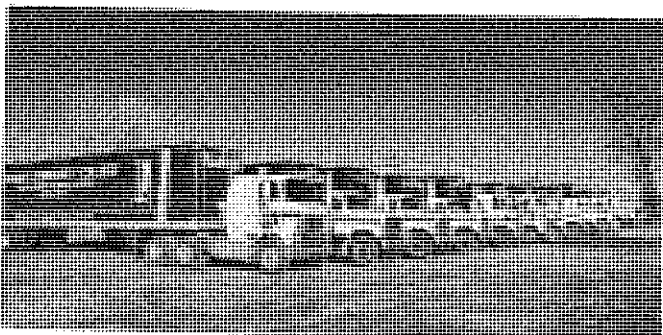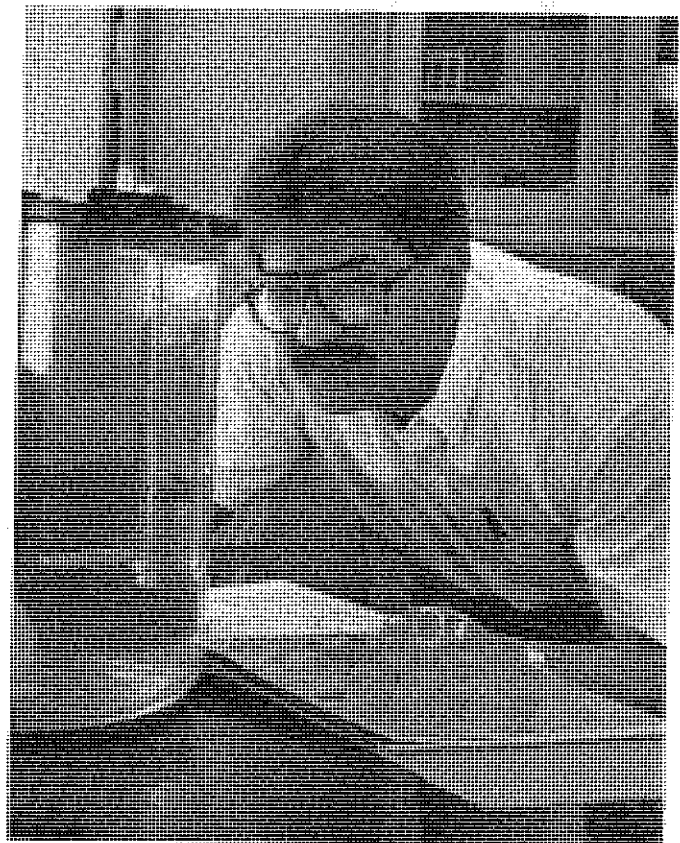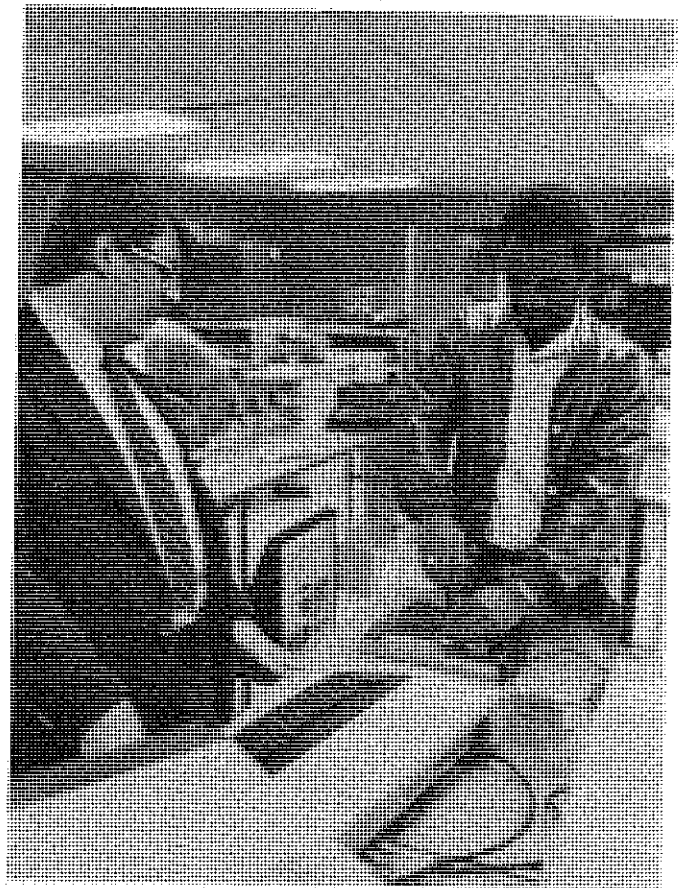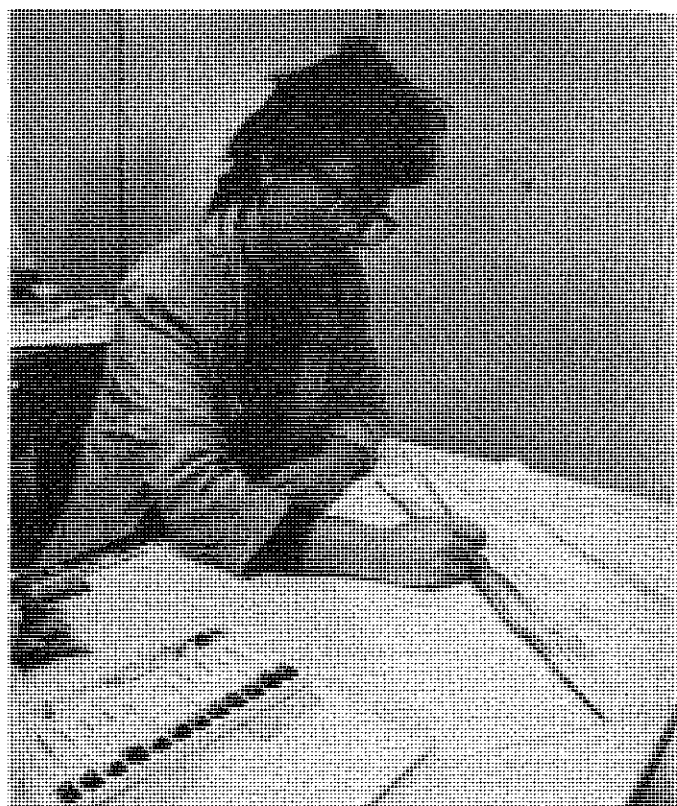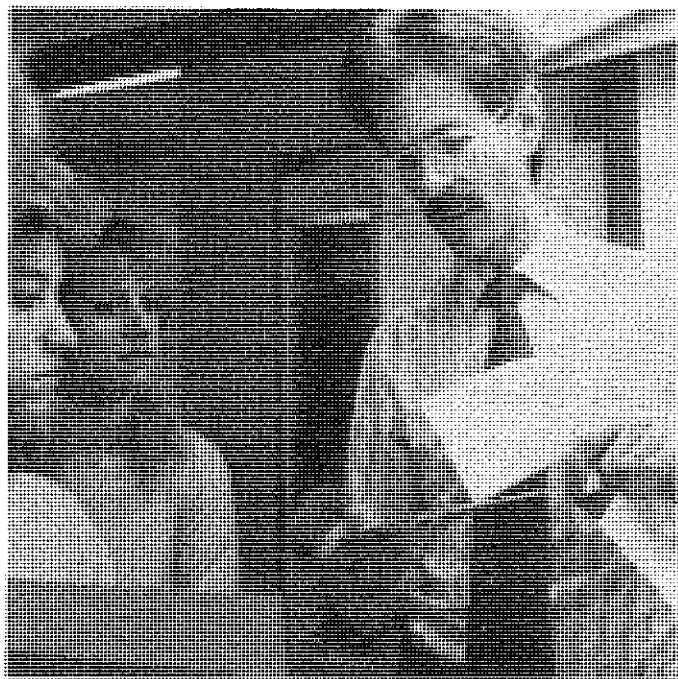
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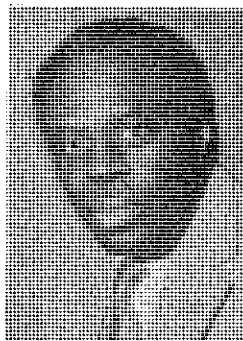
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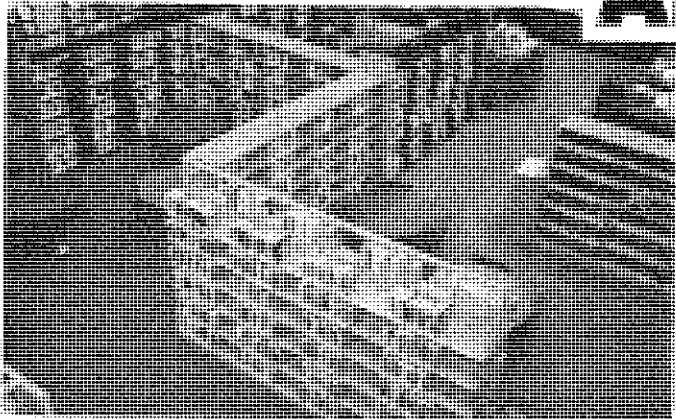
Department of Library Information Services
Department of Media
Department of Performing Arts

LANSING
COMMUNITY
COLLEGE

DIVISION OF TELECOMMUNICATION AND THE ARTS

Dean: Dr. Oswell Person
Room 325, Office Unit F

The Division of TeleCommunication and the Arts has two roles in supporting the mission of the College:

1. Serving the cultural, learning and information needs of students, staff and the community with library resources, current information and media technology.
2. Instructing students in the technical skills of human expression in imagery, performance and media.

Program and Service Objectives

The program and service objectives of the Division are:

1. To acquire, produce, organize, promote and distribute materials and equipment that facilitate communication, learning and instruction.
2. To manage the circulation of print and non-print resources from libraries in each of the three unit colleges.
3. To produce faculty designed instructional media.
4. To support faculty and staff experimentation with alternative learning environments in classrooms and laboratories, or in the community through telecommunications.
5. To provide instruction and assistance to students, faculty and staff in the development of competencies in locating and using information and resources.
6. To assist students, faculty and administrators in College communications systems, supporting community and college relations, performing arts, student activities, etc.
7. To initiate and maintain networks of resources by working with community, state and professional agencies concerned with communication and information access.
8. To schedule and produce a year-round calendar of visual and performing arts that serves the cultural interests of the community and showcases the College and the competencies of its students.
9. To conduct curricula in photography and filmmaking, radio and television, commercial art, interior design, fine arts, music, theatre and dance.

Organization of Resources

To carry out these objectives, the Division has a staff of faculty, technicians, designers, engineers and administrators with extensive academic and technical expertise. They combine their expertise in varying instructional and work teams that provide both state-of-the-art services and academic training. For example, in the media and information access areas, faculty and technicians may interrelate as video producers, camera persons, teachers, information specialists, computer operators, systems designers and artists. In the performing arts area, faculty and staff serve both as teachers and as directors, producers and performing artists in musicals, ensembles, original choreography, technical theatre design and productions.

Since the Division provides diverse college-wide services and instructional programs, the facilities of the Division are found in almost every building on campus. Directories should be consulted for specific program or service location.

Major Programs and Services

The major services and curricula are:

Library and Information Services
Media, Audio, and TV Production Services Photo
Commercial Art
Computer Graphics
Fine Arts
Radio and Television
Filmmaking
Technology
Dance
Art Music
Theatre

DEPARTMENT OF LIBRARY INFORMATION SERVICES

Acting Director: Elenka Raschkow
Room 231, Old Central Building

The learning resource program at Lansing Community College strives to provide information services and enhance the learning-teaching process through collections, personnel, technology and facilities in order to meet the diverse educational, instructional and individual needs of students, employees and other members of the College community.

Library information services are offered from three campus libraries. The Arts and Sciences Library (ASL) is located in Room 253 on the north side of the second floor in the A&S Building. The Old Central Library (OCL) is located in Room 232 in the northwest corner of the Old Central Building on the second floor. A third new library facility, the GVT Library, Room 200, in the Gannon Vocational/Technical building, opened during 1990-91 to provide an expanded listening/viewing area, handicapper equipment services, career information, College archives and additional study seats. Call (517) 483-1888 for library open hours information and changes.

Resources Available

The library collection consists of over 120,000 book and A-V titles and 1,500 periodical titles which has been selected by librarians and faculty to present varied points of view. The collection emphasizes current information on subjects which support instruction. The computer online catalog lists all LCC Library materials and their locations.

Other library resources include instructional lab circulation support; back files of magazines, journals and newspapers; entrepreneur small business manuals; telephone directories; corporate annual reports; the Career Information Center Collection including MOIS; the College USA system and microfiche college catalogs; recordings, audiotapes, filmstrips and slides; an OCLC computer catalog terminal to locate material which can be borrowed from over 11,000 libraries; and Easy Reading Browsing (ERB) books to support developmental reading courses.

With the opening of the GVT Library approximately 400 seats are available in all three campus libraries. Students may listen/view library-owned and instructional lab support audio-visual materials in the newly expanded and consolidated listening/viewing area in the GVT Library.

Services Offered

The staff of the libraries link users to information in LCC's library collection and to information located in libraries locally, statewide and nationally.

Assigned Reading Service:
- Instructors may place on reserve assigned reading materials which are in limited supply.

Classroom AV Services for Faculty:
- Equipment may be checked out at all three library locations.
- Materials listed in the **LCC Videotape and Film Catalog** may be booked for classroom use.
- Film and video preview/rental services are available.

Computerized Information Search Service:
- Hundreds of remote computer data bases in nearly any subject area are searched by librarians to supplement the library's on-site collections.

Dial Access to the LCC Library Collection:
- Users may dial into the LCC Library online catalog from their personal computers.
- Dial-in instructions are available upon request.

Handicapper Equipment Services:
- Special equipment to service the information needs of visual and hearing impaired users include: four-track tape recorders, talking calculators, variable speech tape recorders, TV magnifiers, large print typewriters, large print dictionaries, TDD's (Telephone Devices for the Deaf), and Articvision speech converter.

Interlibrary Loan Service:
- This service is available to students, faculty and staff to provide access to materials not owned by the LCC Library.

Library Information Guides:
- "Focus On . . . " study guides to library resources and services, library information sheets and handbook folders are available in each library and upon request.

Library Orientations/Tours/Instruction:
- Instructors may schedule in-library orientations for small groups.
- Video tapes on library use and self-guided audio tours are also available. Librarians may be consulted to help design assignments which include library research.

Reference Service:
- Librarians provide personal assistance to help students and staff find information and use library materials. Reference service desks are located in all library locations.

MEDIA DEPARTMENT

Chairperson: Dale Dunham
108-B Academic and Office Facility

Services Offered

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

Audio Services staff provide studio recording facilities and assistance to faculty and staff in preparing instructional tapes. Public address systems and location recording services are also available. From master tapes, staff make cassette and open reel duplicate tapes for classroom use.

Television Services include production assistance for instructors who wish to prepare their own instructional television programs. Television Services staff provide closed circuit television channels for classroom programming. Instructors may schedule videotapes from the College collection, view programs during commercial broadcasts or play back their own tapes. Telecourses offered over public broadcasting and cable are coordinated and supported by the Television Services staff.

Photo and Graphic Services include all forms of still photography, color and black-and-white prints, enlargements, slides, copywork and location photography as well as printing and graphic services for instruction and other College operations.

FACILITIES AVAILABLE

Television Studio

A complete color television studio supported by full 3/4-inch editing facilities provides the opportunity for instructional-based and public affairs programming to be aired on Lansing Cable Channel 33 or the LCC closed circuit distribution network. Students may gain practical experience by enrolling in television production classes and by participating in all aspects of program production.

Computer Graphics Center

The Commercial and Fine Art Program offers hands-on training using professional, stand-alone systems designed for a wide range of graphic arts applications, from desktop publishing to video production. Facilities include two computer graphics laboratory-classrooms, one for black and white and one for color systems, containing a total of 23 work stations. With each high-quality color system, the student has access to 16.7 million colors, 256 at a time, as well as a selection of pens, paintbrushes, airbrushes, type fonts, shapes and grids. Each system, both black and white and color, can perform complex manipulation techniques such as multiple imaging, scaling, rotation, typesetting, perspective and animation. Images can also be captured with a video camera for computer manipulation. Students can make copies of their work using a laser printer, a full-color printer, a film recorder and/or videotape. Each student has the exclusive use of a work station during scheduled class or lab time.

Photography Center

The Photography Center offers the students a variety of facilities and equipment. Black and white printing laboratories with a total of 38 enlargers are available during open laboratory hours as well as scheduled class times. Black and white roll and sheet film processing rooms are open during operating hours. Six separate color printing rooms and automatic print processor offer the color printing student an opportunity for serious, controlled work. Processing of color reversal and negative films is available at low cost. Two studios and a variety of electronic flash and continuous lighting equipment give students practice in portrait and product photography. Densitometers, matte cutters, dry mount presses, retouching machines and equipment, normally owned only by professional studios and laboratories are available for instruction and practice. A variety of cameras, light meters and lighting equipment may be checked out for student projects.

Motion Pictures

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

Radio Station

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

Large Group Media Facilities

The Media Department renders both technical and operational support to the following multi-media facilities across the campus: Dart Auditorium, Dart Media Seminar Room, Old Central Lecture Hall, Arts and Sciences Amphitheatre and Planetarium and outdoor Amphitheatre. In addition to supporting science, humanities and other curricula, the Planetarium Multi-media Center provides special request programming for the community.

PROGRAMS OF STUDY

Commercial and Fine Art

Art is a dynamic field expanding and changing with the world it serves. The Commercial and Fine Art Program at Lansing Community College keeps abreast of these changes and offers courses and Associate Degrees designed to meet the needs of persons who wish to pursue careers in commercial art, fine art and computer graphics. Each art curriculum may be completed at the student's own pace on a full or part-time basis.

Media Technology

A broad-based media curriculum leading to an Associate of Applied Science Degree provides the Media Technology student with the practical skills necessary to pursue a professional media career. As business and industry continue to expand their use of media, students with such hands-on production experience will find more and more jobs available. Offering over 40 courses, the program provides specialty tracks in video production, radio broadcasting, and audio production and recording. Media professionals instruct students in both the theory and practice of media operations. Internships are encouraged and opportunity is given for gaining production experience on the College's full-time cable channel.

Photographic Technology Program

Photography is one of the most usable of today's enterprises, not only as an industry but as an indispensable part of other fields including research, training and medicine. In innumerable areas, visual recording is essential to progress. The program offers five different photographic career options: commercial photography, general/fine arts photography, photojournalism, motion picture production, photo marketing and multi-image.

The Photography Program operates conventional class offerings and a Media Institute, where the student progresses through a year-long integrated study of photography.

COURSE DESCRIPTIONS

Art (ART)
Media Department
Division of TeleCommunication and the Arts

ART 005   Computer Graphics Lab   .5(0-3)
Prerequisite: Department approval. At the time of registration in ART 005, a student must register for, or be currently enrolled in, an art course at Lansing Community College as well as have the required prerequisite (department approval). The ART 005 section determines the time for the student's attendance in the Computer Graphics Laboratory; it is not a course. The purpose of ART 005 is to enable the student to utilize the laboratory equipment and software to create individualized computer graphics for Art courses conducted in a traditional classroom environment.

ART 101   Design I   4(2-4)
Universal principles of design, design theory and vocabulary with emphasis on composition and its application to black and white media.

ART 102   Design II   4(2-4)
Prerequisite: ART 101. Continuation of two-dimensional design principles with emphasis on color theory; color interaction; and properties, principles and qualities of color.

ART 103   Design III   4(2-4)
Prerequisite: ART 102. Line, shape, form, value and texture in a variety of three-dimensional materials, applying principles and elements of design.

ART 110   Introduction to Computer Graphics Art   3(3-0)
A comprehensive overview of the computer graphics field through the use of videotapes, lectures, demonstrations and local field trips.

ART 111   Computer Graphics Art I   4(2-4)
Prerequisite: Department approval. A beginning course for students interested in creating artistic images with the aid of a computer. Emphasis is on hands-on training utilizing sophisticated, user-friendly artistic software. Programming skills are not necessary, but students must show evidence of design and drawing skills to receive department approval.

ART 112   Computer Graphics Art II   4(2-4)
Prerequisite: Department approval. A continuation of Computer Graphics Art I (ART 111) with emphasis on color and digitizing images with the aid of a computer to create more sophisticated work.

ART 113   Computer Graphics/2D Animation   4(2-4)
Prerequisite: Department approval. A continuation of Computer Graphics Art II (ART 112) with emphasis on computer animation.

ART 114   Computer Graphics/Business Presentations   4(2-4)
Prerequisite: Department approval. A continuation of Computer Graphics Art III with an emphasis on presentation graphics for business applications.

ART 116   Computer Graphics/3D Animation   4(2-4)
Prerequisite: Department approval. An introduction to 3D solid modeling and animation of a PC-based graphics system.

ART 120   Computer Graphics Desktop Publishing   4(2-4)
Prerequisite: ART 101. A hands-on course designed to provide the student with a working knowledge of Aldus PageMaker and related software programs utilizing a Macintosh computer. Emphasis is on desktop publishing applications. Fine art applications will be discussed as well.

ART 130   Beginning Drawing   2(1-2)
An introductory course using a variety of materials including pencil, charcoal and ink.

ART 131   Drawing   4(2-4)
Prerequisite: ART 101 recommended concurrently. A studio course using a variety of tools and methods. Introduces realism, abstraction and stream of consciousness, using materials such as pencil, ink and conte crayon.

ART 132   Life Drawing   4(2-4)
Prerequisite: ART 101. Basic concepts, approaches and techniques involving drawing the human figure, using materials such as pencil, ink, charcoal and conte crayon. May be taken four terms for credit.

ART 133   Advanced Life Drawing   4(2-4)
Prerequisite: Department approval. A continuation of Life Drawing with emphasis on the human figure in its environments, including multiple model situations, in-depth poses, objective, abstracted and stylized interpretations.

ART 134   Advanced Drawing   4(2-4)
Prerequisite: Department approval. More complex problems in still life, portraits and landscape using a variety of tools and materials in black and white and color. May be taken four terms for credit.

ART 135   Introduction to Printmaking   4(2-4)
Examines the various printmaking techniques, tools and vocabulary of the printmaker. Fine art and career opportunities for printmaking are discussed.

ART 139   Printmaking II   4(2-4)
Prerequisite: ART 135. A continuation of basic printmaking knowledge into more advanced technical and aesthetic concerns. May be taken four terms for credit.

ART 140   Screen Printing I   4(2-4)
A studio practice course introducing the skills and techniques of silkscreen printing, including basic photographic silkscreen processes.

ART 141   Screen Printing II   4(2-4)
Prerequisite: ART 140. Practice techniques and experimentation with more complex problems.

ART 143   Keylining and Production Techniques   4(2-4)
Keyline and paste-up techniques for graphic arts reproduction with emphasis on printing terminology and processes. Color separation and pagination are introduced.

ART 144   Advanced Mechanicals and Production Techniques   4(2-4)
Prerequisite: ART 143. Continuation of keyline techniques with emphasis on speed and professional accuracy. Copy preparation, paper selection and professional finishing techniques are introduced.

ART 145   Typography I   4(2-4)
Introduction to typography. Includes history of type and typesetting, type styles, identification, classification, designing typefaces for specific purposes and type indication for layout.

ART 146   Typography II   4(2-4)
Prerequisite: ART 145. Use of type in layout and graphic design with emphasis on type selection and copyfitting.

ART 147   Perspective Drawing   4(2-4)
Basic principles of perspective drawing utilized in product and architectural illustration; rendering in one, two and three-point perspective using photographs or actual products.

ART 148   Marker Illustration Techniques   4(2-4)
Prerequisite: ART 147 and ART 102. Emphasis on color rendering and practicing techniques of illustrating architectural and product subjects most often used in the graphics or visual communications industries.

ART 150   Graphic Design I   4(2-4)
Prerequisite: ART 145 and ART 101. 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 and ART 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 ceramics, painting, sculpture and architecture from Paleolithic times to the rise of Islam. Cultures included: Africa, the Americas, Egypt, Mesopotamia, Greece, Roma, Early Christian, Byzantine and Islam. 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)
Survey of the fine and decorative arts including ceramics, painting, sculpture and architecture from the Far East and Europe. Covers the early Medieval, 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 20th century Contemporary Art. Correlations and comparisons between specific pieces of art and historical events; artists and artistic techniques are identified and compared.

ART 160   PLEASE REFER TO IAD 131

ART 161   PLEASE REFER TO IAD 132

ART 162   PLEASE REFER TO IAD 133

ART 163   PLEASE REFER TO IAD 141

ART 164   PLEASE REFER TO IAD 142

ART 165   PLEASE REFER TO IAD 143

ART 166   PLEASE REFER TO IAD 101

ART 167   PLEASE REFER TO IAD 105

ART 170   Computer Graphics for Media   4(2-4)
Prerequisite: Department approval. An introduction to computer graphics for students whose major emphasis is TV production.

ART 171   Computer Graphics for Photography   4(2-4)
Prerequisite: Department approval. An introduction to computer manipulation of photographic images for photography majors.

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 ART 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 102 and ART 132. An introductory course in Thuman portraiture with primary concentration on oil painting. May be taken three terms for credit.

ART 203   Figure Painting   4(2-4)
Prerequisite: ART 102 and ART 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 and ART 131. Introduction to the art of transparent water-color. 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. A continuation of Watercolor I (ART 204). This course emphasizes more advanced techniques and increasingly complex problems in watercolor painting.

ART 206   Watercolor III   4(2-4)

Prerequisite: ART 205. A continuation of Watercolor II (ART 205). This course emphasizes more advanced techniques and increasingly complex problems in watercolor painting.

ART 207   Watercolor Advanced   4(2-4)

Prerequisite: ART 206. A continuation of Watercolor III (ART 206). This course 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(0-8)

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   Graphic Design II   4(2-4)

Prerequisite: ART 150 and ART 102. An overall view of the media; its uses in planning campaigns; procedures for campaign building; and graphic design campaign techniques.

ART 211   Graphic Design III   4(2-4)

Prerequisite: ART 210 and ART 148. Three-dimensional commercial design, packaging and display, with emphasis on surface graphics using a variety of materials, tools methods and techniques.

ART 212   Graphic Design IV   4(2-4)

Prerequisite: Department approval. Preparation of a commercial art portfolio for presentation and job procurement, including magazine, newspaper, brochure and corporate identification layouts.

ART 213   Illustration/B&W   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/Color   4(2-4)

Prerequisite: ART 151 and ART 102. Full color exercises in tempera; introduction to acrylic techniques; stylized drawing expressions and design-oriented compositions.

ART 215   Advanced Illustration   4(2-4)

Prerequisite: Department approval. 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 and ART 147. 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 Scientific Illustration   4(2-4)

Prerequisite: ART 151. 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 151. Introduction to animal illustration includes realistic drawing from mounted specimens and live animals.

ART 230   PLEASE REFER TO IAD 231

ART 231   PLEASE REFER TO IAD 232

ART 232   PLEASE REFER TO IAD 233

ART 233   PLEASE REFER TO IAD 171

ART 234   PLEASE REFER TO IAD 238

ART 235   PLEASE REFER TO IAD 261

ART 236   PLEASE REFER TO IAD 262

ART 239   PLEASE REFER TO IAD 239

ART 240   PLEASE REFER TO IAD 250

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 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 270   Computer Graphics/Special Projects   4(0-8)

Prerequisite: Department approval. Individual pursuit of special projects not incorporated in regular course offerings. May be taken four terms for credit.

ART 271   Computer Graphics/3D Special Projects   4(0-8)

Prerequisite: Department approval. An introduction to computer manipulation of photographic images for photography majors.

ART 272   Printmaking Independent Study   4(0-8)

Prerequisite: Department approval. An individual pursuit of special projects not incorporated in regular course offerings. May be taken four terms for credit.

ART 274   Commercial Art Independent Study   4(0-8)

Prerequisite: Department approval. An individual pursuit of special projects not incorporated in regular course offerings. May be taken four terms for credit.

ART 275   PLEASE REFER TO IAD 275

ART 276   Art Independent Study   4(0-8)

Prerequisite: Department approval. Individual pursuit of special projects not incorporated in regular course offerings. May be taken four terms for credit.

ART 278   Commercial Art Internship   8(0-176)

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.

ART 279   PLEASE REFER TO IAD 279

ART 280   Computer Graphics Internship   8(0-176)

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.

ART 281   Art Internship   8(0-176)
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.

Art Workshop (ARW)
Media Department
Division of TeleCommunication and the Arts

ARW 100   Drawing on Your Creativity   .5(6-0)
A hands-on introduction to the theory of the creative side of the brain. Emphasis is on learning to redirect one's "seeing/thinking process" in order to draw simple objects and to better appreciate the visual arts.

ARW 125   Airbrush Applications   2(1-2)
Prerequisite: ART 221. A hands-on workshop designed to acquaint students in the use of airbrush techniques in the fine arts.

ARW 131   Computer Graphics Workshop   2(1-1)
A condensed hands-on introduction to computer graphics utilizing sophisticated, user-friendly artistic software. Programming skills are not necessary.

ARW 133   Introduction to PageMaker   2(12-10)
A condensed hands-on workshop designed to provide the student with a working knowledge of Aldus PageMaker software utilizing a Macintosh computer. Emphasis is on desktop publishing applications.

ARW 134   Introduction to FreeHand   2(12-10)
A condensed hands-on workshop designed to provide the student with a working knowledge of Aldus FreeHand software utilizing a Macintosh computer. Emphasis is on desktop publishing applications.

ARW 135   Desktop Design Fundamentals   1(11-0)
A seminar focusing on basic graphic design concepts to help the student improve the appearance and effectiveness of desktop publishing projects. This is not a software specific course.

ARW 141   Watercolor Workshop   2(1-2)
A condensed learning experience introducing to the student the art of transparent watercolor. Emphasis on the use of different papers, degrees of wetness, tools and techniques. Students will progress to more complex problems as ability develops.

ARW 142   Oil Painting Workshop   2(1-2)
A condensed learning experience introducing the student to the art of traditional oil painting. Emphasis on color and composition, tools and techniques. Students will progress to more complex problems as ability develops.

ARW 145   Landscape Painting and Drawing   2(1-2)
Emphasis on the use of color, perspective and compositional strategies of tha landscape. Most sessions spent in the field. All media welcome.

ARW 200   Hand Made Paper   2(1-2)
A condensed learning experience introducing the student to the art of hand made paper. Emphasis on pulpmaking and casting techniques. Students will progress to more complex problems as ability develops.

ARW 201   Oriental Papermaking Workshop   2(1-2)
Prerequisite: Department approval. A condensed learning experience introducing the student to the art of hand made paper in the Eastern style. Emphasis will be on learning oriental tools and style of papermaking and the development of oriental process. Students will progress to more complex problems as ability develops.

ARW 221   Calligraphy   2(1-2)
A workshop designed to introduce the student to the art of fine writing using Italic pens. Emphasis on hand lettering; surveying different styles and scripts used in early manuscripts; and adaptation to modern use.

ARW 222   Advanced Calligraphy   2(1-2)
Prerequisite: ARW 221. A continuation of Calligraphy (ARW 221), emphasizing a variety of tools, materials and techniques. Students will progress to more complex problems and experiment with aesthetic expression as skills progress.

Media Department
Division of TeleCommunication and the Arts

MRT 101   Old Time Radio   2(2-0)
Looks at the sights and sounds of radio programming of the past. A non-technical view of broadcasting, exploring many aspects of the history of radio: beginnings, development, network and station programming, including comedy, variety, mystery and drama.

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 set-up.

MRT 111   Basic Home Video   2(2-0)
A course designed to acquaint the beginning student with the basic operation of the consumer video camera, and to offer guidance and assistance to those persons who occasionally use video in their work.

MRT 116   Fundamentals of Media Production   4(4-0)
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   Media Production Symposium   4(4-0)
Prerequisite: MRT 116. 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 145   Reporting for TV   4(4-0)
Survey of the broadcast news industry, including practical exercises in newswriting and presentation.

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   TV Studio Production I   4(4-0)
Prerequisite: 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   TV Studio Production II   4(4-0)
Prerequisite: MRT 152. A more vigorous application of skills learned in MRT 152. Student will also participate in individual projects.

MRT 160   Broadcast 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   Broadcast Script Writing   4(4-0)
Basic writing techniques and formats utilized in preparing program scripts. An introduction to news, public affairs, documentary and entertainment writing for radio and TV.

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   Telecommunications Technology and Society   4(4-0)
Impacts of telecommunications technology on business, government, social institutions, the home, and as a stimulus to social change.

MRT 200   Electronic Graphics for Media   4(4-0)
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 and Marketing   4(4-0)
Covers methods and specialized skills employed in selling radio and television advertising and air time.

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. Teaches principles and practical techniques that apply to sound reinforcement for voice, music performance, theatre, film and television. Includes equipment selection, set-up, troubleshooting and operations.

MRT 219   Sound Reinforcement Practicum   4(4-0)
Prerequisite: MRT 218. A continuation of MRT 218 giving practical experience in planning, set-up, and operation of varied sound reinforcement systems used in musical performance theatre.

MRT 220   Audio Recording I   4(4-0)
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 228   Sound Reinforcement II   4(4-0)
Prerequisite: Department approval and MRT 218. Expands the basic principles taught in Sound Reinforcement. Students will learn how to apply their skills to larger installed and concert systems, as well as expanding their knowledge of basic audio electronics, troubleshooting and less common system types.

MRT 230   Audio Production III   4(4-0)
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(5-0)
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(0-4)
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 244   Audio Practicum   2(0-4)
Prerequisite: Department approval. Practical experience in audio production and recording techniques. Students work on assigned audio projects, which vary according to production schedules.

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 150 or department approval. 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.

MRT 255   Lighting for Video   4(4-0)
Prerequisite: MRT 152. Theory and practice of lighting for television.

MRT 258   Video/Dance Practicum   4(2-4)
Prerequisite: Department approval. Combined class with Dance Department to learn the basics of shooting movement and apply those techniques to a video dance project. Study styles and applications of other video artists.

MRT 260   Ethics/Social Impact of Media   4(4-0)
Study of the effects of television on society. Critically explores such issues as violence, sexuality, children, advertising, stereotypes and others.

MRT 280   Video for Business and Industry   4(4-0)
Design and production of instructional materials for television, instructional design techniques appropriate for video production.

MRT 285   Media Portfolio   4(4-0)
Prerequisite: Department approval. Individualized project provides student opportunity to demonstrate media skills in production of a portfolio tape. Proposal approved by program director required.

MRT 290   Independent Study   2(0-5)
Prerequisite: Department approval. Pursuit of advanced study in areas not formerly taught within the curriculum. Students must submit written applications detailing their projects for departmental approval.

MRT 291   Independent Study   3(0-8)
Prerequisite: Department approval. Pursuit of advanced study in areas not formerly taught within the curriculum. Students must submit written applications detailing their projects for departmental approval.

MRT 292   Independent Study   4(0-11)
Prerequisite: Department approval. Pursuit of advanced study in areas not formerly taught within the curriculum. Students must submit written applications detailing their projects for departmental approval.

MRT 296   Media Internship   Credits Variable
Prerequisite: Department approval. MRT students work up to 30 hours per week as interns in a professional media environment.

MRT 299   Media Special Projects   4(0-8)
Prerequisite: Department approval. MRT students work closely with faculty or production staff in developing particular programs for College departments or divisions.

Photography (PHO)
Media Department
Division of TeleCommunication and the Arts

PHO 108   History of Photography I   4(4-0)
Survey of the development of photography through study of the people and processes involved.

PHO 110   Basic Camera Operation   3(3-0)
Practical application of camera controls and pictorial composition using commercial processing for class projects."

PHO 111   Basic Camera Operation II   3(3-0)
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.

PHO 118   History of Photography II   3(3-0)
Survey of contemporary photographers and processes.

PHO 120 Introduction to Photography I   4(2-4)

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.

PHO 125 Black and White Processing Lab   3(2-2)

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 126 Basic Motion Picture Production   4(4-0)

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.

PHO 128 Photographic Design   4(4-0)

Prerequisite: PHO 110 or PHO 120 concurrent. Explore, through photographic medium, the elements and principles of design.

PHO 129 Professional Photography Technical Lecture   Credits Variable

Facets of the role of the professional photographer: materials, processes and new developments.

PHO 136 Fundamentals of Cinematography and Sound   4(4-0)

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.

PHO 138 Understanding Photographic Communication   3(3-0)

By viewing photographs, interacting with guest experts, participating in class dicussions and completing assigned readings, the student will acquire an understanding of photographic content and function.

PHO 140 Introduction to Photography II   4(2-4)

Prerequisite: Department approval. Continuation of PHO 120 with refinement of exposure, processing, printing controls and print finishing.

PHO 146 Fundamentals of Lighting   4(4-0)

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.

PHO 148 Photo Design II   4(4-0)

Prerequisite: PHO 128. A continuation of Photo Design I concepts. This class will emphasize practical application in each student's own visual processing system.

PHO 149 Photographic Technical Laboratory   Credits Variable

Prerequisite: Department approval. Demonstration, laboratory experience and involvement with and about new ideas in the photographic fields.

PHO 150 Basic Photo-Chemistry   3(3-0)

Prerequisite: PHO 120 and department approval. Introduction to the black and white photo-chemical processes including chemical compounding and testing.

PHO 154 Professional Product Lighting   4(4-0)

Prerequisite: PHO 140 or concurrent and department approval. 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.

PHO 155 Black and White Printing Lab   2(0-4)

Prerequisite: PHO 140 and department approval. Guided practice in black and white printing geared to each student's need or problem.

PHO 158 Print Finishing and Presentation   4(4-0)

Prerequisite: PHO 120 and department approval. Development of expertise in print finishing and presentation.

PHO 160 Introduction to Photography III   4(4-0)

Prerequisite: Department approval. 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.

PHO 161 Camera Maintenance   2(2-0)

Prerequisite: PHO 120. Fundamentals of caring for photographic equipment, including routine maintenance, preventive maintenance, simple servicing and cleaning, as well as basic adjustments.

PHO 165 Manipulative Printing   4(4-0)

Prerequisite: PHO 160 or concurrent and department approval. Imagery achieved through manipulative camera and darkroom techniques. An introduction to various special films and papers and their use.

PHO 166 Fundamentals of Film Editing and Sound   4(4-0)

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.

PHO 170 Basic Color Printing   4(2-4)

Prerequisite: PHO 110 and department approval. 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 Photo Theory   2(0-4)

Prerequisite: Department approval. A troubleshooting class for students whose daficiancies 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 1   10(8-4)

Together with PHO 189 and PHO 199, this course forms the first term of the first year of the institute program in photography. At the completion of the year, students will establish credits in the following: PHO 120, PHO 128, PHO 129 (2 cr.), PHO 140, PHO 154, PHO 160, PHO 200, SD 124, WRI 121 and WRI 122.

PHO 186 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 2   8(4-8)

Prerequisite: PHO 179 and department approval. Together with PHO 179 and PHO 199, this course forms the second term of the first year of the institute program in photography. At the completion of the year, students will establish credits in the following: PHO 120, PHO 128, PHO 129 (2 cr.), PHO 140, PHO 154, PHO 160, PHO 200, SD 124, WRI 121 and WRI 122.

PHO 190 Photography in Business and Industry   4(4-0)

Prerequisite: PHO 160 or concurrent and department approval. Study of occupational situations and opportunities in the photographic industry.

PHO 199 Media Studies/Photography 3   8(4-8)

Prerequisite: Department approval. Together with PHO 179 and PHO 189, this course forms the third term of the first year of the institute program in photography. At the completion of the year, students will establish credits in the following: PHO 120, PHO 128, PHO 129 (2 cr.), PHO 140, PHO 154, PHO 160, PHO 200, SD 124, WRI 121 and WRI 122.

PHO 200 Introduction to Color   4(4-0)

Prerequisite: PHO 140 and department approval. Introduction to color photographic theory, professional color materials and their practical application of the elements of color design to solve photographic problems.

PHO 201 Photo-Journalism I   4(4-0)

Prerequisite: PHO 140 and department approval. 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 and department approval. 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 and department approval. Techniques and equipment utilized in nature and environmental photography.

PHO 204 Large Format I   4(2-4)

Prerequisite: PHO 160 and department approval. Camera technique, perspective and sharpness controls, optics, processing and printing of large format negatives; 4 x 5 cameras provided.

PHO 205   Non-Silver Processes I   4(4-0)
Prerequisite: PHO 150 or PHO 165 and department approval. An introduction to the various non-silver processes which preceded the silver print.

PHO 206   Workshop I—Film Production   4(2-4)
Prerequisite: Nine credits from PHO 136-186 and department approval. 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 and department approval. 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. This course will engage the student with color as a critical tool in professional photography. A three-fold emphasis is used: Technical skill development, image creation assignments and viewing/discussion of both the generalized and commercial uses of color photography by a variety of successful photographers.

PHO 209   Professional Black and White Printing   4(4-0)
Prerequisite: PHO 160 and department approval. 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 and department approval. Study of reversal and negative color film and paper processing procedures. Emphasizes process monitoring for quality control.

PHO 214   The Zone System Photography   4(2-4)
Prerequisite: PHO 160 and department approval. 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   Workshop II—Film Production   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 and department approval. Introduction to the materials and processes of color printing.

PHO 221   Photo-Journalism II   4(4-0)
Prerequisite: PHO 160/201 and department approval. Continuation of photography for publication.

PHO 222   Portrait Photography II   4(4-0)
Prerequisite: PHO 202/204/220 and department approval. 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   Illustration I   4(4-0)
Prerequisite: PHO 204/220 and department approval. 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 and department approval. Continuation of PHO 205 providing in-depth experience in several non-silver photo processes.

PHO 226   Workshop III—Film Production   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 and department approval. Fundamentals of composing, cropping and editing photographs. This is essential for photojournalism students and valuable for all students in the vocational photography program.

PHO 240   Color Printing II   4(4-0)
Prerequisite: PHO 220 and department approval. Continuation of materials and processes used in color printing.

PHO 244   Illustration II   4(4-0)
Prerequisite: PHO 204/220 and department approval. Continuation of large format techniques with emphasis on architectural photography.

PHO 245   Professional Photographic Arts   4(4-0)
Prerequisite: Department approval. This course will allow the student to investigate potential professional artistic photographic expression. The learning process will include the production of assignments, reports, discussion and other scheduled activities.

PHO 246   Multi-Image I   4(4-0)
Prerequisite: PHO 140/200 or equivalent and department approval. This course will introduce the student to basic concepts of multi-image production—both technical camera exposure techniques and shooting/editing strategies for presentation.

PHO 249   Media Studies/Photography 4   8(4-8)
Prerequisite: Department approval. Together with PHO 259 and PHO 269, this course forms the first term of the second year of the Institute program in Photography. At the completion of the second year students will establish credit in the following: PHO 108, PHO 201, PHO 202, PHO 204, PHO 208, PHO 220, SS 104, one computer course and one Media Department elective.

PHO 250   Color Printing III   4(4-0)
Prerequisite: PHO 220 and department approval. 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 252   Portrait III   4(4-0)
Prerequisite: PHO 222 and PHO 220 and department approval. Combines the techniques of portrait and product photography. Student will work primarily in color, and will put people and products together to produce effective photographs suitable for reproduction in various media.

PHO 255   Professional Photographic Art Practices   4(4-0)
Prerequisite: PHO 160 and PHO 128. This course will encourage the student to investigate actual professional artistic photographic expression. This process will include the production of assignments, reports, discussion and other scheduled activities. May be repeated for credit.

PHO 256   Multi-Image II   4(4-0)
Prerequisite: Departmental approval and successful completion of PHO 246. A continuation of the basic techniques used in multi-image special effects optical camera work, with additional instruction covering the areas of wide screen multi-image and multi-image computerized memory programming.

PHO 259   Media Studies/Photography 5   8(4-8)
Prerequisite: PHO 249 and department approval. Together with PHO 249 and PHO 269 this course forms the second term of the second year of the Institute program in Photography. At the completion of the second year students will establish credit in the following: PHO 108, PHO 201, PHO 202, PHO 204, PHO 208, PHO 220, SS 104, one computer course and one Media Department elective.

PHO 260   Professional Photo Workshop   4(0-0)
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 269   Media Studies/Photography 6   8(4-8)
Prerequisite: PHO 259 and department approval. Together with PHO 249 and PHO 259, this course forms the third term of the second year of the Institute program in Photography. At the completion of the second year students will establish credit in the following: PHO 108, PHO 201, PHO 202, PHO 204, PHO 208, PHO 220, SS 104, one computer course and one Media Department elective.

PHO 270   Field Projects   4(0-11)
Prerequisite: Department approval. Work experience in actual photography situations for practical application of curriculum based skills.

PHO 275   Advanced Photo Applications   4(4-0)
Prerequisite: PHO 205 or 221 or 224 or 244 and department approval. Allows the advanced student to pursue an area of weakness in his/her field of study under the guidance of an instructor. Thus the student can obtain competencies needed to proceed. May be repeated for credit.

PHO 279   Media Studies/Photography 7   8(4-8)

Prerequisite: PHO 269 and department approval. Together with PHO 289 and PHO 299, this course forms the first term of the third year of the Institute program in Photography. At the completion of the year students will establish credits in the following: PHO 129, PHO 190, PHO 240, PHO 275, PHO 297, two courses in the student's major, SD 127 and two Media Department electives.

PHO 280   Directed Independent Study   2(0-5)

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 289   Media Studies/Photography 8   8(4-8)

Prerequisite: PHO 279 and department approval. Together with PHO 279 and PHO 299, this course forms the second term of the third year of the Institute program in Photography. At the completion of the year, students will establish credits in the following: PHO 129, PHO 190, PHO 240, PHO 275, PHO 297, two courses in the student's major, SD 127 and two Media Department electives.

PHO 290   Directed Independent Study   3(0-83)

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   Photo Internship   Credits Variable

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 and department approval. Intended to be a terminal course in the Photo Technology Program. Students are expected to assemble their best work into a cohesive, relevant presentation for the purpose of securing employment in their chosen career emphasis area.

PHO 298   Directed Independent Study   4(0-110)

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.

PHO 299   Media Studies/Photography 9   8(4-8)

Prerequisite: PHO 289 and departmental approval. Together with PHO 279 and PHO 289, this course forms the third term of the third year of the Institute program in Photography. At the completion of the year students will establish credits in the following: PHO 129, PHO 190, PHO 240, PHO 275, PHO 297, two courses in the student's major, SD 127 and two Media Department electives.

PERFORMING ARTS

Director: John Dale Smith
Room 201, Turner House

The purposes of Performing Arts are to educate students in the disciplines of music, dance and theatre so they may achieve an Associate Degree in Arts, train toward a professional career or enhance personal skills.

The objectives of Performing Arts 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 dance, music and theatre, the Performing Arts 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 public performances are produced and promoted to enrich the College community as well.

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 is given in performance, design, and technical theatre skills.

Dance (DNC)
Performing Arts
Division of TeleCommunication and the Arts

DNC 101   Modern Dance Beginning I   3(2-1)

Course includes Modern technique for development of strength, flexibility, balance and coordination. Technique development, dance vocabulary, and spatial relationships are emphasized. Should be repeated for credit until proper skills are achieved.

DNC 102   Modern Dance Beginning II   3(2-1)

Progression of skills developed in DNC 101. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 103   Modern Dance Intermediate I   3(2-1)

Progression of skills developed in DNC 139. Emphasis will be placed on technique development, spatial relationships and the dynamics of modern dance in preparation for performance. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 104   Dance History   2(1-2)

A history of dance from the 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)

Includes ballet technique for development of strength, flexibility, balance and coordination. Technique development, dance vocabulary and spatial relationships are emphasized. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 108   Beginning Ballet II   3(2-1)

Progression of skills developed in DNC 107. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 109   Intermediate Ballet I   3(2-1)

Progression of skills developed in DNC 129. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 110   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 124   Dance Performance Workshop   3(3-1)

Prerequisite: Audition and interview; two letters of reference from high school or non-LCC instructors. The high school dance workshop is a summer program for gifted high school students. Students will have ballet and modern technique class three days each week as well as three choreography rehearsal periods. Students will perform in a final public performance.

DNC 126   Orientation to Dance Performance   1(1-0)

Prerequisite: Audition and approval in either music or theatre major. A survey of various performance styles of dance including jazz, tap, musical comedy and character/ethnic dance.

DNC 129   Beginning Ballet III   3(2-1)

Progression of skills developed in DNC 108. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 133   Beginning Tap I   3(2-1)

Includes tap technique for development of balance, coordination and rhythm. Technique development, dance vocabulary, and spatial relationships are emphasized. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 134   Beginning Tap II   3(2-1)

Progression of skills developed in DNC 133. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 136   Character Dance   3(2-1)

Prerequisite: Instructor approval. Designed to provide students with the basics of character dancing as applied to classical dance. Should be repeated for credit until proper skills are achieved.

DNC 139   Modern Dance Beginning III   3(2-1)

Progression of skills developed in DNC 102. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 140   Jazz Dance Beginning I   3(2-1)

Includes jazz technique for development of style, strength, flexibility, balance and coordination. Technique development, dance vocabulary, and spatial relationships are emphasized. Should be repeated for credit until proper skills are achieved.

DNC 141   Spanish Dance   2(1-2)
Prerequisite: Instructor approval. 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 143   Jazz Dance Beginning II   3(2-1)
Progression of skills developed in DNC 140. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 144   Jazz Dance Beginning III   3(2-1)
Progression of skills developed in DNC 143. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 150   Intermediate Tap I   3(2-1)
Progression of skills developed in DNC 134. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 154   Independent Study I   1(0-2)
Prerequisite: Department approval. For dance majors who wish to devote time to research projects, choreography, assigned student teaching projects and other related dance interests. Student will meet with approved instructor 2.75 hours during the term. May be repeated for credit.

DNC 155   Independent Study II   2(1-2)
Prerequisite: Department approval. For dance majors who wish to devote time to research projects, choreography, assigned student teaching projects and other related dance interests. Student will meet with approved instructor 5.5 hours during the term. May be repeated for credit.

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. Student will meet with approved instructor 8.25 hours during the term. May be repeated for credit.

DNC 160   Private Dance   1(1-0)
Prerequisite: Department approval. Intensive technical training for intermediate/advanced dance majors with special problems or areas of special skill.

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 169   Dance Exercise   1(0-2)
Dance exercises and techniques. Warm-ups and exercises consist of various techniques including ballet, modern and jazz for development of flexibility, strength and coordination with emphasis on toning. Recommended for all levels of dance. May be repeated three times for credit.

DNC 170   Jazz Dance Intermediate   3(2-1)
Progression of skills developed in DNC 144. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 171   Jazz Dance Advanced   3(2-1)
Progression of skills developed in DNC 170. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 192   Improvisation   2(1-2)
Prerequisite: Instructor approval. Explores the process and techniques of improvisation; personal resources, talent and solution of improvisational problems. May be repeated for credit.

DNC 195   Adagio   3(2-1)
Prerequisite: Instructor approval. The course emphasizes duets, solos, lifts and precision timing between dancers to improve ability to relate physically to each other. May be repeated for credit.

DNC 200   Intermediate Adagio/Partnering   3(2-1)
Progression of skills developed in DNC 195 and instructor approval. Includes intermediate dance techniques for continued development of partnering and dance vocabulary. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 201   Modern Dance Intermediate II   3(2-1)
Progression of skills developed in DNC 103. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 202   Modern Dance Advanced I   3(2-1)
Progression of skills developed in DNC 201. Includes modern technique for development of strength, flexibility, balance, coordination and individual style in preparation for performance. Modern repertoire will be taught along with technique development, dance vocabulary and spatial relationships. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 203   Modern Dance Advanced II   3(2-1)
Progression of skills developed in DNC 202. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 206   Ballet for Men   3(2-1)
Prerequisite: DNC 108 and instructor approval. This course is designed specifically for the male ballet dancer. Includes ballet technique for the development of strength, flexibility, balance, coordination and endurance. Spatial relationships, technique development and dance vocabulary are emphasized. Should be repeated for credit until proper skills are achieved.

DNC 207   Intermediate Ballet II   3(2-1)
Progression of skills developed in DNC 109. May be repeated for credit until skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 208   Advanced Ballet I   3(2-1)
Variations from the repertoire of classical ballet are added to advanced centre combinations. Complicated turns and aerial combinations are introduced as well as extensive patterns of adagio and allegro techniques. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 209   Advanced Ballet II   3(2-1)
Progression of skills developed in DNC 208. Should be repeated for credit until proper skills are achieved. Consult Dance advisor for initial placement based on previous experience.

DNC 210   Pointe Technique Beginning   2(1-1)
Prerequisite: Instructor approval. This course is for the intermediate level ballet student. Pointe technique is a continuation in development of strength, flexibility, balance and coordination geared toward pointe work. Basic pointe technique is stressed at the barre and center floor. Should be repeated for credit until proper skills are achieved.

DNC 214   Anatomy/Dance   3(2-1)
An introduction to basic anatomy as it applies to dance. Emphasis will be on major muscles, muscle groups and skeletal structure. Terminology, practical application, theory of movement, nutrition and injury prevention and care will be incorporated.

DNC 230   Elementary Labanotation   3(3-0)
An introductory course designed for people who are interested in the analysis and recording of movement. Labanotation is a scientific method which provides a means of recording movement for future reference, an equivalent to music notation and a tool for movement education; to train in movement observation and research. Both theory and practical application will be examined.

DNC 240   Introduction to Dance Video   4(4-0)
Prerequisite: Department approval. This course is designed to provide practical training in choreography and dance for the video medium. The course will include study of established video artists and application of their style to practical work.

DNC 265   Makeup Dance/Theatre   3(2-2)
Applying makeup properly for stage; effectively using supplies and techniques; evaluating assortment of makeup on the market.

DNC 267   Introduction to Modeling   3(2-1)
Projection, visual image and impressions; turns and movements, differences between American and European modeling; requirements, opportunities and various facets of a modeling career.

DNC 273   Runway Technique   3(2-1)
Prerequisite: DNC 267. Runway modeling routines, model's turns, stage entrances and exits. May be repeated three times for credit.

LANSING COMMUNITY COLLEGE

DNC 275   Model's Internship I   6(3-6)

Prerequisite: DNC 267 and DNC 276 and audition and department approval. An advanced level training of all modeling techniques, practical experience and individual professional development.

DNC 276   Skin Care and Makeup Design I   3(2-1)

Instruction in all aspects of individual personal grooming; coordination of hair style, makeup and wardrobe will be stressed.

DNC 277   Hair Care and Makeup Design II   3(2-1)

Prerequisite: DNC 276. Second level of instruction in individual hair care and makeup techniques.

DNC 278   Photo and Video Makeup Design III   3(2-1)

Prerequisite: DNC 277. Still photo and video-related application will be studied and developed. Students will be required to demonstrate professional makeup-artistry of all levels.

DNC 280   Ballroom Bronze I   3(2-1)

Prerequisite: Couples only. An introduction to the five basic levels of ballroom dances: fox trot, rumba, swing, cha-cha and waltz. May be repeated three times for credit.

DNC 281   Ballroom Bronze II   3(2-1)

Prerequisite: DNC 280 and couples only. Introduction through advanced level of five basic ballroom dances: fox trot, rumba, swing, cha-cha and waltz. 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 292   Swing Ballroom II   1(0-2)

Prerequisite: DNC 280 or DNC 291 and couples only. This course is designed to build on the dance training and technique introduced in Swing Ballroom. Students will be able to learn new steps and improve their technique in Swing.

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.

DNC 311   Teaching Methods   3(3-0)

Prerequisite: Department approval. Dance teaching methods will acquaint student with various methods of teaching dance and enable him/her to develop own teaching style. Communication of dance vocabulary, movement patterns and relationships, music, the art of giving corrections, class structure and term structure will be explored.

DNC 321   Dance Teaching Assistantship   3(2-2)

Prerequisite: Department approval. This is an introductory course which will assist the student in developing skills required to teach dance. Working jointly with a dance faculty member, the student will be able to prepare and teach classes at the beginning levels. This course must be repeated for credit until proper skills are achieved.

DNC 326   Dance Teaching Practicum   3(2-2)

Prerequisite: Department approval. This course will allow the student to teach a term-long class in his/her major discipline. The student will apply basic teaching methods in various dance techniques. The student will prepare "combinations," prepare for class in advance, choose the correct music, and the proper order of the class. The student will apply his/her knowledge of making corrections and preventing injuries.

DNC 331   Studio and Recital Management   4(4-0)

Prerequisite: Department approval. This course is designed to introduce basic concepts of the development, growth and maintenance of a dance studio. Operational and administrative procedures are emphasized for the dance studio as well as for recitals and other performance activities.

DNC 341   Dance Performance Internship   3(1-4)

Prerequisite: Department approval. This course is designed to provide the student practical production leadership experience outside the College. Under the supervision of faculty, the student will choreograph, direct, assistant direct or produce a dance production at an area dance studio, high school, community theatre or other non-college performing venue.

Dance Workshops and Seminars (DNR)
Performing Arts
Division of TeleCommunication and the Arts

DNR 101   Modern Repertory   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   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 107   Tap Repertory   2(1-2)

Prerequisite: Audition and department approval. Tap repertory classes focus on the preparation of dance for performance. The student concentrates on memorization, projection, character training, polishing and performing.

DNR 110   Jazz Repertory   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 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 153   Master Contemporary Ballet—
Beginning to Intermediate   .5(.5-0)

Prerequisite: DNC 101 or DNC 107. A master ballet class for the beginning to low intermediate level student. Conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes scheduled in concentrated sessions. May be repeated for credit. P-Z course.

DNR 154   Master Contemporary Ballet—
Intermediate to Advanced   .5(.5-0)

Prerequisite: DNC 103 or DNC 109. A master ballet class for the high intermediate to advanced level student. Conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes scheduled in concentrated sessions. May be repeated for credit. P-Z course.

DNR 155   Master Tap and Jazz   .5(.5-0)

A master tap and jazz class. Conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes scheduled in concentrated sessions. May be repeated for credit. P-Z course.

DNR 159   Master Modern—Beginning to Intermediate   .5(.5-0)

Prerequisite: DNC 101 or DNC 107. A master modern class for the beginning to low intermediate level student. Conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes scheduled in concentrated sessions. May be repeated for credit. P-Z course.

DNR 160   Master Modern—Intermediate to Advanced   .5(.5-0)

Prerequisite: DNC 103 or DNC 109. A master modern class for the intermediate to advanced level student. Conducted by professional dancer/instructor in residence or performing/teaching in the service area. Classes scheduled in concentrated sessions. May be repeated for credit. P-Z course.

DNR 201   Musical Theatre Repertory   2(1-2)

Prerequisite: DNC 102 and DNC 108 and DNC 140. An introduction to choreographic styles of the American Musical Theatre for the intermediate dance student. Selected passages of original choreography from current and past Broadway musicals will be introduced.

DNR 210   Polka Workshop   1(1-1)

A course in international waltz and polka dance techniques. This is a course suitable for the beginner or those wishing to acquire intensive training in waltz and polka dance forms. Discussion of national origin and historic significance to dance will be included.

DNR 216   Ballroom Bronze I Workshop   1(0-2)

Traditional ballroom techniques in cha-cha, samba, tango and rumba. Enrollment with partner recommended but not required. May be repeated three times for credit.

DNR 221   Cha-Cha/Mambo Workshop   1(3-0)

This four-week course is an introductory study of the ballroom dances cha-cha and mambo. Both dances have a Latin heritage. The steps are compact and require Latin hip movement. This course will cover basic components of partnership dancing and basic patterns, footwork, timing, technique and style of the cha-cha and mambo.

DNR 222   Tango/Samba Workshop   1(3-0)

This four-week course is an introductory study of the ballroom dances tango and samba. Covers basic components of partnership dancing, including basic patterns, footwork, timing, technique and style of the tango and samba.

DNR 223   Ballroom Bronze II Workshop   1(0-2)

Prerequisite: DNR 216. An advanced course in traditional ballroom techniques. Emphasis will be placed on dance styles such as the cha-cha, waltz, rumba, foxtrot and swing, as well as introduction to the tango. Enrollment with a partner is recommended but not required.

DNR 224   Ballroom Hustle Workshop   1(1-0)

Designed to introduce students to hustle dance steps and styling. Hustle is an upbeat dance which is performed to popular music.

Music (MUS)
Performing Arts
Division of TeleCommunication and the Arts

MUS 101   LanSwingers   2(0-5)

Prerequisite: Instructor approval. Selected vocal ensemble that participates almost exclusively in jazz, swing and pop choral performance, with choreography.

MUS 102   Women's Chorus   1(0-2)

An ensemble of women vocalists composed of students and community members to develop general musicianship and provide training in choral singing.

MUS 107   Opera Workshop   2(1-2)

Prerequisite: Instructor approval. An introductory course to the elements of opera as musical theatre.

MUS 108   Concert Choir   1(0-4)

Prerequisite: Instructor approval. A College choral organization whose members learn and perform the master works which have been composed for large chorus and orchestra.

MUS 113   Summer Musical Chorus   2(1-3)

Prerequisite: Audition. LCC's annual summer musical chorus. Members are selected for their acting as well as singing ability and past performance experience.

MUS 119   Lansing Concert Band   1(0-3)

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.

MUS 123   Jazz Ensemble   2(1-2)

Prerequisite: Audition. An ensemble approach to the playing and studying of jazz.

MUS 124   Music Performance Workshop   3(3-1)

Prerequisite: Must audition and interview and have two references from high school or non-LCC instructors. The high school workshop is a summer program for gifted high school students. Students work on basic music skills; concentrate on music theory; develop keyboard skills; strengthen vocal skills; and perform in a final recital. Acceptance by audition and interview only.

MUS 127   Orientation to Music Performance   1(1-0)

Prerequisite: Audition and approval in either dance or theatre major. A survey of the basic skills used in music including elements of theory, use of keyboard and use of voice.

MUS 130   Classical Guitar Ensemble   1(0-2)

Prerequisite: Instructor approval. A classical guitar ensemble that participates almost exclusively in classical literature performance.

MUS 133   Jazz Theory I   3(3-0)

Prerequisite: Instructor approval. The first in a series of three designed to acquaint the student with basic jazz theoretical principles. Covers harmony, scales and modes, chord-scale relationships, chord substitution and harmonization techniques.

MUS 134   Jazz Theory II   3(3-0)

Prerequisite: MUS 133. A continuation of MUS 133. The student will learn and apply intermediate jazz theoretical principles with regard to arranging for a limited number of instruments.

MUS 135   Jazz Theory III   3(3-0)

Prerequisite: MUS 134. A continuation of MUS 134, this course is designed to prepare the student for jazz arranging. Techniques in rhythmic and melodic development will be covered as well as writing for the rhythm section, notation and preparing a score.

MUS 137   Blue Grass Banjo   2(1-1)

Introduction to Blue Grass style on banjo.

MUS 138   Class Piano/Major   3(2-1)

Prerequisite: Department approval. The first in a sequence of three 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.

MUS 139   Class Piano/Major   3(2-1)

Prerequisite: MUS 138. The second in a sequence of three limited to transfer music majors to gain keyboard facility, skill in sight reading, and ability to transpose. This course builds on the cumulative material covered in MUS 138. The electronic piano lab is utilized in both individual and group playing.

MUS 140   Class Piano/Major   3(2-1)

Prerequisite: MUS 139. The third in a sequence of three limited to transfer music majors to gain keyboard facility, skill in sight reading and ability to transpose. This course builds on the cumulative material covered in MUS 139. The electronic piano lab is utilized in both individual and group playing.

MUS 144   Keyboard Beginner I   2(1-1)

Prerequisite: None. The first in a sequence of two classes taught in an electronic piano lab. For non-majors.

MUS 145   Keyboard Beginner II   2(1-1)

Prerequisite: MUS 144. The second in a sequence of two classes taught in an electronic piano lab. This course builds on the cumulative material covered in MUS 144. For non-majors.

MUS 168   Introduction to Musicianship I   3(2-1)

The first in a sequence of three 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.

MUS 169   Introduction to Musicianship II   3(2-1)

Prerequisite: MUS 168. The second in a sequence of three 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. This course builds on the cumulative material covered in MUS 168.

MUS 170   Introduction to Musicianship III   3(2-1)

Prerequisite: MUS 169. The third in a sequence of three 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. This course builds on the cumulative material covered in MUS 169.

MUS 171   Theory Review   2(1-1)

Prerequisite: MUS 175. A general review of first-year Music Theory. Analysis, group and individual singing and ear training material will be emphasized.

MUS 173   Basic Musicianship   5(3-3)

Prerequisite: Department approval. The first in a sequence of three 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.

MUS 174   Basic Musicianship   5(3-3)

Prerequisite: MUS 173. The second in a sequence of three 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. This course builds on the cumulative material covered in MUS 173.

MUS 175   Basic Musicianship   5(3-3)

Prerequisite: MUS 174. The third in a sequence of three 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. This course builds on the cumulative material covered in MUS 174.

MUS 176   Advanced Musicianship   5(3-3)
Prerequisite: MUS 175. The first in a sequence of three 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.

MUS 177   Advanced Musicianship   5(3-3)
Prerequisite: MUS 176. The second in a sequence of three 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. This course builds on the cumulative material covered in MUS 176.

MUS 178   Advanced Musicianship   5(3-3)
Prerequisite: MUS 177. The third in a sequence of three 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. This course builds on the cumulative material covered in MUS 177.

MUS 179   Class Voice/Majors   2(1-1)
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 from the United States, Great Britain and Italy.

MUS 180   Class Voice/Majors   2(1-1)
Prerequisite: MUS 179. 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.

MUS 181   Class Voice/Majors   2(1-1)
Prerequisite: MUS 180. 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.

MUS 182   Class Voice   2(1-1)
The first in a sequence of classes for group and individual work on classical literature and study of vocal techniques such as breathing, tone production, diction, phrasing and style. Some pop music included.

MUS 183   Class Voice   2(1-1)
Prerequisite: MUS 182. The second in a sequence of classes for group and individual work on classical literature and study of vocal techniques such as breathing, tone production, diction, phrasing and style. Some pop music included. This course builds on the cumulative material covered in MUS 182.

MUS 185   Music Reading I   3(2-1)
The first in a sequence of two courses for students with no previous experience in ear training. Covers solfege, musical thinking, including rote and mnemonic procedures, and introduction to the principle of sight-reading and the fundamentals of melodic, harmonic and rhythmic dictation.

MUS 186   Music Reading II   3(2-1)
Prerequisite: MUS 185. The second in a sequence of two courses for students with no previous experience in ear training. Covers solfege, musical thinking, including rote and mnemonic procedures, and introduction to the principle of sight-reading and the fundamentals of melodic, harmonic and rhythmic dictation. This course builds on the cumulative material covered in MUS 185.

MUS 188   Guitar I   2(1-1)
The first in a sequence of two courses 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 are introduced. Provide your own instrument.

MUS 189   Guitar II   2(1-1)
Prerequisite: MUS 188. The second in a sequence of two courses 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 are introduced. This course builds on the cumulative material covered in MUS 188. Provide your own instrument.

MUS 192   Performance Repertoire   2(1-1)
Prerequisite: Private lessons as a major. A specific study and application of performance practices for second year music majors.

MUS 199   Music Appreciation   2(2-0)
Gives a general knowledge of musical structure, composers, compositions, terms and the relationships of music to other arts. For non-music majors.

MUS 200   Basic Music/Elementary Teachers   4(4-0)
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.

MUS 201   Elementary Music Methods   3(3-0)
Prerequisite: MUS 200. As a sequel to a basic music fundamentals course, this course will provide elementary teachers with a wide range of successful methods for teaching the elements of music, guided listening and extra-musical concepts to music instruction.

MUS 205   Private Voice/Majors   3(0-5)
Prerequisite: Audition. Private lesson, one hour per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 206   Private Voice/Majors   2(0-3)
Prerequisite: Audition. Private lesson, 40 minutes per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 207   Private Instrument/Majors   3(0-5)
Prerequisite: Audition. Private lesson, one hour per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 208   Private Instrument/Majors   2(0-3)
Prerequisite: Audition. Private lesson, 40 minutes per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 209   Private Keyboard/Majors   3(0-5)
Prerequisite: Audition. Private lesson, one hour per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 210   Private Keyboard/Majors   2(0-3)
Prerequisite: Audition. Private lesson, 40 minutes per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 211   Private Guitar/Majors   3(0-5)
Prerequisite: Audition. Private lesson, one hour per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 212   Private Guitar/Majors   2(0-3)
Prerequisite: Audition. Private lesson, 40 minutes per week, for music students. Enrollment by audition only. Auditions held the first Friday of fall and winter terms, or as requested during fall and spring term juries.

MUS 213   Private Voice/Non-Majors   3(0-5)
Prerequisite: Department Approval. Private non-major voice lesson, one hour per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 214   Private Voice/Non-Majors   2(0-3)
Prerequisite: Department Approval. Private non-major voice lesson, 40 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 215   Private Voice/Non-Majors   1(0-1)
Prerequisite: Department Approval. Private non-major voice lesson, 30 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 216   Private Instrument/Non-Majors   3(0-5)
Prerequisite: Department Approval. Private non-major instrumental lesson, one hour per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 217   Private Instrument/Non-Majors   2(0-3)
Prerequisite: Department Approval. Private non-major instrumental lesson, 40 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 218   Private Instrument/Non-Majors   1(0-1)
Prerequisite: Department Approval. Private non-major instrumental lesson, 30 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 219   Private Keyboard/Non-Majors   3(0-5)
Prerequisite: Department Approval. Private non-major piano or organ lesson, one hour per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 220   Private Keyboard/Non-Majors   2(0-3)
Prerequisite: Department Approval. Private non-major piano or organ lesson, 40 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 221   Private Keyboard/Non-Majors   1(0-1)
Prerequisite: Department Approval. Private non-major piano or organ lesson, 30 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 222   Private Guitar/Non-Majors   3(0-5)
Prerequisite: Department Approval. Private non-major guitar lesson, 1 hour per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 223   Private Guitar/Non-Majors   2(0-3)
Prerequisite: Department Approval. Private non-major guitar lesson, 40 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 224   Private Guitar/Non-Majors   1(0-1)
Prerequisite: Department Approval. Private non-major guitar lesson, 30 minutes per week, for music, dance, or theatre majors or dual enrolled and special admission high school students.

MUS 227   Independent Study   1(1-1)
Prerequisite: Department approval. Under instructor supervision, the student will work on specific projects approved by the program director. Student will meet with approved instructor 2.75 hours during the term.

MUS 228   Independent Study   2(1-2)
Prerequisite: Department approval. Under instructor supervision, the student will work on specific projects approved by the program director. Student will meet with approved instructor 5.5 hours during the term.

MUS 229   Independent Study   3(1-3)
Prerequisite: Department approval. Under instructor supervision, the student will work on specific projects approved by the program director. Student will meet with approved instructor 8.25 hours during the term.

MUS 232   Music Seminar   1(1-0)
Prerequisite: Department approval. Designed to meet special needs of students and offered on demand. Students are approved in advance by faculty and department.

MUS 233   Music Seminar   2(1-1)
Prerequisite: Department approval. Designed to meet special needs of students and offered on demand. Students are approved in advance by faculty and department.

MUS 234   Music Seminar   3(2-1)
Prerequisite: Department approval. Designed to meet special needs of students and offered on demand. Students are approved in advance by faculty and department.

MUS 235   Harmonica I   2(1-1)
Introductory course demonstrating the sound techniques employed in the mastery of the harmonica.

MUS 236   Harmonica II   2(1-1)
Prerequisite: MUS 235. Introduces blues changes. The student will perform five blues songs and gain the ability to improvise over standard blues changes.

MUS 240   Music History I   3(3-0)
Prerequisite: Department approval. Ancient Greece through Romanesque and Gothic periods, concluding with the Renaissance. Greek theory and "ethos"—age of plainsong, development of polyphony.

MUS 241   Music History II   3(3-0)
Prerequisite: MUS 240. Baroque and classical periods with special attention to fugue, opera, oratorio, sonata and symphony. Characteristic works analyzed.

MUS 242   Music History III   3(3-0)
Prerequisite: MUS 241. The final term in a three-term sequence of the history of music from the earliest times to the present. This term focuses on music from the Classical period into the Twentieth century.

MUS 244   Studio Production—Commercial   3(2-1)
Prerequisite: Department approval. This course is an introduction to modern multi-channel recording techniques. The term is divided into two parts. The first part is conducted on-campus and the second part is observation of recording sessions in an off-campus recording studio. Covers equipment functions, separation techniques, basic tracks and overdubs. Additional studies include: the roles of musicians, producers and engineers in the commercial music recording field.

MUS 245   Jazz History I - Pops to Bird   3(3-0)
This course is an introductory overview of the origins of early jazz, and the subsequent development of the music into big band swing and then into bebop. The student will hear recordings made by the major figures of the music and—from them and the readings and class presentations—become acquainted with the development of the first half of the history of jazz in this century.

MUS 246   Jazz History II - Bop 'N Out   3(3-0)
An introduction to the development of jazz styles since the beginnings of bebop. Starting with the major figures of bop, we will trace the development of hard bop, cool jazz of the Fifties, the avant-garde or New Thing players of the Sixties, jazz rock fusion of the late Sixties and early Seventies, and the subsequent development of elements of each of the above in the contemporary music scene.

MUS 248   Rock History I—Blues to the British Invasion   3(3-0)
Provides an overview to the elements of rock'n'roll and its origins. The student will be introduced to the major figures of rhythm and blues/early rock and roll via their music, and will explore the elements that they have in common, as well as the ones that are individualistic. The student will be shown how many of these are still elements of popular music via their assimilation by the general public.

MUS 249   Rock History II—From 1963 to Present   3(3-0)
An introduction and overview to the changes in pop music that have occurred since the early Sixties. Developments in individual and popular styles will be covered via examination of a variety of recordings from the early Sixties to now. The majority of performers covered are those in the Rolling Stone Illustrated History, supplemented by those of the instructor's choosing.

MUS 251   Blues History   3(3-0)
An introductory overview of the African-American form known as the blues. Using recordings of the musicians as the primary source, supplemented with reading, the student will become familiar with the stylistic variations of both regional styles and individual performers. Also covered will be the variety of instrumentations used, from jug bands to swing bands to solo performers. Will show how the music changed as the performers dealt with factors of urbanization, electricity, social/cultural elements and more.

MUS 253   Business of Music   4(4-0)
An introduction to the business aspects of the music industry. Areas covered include copyrights, contracts, trademarks, publishing, recording and record company operations, personal managers, booking agents, concert promotion and unions.

MUS 254   Band Management   2(2-0)
Prerequisite: MUS 253 or experience. 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.

MUS 255   Class Voice—Commercial Music   3(2-1)
The beginning class in a series of three classes. Class and individual work on pop music and study of important vocal techniques in pop, jazz, and rock music. Recommended as a prerequisite to private voice lessons.

MUS 256   Class Voice—Commercial Music   3(2-1)
Prerequisite: MUS 255. The intermediate class in a series of three classes. Class and individual work on pop music and study of important vocal techniques in pop, jazz and rock music. Recommended as a prerequisite to private voice lessons.

MUS 257   Class Voice—Commercial Music   3(2-1)
Prerequisite: MUS 256. The advanced, and last class in a series of three classes. Class and individual work on pop music and study of important vocal techniques in pop, jazz and rock music. Students required to give public performance. Recommended as a prerequisite to private voice lessons.

MUS 269   Recording Band   2(1-2)
Prerequisite: Audition. The term is divided into two parts. The first half is conducted in an on-campus rehearsal facility. Under instructor supervision, students select, arrange and rehearse the musical compositions to be recorded. The second half of the term is spent in an off-campus recording studio, recording and mixing the same selections.

MUS 270   Rock Guitar I   2(1-1)
Classroom guitar for the beginning student. Learn to take solos from records and perform rock guitar ensemble music in the classroom. Student provides own instrument.

MUS 271   Rock Guitar II   2(1-1)
Prerequisite: MUS 270. Advanced classroom guitar for the intermediate or advanced rock guitarist. This course builds on the cumulative material covered in MUS 270. Learn to take solos from records and perform rock guitar ensemble music in the classroom. Student provides own instrument.

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MUS 276   Lyric Writing   3(3-0)

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.

MUS 278   Private Songwriting   2(0-3)

Prerequisite: MUS 168 or MUS 173 and departmental approval. Private coaching for music majors, 40 minutes per week, in writing and copyrighting musical composition, giving attention and suggestion in harmony, chord substitution and formal design.

MUS 279   Private Songwriting   3(0-5)

Prerequisite: MUS 168 or MUS 173 and departmental approval. Private coaching for music majors, one hour per week, in writing and copyrighting musical compositions, giving attention and suggestion in harmony, chord substitution and formal design.

MUS 280   Rock Percussion   2(1-1)

The first in a sequence of two, provides progressive work in percussion techniques with emphasis on rock rhythms and concepts.

MUS 281   Advanced Rock Percussion   2(1-1)

Prerequisite: Advanced skills. The second in a sequence of two, provides progressive work in percussion techniques with emphasis on rock rhythms and concepts. This course builds on the cumulative material covered in MUS 280.

MUS 283   Private Voice—Commercial Music   2(0-3)

Prerequisite: Audition Approval. Private voice lessons for music-majors, particularly relating to commercial music. Work on specific music projects, to be assigned by instructor. Weekly lessons of 40 minutes.

MUS 284   Private Voice—Commercial Music   3(0-5)

Prerequisite: Audition Approval. Private voice lessons for music-majors, particularly relating to commercial music. Work on specific music projects, to be assigned by instructor. Weekly lessons of one hour.

MUS 286   Private Instrument—Commercial Music   2(0-3)

Prerequisite: Audition Approval. Private instrumental instruction for music majors emphasizing techniques and style specifically related to commercial music. Weekly lessons of 40 minutes.

MUS 287   Private Instrument—Commercial Music   3(0-5)

Prerequisite: Audition Approval. Private instrumental instruction for music majors emphasizing techniques and style specifically related to commercial music. Weekly lessons of one hour.

MUS 289   Private Keyboard—Commercial Music   2(0-3)

Prerequisite: Audition Approval. Private keyboard instruction for music majors emphasizing techniques and style specifically related to commercial music. Weekly lessons of 40 minutes.

MUS 290   Private Keyboard—Commercial Music   3(0-5)

Prerequisite: Audition Approval. Private keyboard instruction for music majors emphasizing techniques and style specifically related to commercial music. Weekly lessons of one hour.

MUS 297   Synthesizers and Computer Music I   2(1-2)

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 and sound analysis. Students will receive practical experience in the computer laboratory with computer-assisted analysis and instruction on the DEC VAX 11/780, IBM personal computers and a digital synthesizer.

MUS 298   Synthesizers and Computer Music II   2(1-2)

Prerequisite: MUS 297 or instructor approval. An extension of MUS 297, with emphasis on advanced synthesis technique, performance and composition.

Theatre (THR)
Performing Arts
Division of TeleCommunication and the Arts

THR 105   Introduction to Theatre   3(3-0)

Elements in theatre: audience, cast, director, designers, technicians and historical development. Students will discuss and participate in production critiques and evaluate performances.

THR 115   Theatre Performance Workshop   3(3-1)

Prerequisite: Interview, department approval and two letters of reference from high school or non-LCC instructors. The high school theatre workshop is a program for gifted high school students. Students work on basic acting skills; develop physical and vocal expressiveness; analyze dramatic literature; and perform in a final recital.

THR 118   Orientation to Theatre Performance   1(1-0)

Prerequisite: Interview and department approval. A survey of the basic techniques used in acting including use of voice and body, focus, relaxation and energy.

THR 131   Studio Theatre Performance   2(1-2)

Prerequisite: Department approval. 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.

THR 151   Readers Theatre   2(1-2)

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.

THR 152   Stage Voice I   2(2-1)

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.

THR 153   Stage Voice II   2(2-1)

Prerequisite: THR 152. A continuation of THR 152 with emphasis on more sophisticated style of voice for the stage, involving individual production requirements.

THR 155   Pantomime   3(2-2)

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.

THR 175   Theatre History   3(3-0)

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.

THR 189   Audition Workshop   2(2-0)

Prerequisite: Department approval. An intense workshop in which participants prepare and polish audition materials suited for a professional audition or audition for advance training.

THR 205   Reading for the Theatre   2(1-2)

This course is designed to stimulate reading interest for the theatre student. It will provide students with the opportunity to read a variety of literature: prose, poetry, novel, short story and plays. Students will share their perspectives and insights with one another in a relaxed seminar class atmosphere.

THR 211   Production Practicum I   1(1-2)

Prerequisite: Department approval. 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, and understanding of the organization of backstage production. Involves two hours of lab time per week.

THR 212   Production Practicum I   2(1-4)

Prerequisite: Department approval. Course involves four hours of lab time per week, giving the student basic fundamentals involved in tool usage and safety, stage lighting, lighting plot interpretation and understanding of the organization of backstage production.

THR 213   Production Practicum I   3(1-6)

Prerequisite: Department approval. Course involves six hours of lab time per week, giving the student a greater opportunity to refine the basic fundamentals involved in tool usage and safety, stage lighting, lighting plot interpretation and understanding of the organization of backstage production.

THR 215   Design Practicum I   3(2-1)

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 three-dimensionality, spatial relationships and development of a design concept also covered.

THR 216   Design Practicum II   3(2-1)
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.

THR 217   Design Practicum III   3(2-1)
Prerequisite: THR 216 or department approval. Advanced study in the design process. A continuation of training begun in Design Practicum I and II.

THR 218   Scene Painting   3(1-2)
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.

THR 219   Advanced Scene Painting   3(1-2)
Prerequisite: THR 218. Advanced course designed to study in-depth techniques for scene painting.

THR 223   Production Practicum II   3(1-6)
Prerequisite: THR 212 or THR 213. Involves six hours of lab time per week giving the student experience in order to refine intermediate and learn more advanced techniques of stage craft for the performing arts. Student continues training in tool usage and safety, stage lighting and lighting plot interpretation and gains a more detailed understanding of backstage production. Based on student's choice to emphasize their studies toward lighting design or technical direction, student will study floorplan, working drawing interpretation and fundamentals of color.

THR 224   Production Practicum III   3(1-6)
Prerequisite: THR 223 or department approval. Involves six hours of lab time per week. Student will receive practical production experience based on student's choice to emphasize their studies on lighting design or technical direction. THR

THR 225   Stage Management   3(3-0)
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.

THR 226   Advanced Stage Management   3(3-0)
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.

THR 235   Theatre Special Projects   2(1-3)
Prerequisite: Instructor approval. Student will be given the opportunity to write, direct, or produce productions for College functions. Limited to individuals who have been selected as cast members in a scheduled LCC performance. Two credit hours awarded for scope of work under supervision of instructor.

THR 236   Theatre Special Projects   4(2-4)
Prerequisite: Instructor approval. Student will be given the opportunity to write, direct, perform or produce productions for College functions. Limited to individuals who have been selected as cast members in a scheduled LCC performance. Four credit hours awarded for scope of work under supervision of instructor.

THR 237   Theatre Special Projects   1(0-2)
Prerequisite: Instructor approval. Student will be given the opportunity to write, direct, perform or produce productions for College functions. Limited to individuals who have been selected as cast members in a scheduled LCC performance. One credit hour awarded for scope of work under supervision of instructor.

THR 246   Introduction to TV/Film Acting   3(2-1)
Prerequisite: THR 250. 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 an individual evaluation.

THR 247   Acting for TV Commercials   3(2-1)
Designed to provide the student with an introduction to the concept of commercials, the audition, the cold reading and the taping session.

THR 248   Advanced TV/Film Acting   3(2-1)
Prerequisite: THR 246. Advanced work on basic skills in front of the camera.

THR 249   Improvisation   3(2-2)
Prerequisite: THR 250. Through the use of masks and developmental exercises, this class will train the student in long-term, in-depth character development through improvisational technique.

THR 250   Introduction to Acting   3(2-2)
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.

THR 251   Acting I   3(2-4)
Prerequisite: THR 250 and department approval. 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 are covered.

THR 252   Acting II   3(2-2)
Prerequisite: THR 251. A continuation of the fundamental skills of acting. Students review techniques presented and add more complicated skills as abilities increase.

THR 253   Acting III - Scene Study   3(2-2)
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.

THR 254   Acting III — Shakespeare   3(2-2)
Prerequisite: THR 252. Course instruction includes reading and discussing the plays of William Shakespeare, focusing on the attitude and style of the Elizabethan Theatre. Students will participate by presenting short scenes using dialects with developed characters.

THR 255   Stage Makeup   3(2-2)
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.

THR 258   Advanced Improvisation   1(0-2)
Prerequisite: THR 249. Advanced Improvisation is an extension of Beginning Improvisation. Students will develop performance materials and present it by the end of the term.

THR 261   Movement for the Actor I   2(1-2)
Course providing a basic understanding of the use of movement in performance. Students learn relaxation techniques and begin to explore skills for allowing an audience to share the actor's emotional and intellectual responses as expressed through movement.

THR 262   Movement for the Actor II   2(1-2)
Prerequisite: THR 261. An advanced course emphasizing the body as a medium of expression, encouraging students to devise their own techniques in order to share their unique personal interpretations.

THR 263   Scene Study from Contemporary Plays   3(2-2)
Prerequisite: THR 250. This course is designed for non-majors and focuses on an analysis and presentation of scenes from the works of contemporary playwrights. The students will analyze a dramatic and a contemporary comedy script and present a scene each.

THR 264   Oral Interpretation   3(2-2)
Prerequisite: THR 250. This course is designed for non-majors and focuses on the dramatic interpretation of literature. Students will interpret poetry, short stories and novels as well as develop skills in choral speaking and present a short readers theatre presentation.

THR 265   Performing for a Young Audience   3(2-2)
Prerequisite: THR 250. This course is designed for non-majors and focuses on children's theatre. Students will identify the concepts, elements and style of children's theatre and develop skills in presenting them in performance.

THR 267   Acting Comedy Styles   3(2-2)
Prerequisite: THR 250. This course is designed for non-majors and the student will study the philosophical and psychological theories on comedy; analyze and physicalize five of the six different comic styles in front of an invited audience.

THR 268   The Actor and the Playwright   3(2-2)
Prerequisite: THR 250. This course is designed for non-majors and focuses on a different contemporary playwright each term. Students will read from the playwright's works, present scenes from his/her works, and analyze the contribution made by the given playwright to the theatre.

THR 269   Stage Combat   3(2-2)
Prerequisite: Department approval. Stage combat is an elective class for Theatre majors only. Students will study the use of broad sword, foil, sword and buckler, and hand-to-hand combat in the context of a theatrical performance.

THR 270   Studio Movement I   1(1-.5)

Prerequisite: Department approval. A course which helps the student develop his/her movement skills including strength, flexibility and endurance. Theatre majors are required to take this course as a part of their studio performance classes. Student progress will be analyzed as part of the final evaluation of the studio production. Studio Movement I will focus on the basics of movement dynamics.

THR 271   Studio Movement II   1(1-.5)

Prerequisite: Department approval. A sequence of courses which helps the student develop his/her movement skills including strength, flexibility and endurance. Theatre majors are required to take this course in conjunction with their studio performance classes. Student progress will be analyzed as part of the final evaluation of the studio production. Studio Movement II will continue to focus on the basics of movement dynamics.

THR 272   Studio Movement III   1(1-.5)

Prerequisite: Department approval. A sequence of courses which helps the student develop his/her movement skills including strength, flexibility and endurance. Theatre majors are required to take this course in conjunction with their studio performance classes. Student progress will be analyzed as part of the final evaluation of the studio production. Studio Movement III will focus on period movement.

THR 275   Studio Voice I   1(1-.5)

Prerequisite: Instructor approval. A course which helps the student develop his/her vocal skills including projection, vocal flexibility and endurance. Theatre majors are required to take this course as a part of their studio performance classes. Student progress will be analyzed as part of the final evaluation of the studio production Studio. Voice I will focus on the basics of vocal dynamics.

THR 276   Studio Voice II   1(1-.5)

Prerequisite: Department approval. Studio Voice is a sequence of courses which helps the student develop his/her vocal skills including projection, vocal flexibility and endurance. Theatre majors are required to take this course in conjunction with their studio performance classes. Student progress will be assessed as part of the final evaluation of the studio production. Studio Voice II will focus on the basics of verse speaking and phonetics.

THR 277   Studio Voice III   1(1-.5)

Prerequisite: Department approval. Studio Voice is a sequence of courses which helps the student develop his/her vocal skills including projection, vocal flexibility and endurance. Theatre majors are required to take this course in conjunction with their studio performance classes. Student progress will be assessed as part of the final evaluation of the studio production. Studio Voice III will focus on the basics of dialects and expanded understanding of phonetics.

THR 281   Directed Independent Study   6(3-6)

Prerequisite: Instructor approval. Course provided for advanced students working on special projects outside the scope of standard classroom instruction. Student will meet with approved instructor 16.5 hours during the term.

THR 282   Directed Independent Study   4(2-4)

Prerequisite: Instructor approval. Course provided for advanced students working on special projects outside the scope of standard classroom instruction. Student will meet with approved instructor 11 hours during the term.

THR 283   Directed Independent Study   2(1-2)

Prerequisite: Instructor approval. Course provided for advanced students working on special projects outside the scope of standard classroom instruction. Student will meet with approved instructor 5.5 hours during the term.

THR 284   Directed Independent Study   3(2-1)

Prerequisite: Instructor approval. Course provided for advanced students working on special projects outside the scope of standard classroom instruction. Student will meet with approved instructor 8.25 hours during the term.

THR 285   Introduction to Clowning   3(2-2)

Introductory course in the art of clowning. Basic clown types, makeup, juggling, "balloonology" and beginning magic.

THR 286   Advanced Clowning 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.

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.

THR 320   Advanced Acting I   3(2-2)

Prerequisite: Department approval. A course that is part of a three-term sequence in the advanced acting curriculum. Students will intensify their work in realistic style through use of sense memory, emotional memory, a more complex scoring system and the performance of two scenes from realistic scripts.

THR 321   Advanced Acting II   3(2-2)

Prerequisite: Department approval. A course that is a part of a three term sequence of courses for students who have been accepted into the advanced acting curriculum. Students will work on specific acting styles from different historical periods. The major focus of the term will be classical Greek, Elizabethan and Commedia del'Arte.

THR 322   Advanced Acting III   3(2-2)

Prerequisite: Department approval. The last in a sequence of courses in the advanced acting curriculum. Students will begin to develop characters through observation of people within their community and develop those observations into dramatically interesting characters through the use of improvisation.

THR 340   Dramatic Form and Function I   3(3-0)

Prerequisite: Department approval. A course that is part of a three-term sequence in the advanced acting curriculum. It is a survey of history of theatrical forms: an examination of the forms of tragedy, comedy and tragicomedy; and an examination of writing of a playwright of the students' own choosing.

THR 341   Dramatic Form and Function II   3(3-0)

Prerequisite: Department approval. A course that is part of a three-term sequence in the advanced acting curriculum. The class will study a particular topic through different theatrical forms, plays and historical periods. The class culminates in each student's selection of a topic and completion of research into the theatrical response to that topic.

THR 342   Dramatic Form and Function III   3(3-0)

Prerequisite: Department approval. The last in a sequence of courses for students in the advanced acting curriculum. This course will analyze one play minutely in terms of structure, artistic merit and social relevance; and develop a new script based on that play.

THR 360   Creating Theatre I   4(2-6)

Prerequisite: Department approval. A course that is part of a three-term sequence in the advanced acting curriculum. The class will research local history and develop a theatre piece based on information discovered through letters, documents and oral history. The production will tour to local schools, clubs and service organizations.

THR 361   Creating Theatre II   4(2-6)

Prerequisite: Department approval. Class will complete work on previous term's production and evaluate it in production. The production will tour to local schools, clubs and service organizations. The class will develop a short theatre piece of classical scenes, songs and poetry loosely related to a central theme.

THR 362   Creating Theatre III   4(2-6)

Prerequisite: Department approval. The class will write a script based on observations and interviews with people in the community and based on a classical script.

Theatre Seminars and Workshops (THW)
Performing Arts
Division of TeleCommunication and the Arts

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.

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Illinois University

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ZUSSMAN, Mark R.
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of Michigan

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LANSING
COMMUNITY
COLLEGE

LANSING
COMMUNITY
COLLEGE

Lansing Community College Service Area

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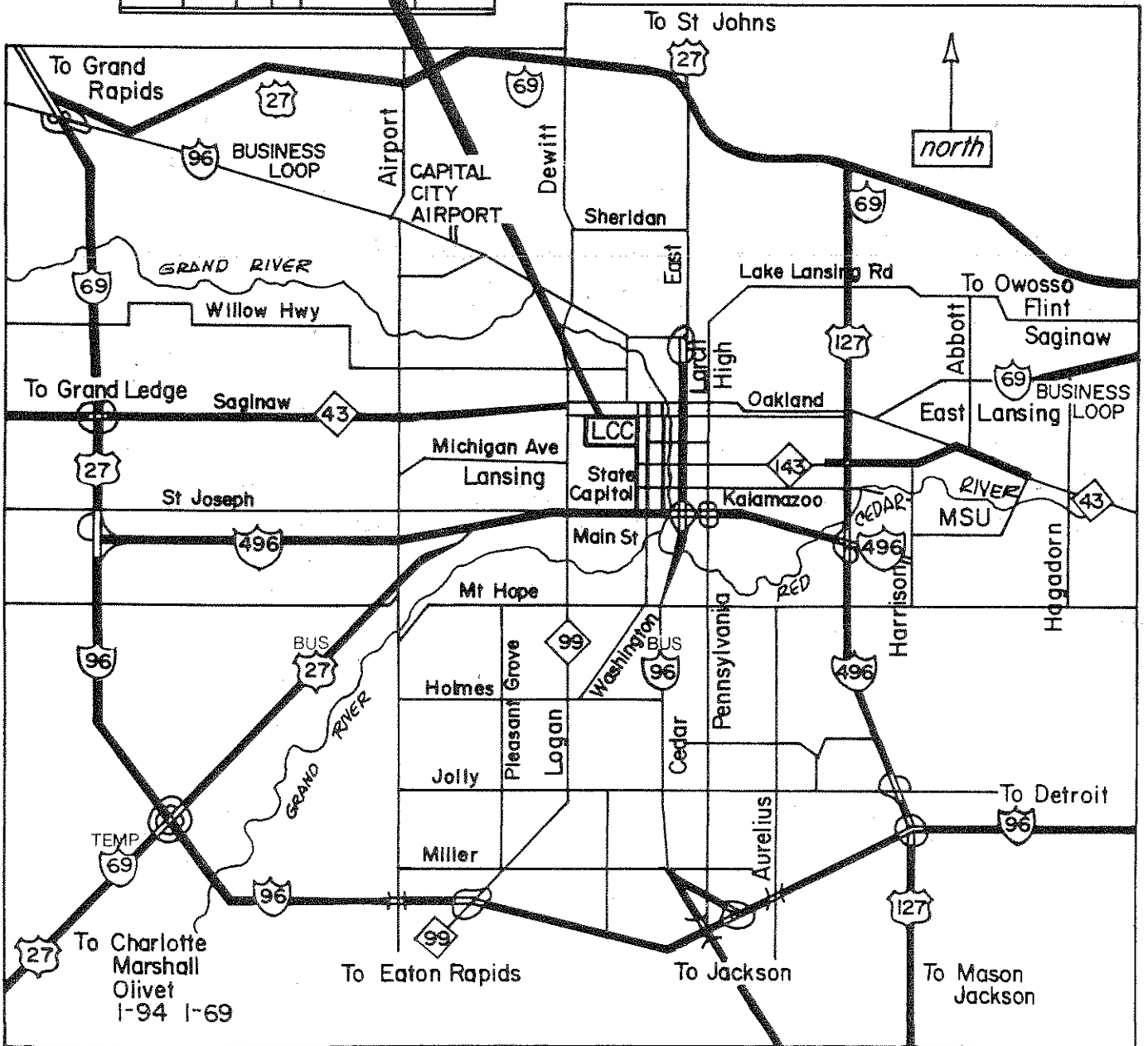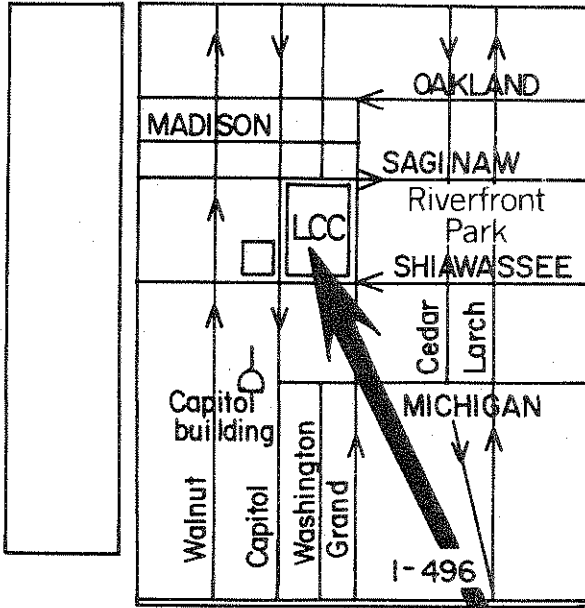MASON
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Lansing Community College Resident District

Lansing Community College

400-600 N. Washington Square • Lansing, MI

LANSING COMMUNITY COLLEGE

OAKLAND

MADISON

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LANSING COMMUNITY COLLEGE

LANSING COMMUNITY COLLEGE
CAMPUS MAP

BUILDING INFORMATION

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1C. Office Unit C (OUC)
1F. Office Unit F (OUF)
1.   Old Central (OC)
2.   Photography Center (PC)
3.   Administration (ADM)
4.   North House (NH)
5.   Herrmann Conference Center Complex
   a. Herrmann Conference Center
   b. Rogers-Carrier House
   c. LCC Board Room
6.   Dart Auditorium (DRT)

7.   Turner House
8.   Student Personnel Services (SPS)
9.   Arts & Sciences (A&S)
10. Parking Ramp
11. Gannon Health Careers/Physical Education (GPE)
12. Gannon Vocational-Technical (GVT)
13. Voc-Tech Automotive Center
14. Academic & Office Facility (AOF)
15. Parking Lot
16. Parking Lot
⊛   Emergency Phone

LANSING COMMUNITY COLLEGE SISTER COLLEGES AND AFFILIATE COLLEGES

UNITED STATES OF AMERICA
Clark College
   240 James Browley Drive, S.W.
   Atlanta, GA 30324
Morehouse College
   830 Westview Drive
   Atlanta, GA 30324
Morris Brown College
   643 Martin Luther King Drive, S.W.
   Atlanta, GA 30314
Spelman College
   350 Spelman Lane
   Atlanta, GA 30314

MEXICO
Universidad Autonoma de Guadalajara
   Guadalajara

REPUBLIC OF CHINA (TAIWAN)
Ming-Hsin Engineering College
   Hsin Feng, Hsinchu, Taiwan
Ming Chuan College
   Taipei
National Taichung Institute of Commerce
   Taichung
National Taipei Institute of Technology
   Taipei
Shih Chien College
   Taipei

BRAZIL
Universidade Federal de Minas Gerais
Belo Horizonte, Minas Gerais

FRANCE
France Universite de Metz
  Metz

JAPAN
Shiga Prefectural Junior College
  Shiga

THE PEOPLE'S REPUBLIC OF CHINA
Chengdu University/Chengdu College
  Sichuan Province
Shaanxi Business Management Institute
  Shaanxi Province
Jianghan University
  Wuhan Province
Luoyang University
  Henan Province

REPUBLIC OF KOREA
Kongju Teachers' College
  Kongju
Kyung-Nam Technical Junior College
  Pusan
Myongji Junior College
  Seoul

DRUG AND ALCOHOL REGULATIONS
(Replaces regulation information on page 20)

DRUG-FREE WORKPLACE REGULATIONS

In recognition of the serious health risks (1) associated with the illegal use of controlled substances (2) and the abuse of alcohol, and in conformance with the Board of Trustees policies 4490 and 7820 as well as the Drug-Free Schools and Communities Act Amendments of 1989 (20 U.S.C. 3171. et. seq.) the following regulations are effective immediately:

1. Students, employees, and guests may not manufacture, distribute, dispense, possess or use alcoholic beverages on College premises.

2. Students, employees, and guests may not unlawfully possess, use or distribute controlled substances and alcohol on College premises or while engaged in College activities such as conferences or field trips.

3. No College student activity funds will be used for the purpose of purchasing alcoholic beverages or controlled substances.

4. Being under the influence of alcohol or any controlled substance while on College premises or engaged in College activities is prohibited.

5. Students, employees, and guests are personally accountable for knowledge of federal, state and local laws relating to alcoholic beverages and controlled substances, the minimum drinking age, transporting open containers of alcoholic beverages, and false representation of age by a minor.

6. As a condition of his or her employment, each employee of the College shall agree to abide by the terms contained within this policy. Violation

of any of these terms by College employees may result in disciplinary action, up to and including termination. The College may require satisfactory participation in a substance or alcohol abuse assistance or rehabilitation program for an employee who violates any of the prohibitions listed above.

7. As a further condition of his or her employment, each employee of the College shall agree to notify the College of any criminal drug statute conviction for a violation occurring on College premises or while engaged in College activities, no later than five (5) days after such a conviction. Upon receiving notice of such conviction, the College shall take appropriate disciplinary action within thirty (30) days thereafter.

8. Violation of this regulation by students may result in disciplinary action up to and including expulsion from the College and referral for prosecution. A lack of legal conviction of relevant laws is not a defense in a charged violation of this regulation (3).

9. Guests on College premises are expected to follow the above requirements. Failure to do so may result in a request to leave College property or College activities.

10. In the spirit of providing a safe, healthy and drug-free environment, the College will:

   a. Continue to offer educational programs that support a drug-free campus and workplace as a normative social value.

   b. Continue to offer opportunities for substance abuse counseling accessible by students and College employees.

   c. Continue to make referrals to appropriate counseling professionals and/or agencies within the community to help students and employees who may benefit from such counseling.

   d. Incorporate in classes throughout the curriculum, where appropriate, references and class-related assignments related to the medical, legal, social and wellness issues inherent in a drug-free campus and workplace.

   e. Distribute copies of this regulation to all new students and employees.

     (1) *Substance abuse is a serious but treatable condition or disease that can lead to short-term or long-term physical and psychological consequences, including but not limited to dependence, damage to the nervous system, heart and respiratory conditions and death.*

     (2) *A "controlled substance" is defined as: 1.) which is not legally obtainable; 2.) which is being used in a manner different from that prescribed; or 3.) which is legally obtainable but has not legally been obtained. (21 U.S.C.821;MCLA, 333.7101, et. seq.)*

     (3) *A "conviction" under this policy is defined as a defendant pleading guilty or no contest and/or a guilty finding by a court of law.*

Effective: March 31, 1991

LANSING COMMUNITY COLLEGE