

L A N S I N G
C O M M U N I T Y
C O L L E G E

Where Futures Begin

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Catalog



LANSING COMMUNITY COLLEGE

ESTABLISHED IN 1957

1993-94 CATALOG

400-600 North Washington Square, P.O. Box 40010, Lansing, Michigan 48901-7210, Telephone: (517) 483-9850

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

Accredited by North Central Association of Colleges and Schools

WELCOME TO LCC

Lansing Community College is committed to excellence in education. Since its beginning in 1957, the College has grown from a small technical college to one of the largest, most comprehensive community colleges in the nation. Classes are offered year-round on the 28-acre campus in the heart of Michigan's capital. Students can choose from 162 degree and certificate programs and more than 2,500 course offerings or complete the first two years of a liberal arts education. In addition to the programs offered on the main campus, the College operates an Aviation Center at Capital City Airport in Lansing and the Truck Driver Training Center near Battle Creek. To make classes more accessible, a number of Learning Centers are located in communities within the College's 30-mile service area. LCC is accredited by the North Central Association of Colleges and Schools, and serves more than 40,000 persons annually. The College recently held its 35th commencement, evidence of LCC's success in providing education as a lifelong process for all.

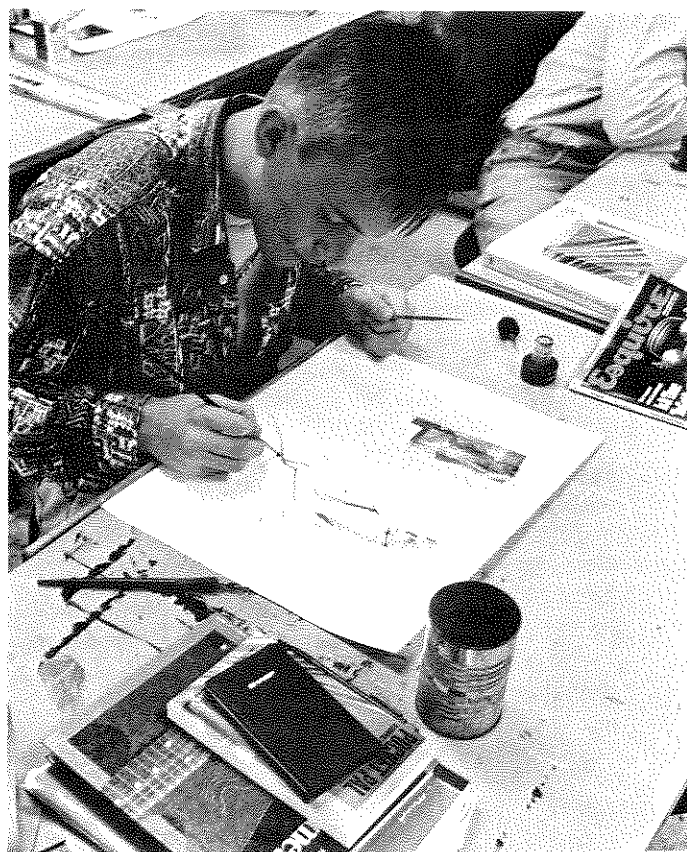
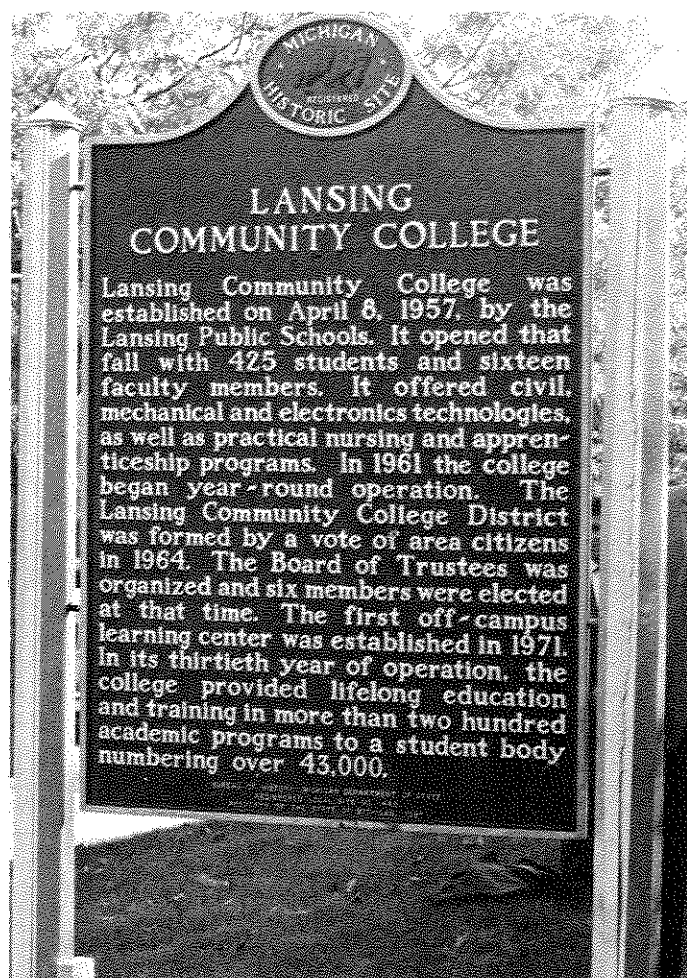
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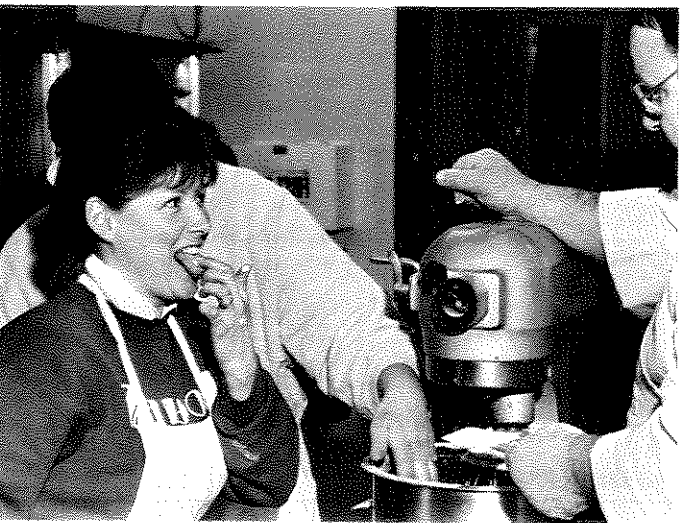
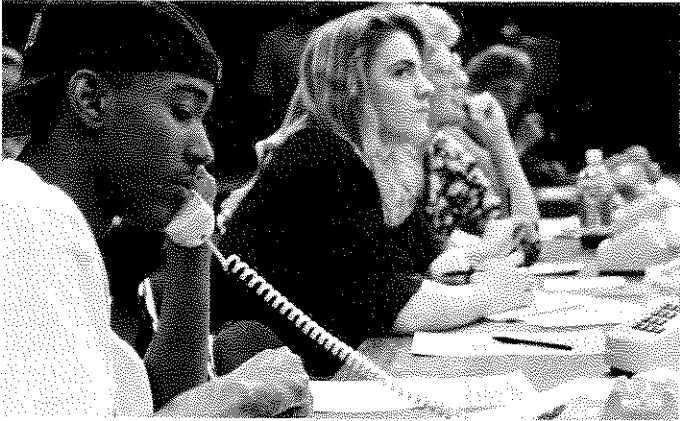
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Please keep this catalog for future reference to the lifelong learning opportunities that are available at Lansing Community College. Education is a lifelong process, and LCC continues to be a resource for its students through the nation and the world.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

This catalog was produced by Publications and Advertising Services, Lansing Community College.

Contributing Photographers: Sandy Davison, Paul Koch, John Rocco and Roger Ward





MISSION STATEMENT

The mission of Lansing Community College is to provide lifelong education based on traditional and contemporary values, and to create a dynamic educational environment that enables individuals to enrich their personal, professional and occupational lives.

Lansing Community College will continue to develop partnerships with the community that foster support and understanding for mutually beneficial endeavors. The College recognizes the diverse community it serves, and believes in nurturing and promoting a climate that supports and respects the value of this diversity.

Lansing Community College is committed to standards of excellence in the programs that it offers through general education, career training and transfer programs, basic skills education, and supportive services to the students, community, business and industry at the local, national and international levels.

STRATEGIC GOALS

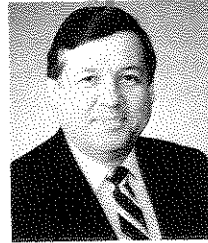
1. Maintain and develop the highest standards of academic and curricular and co-curricular excellence in order to promote recruitment, retention and student success in a diverse society.
2. In recognition and awareness of the value of the College's human resources, continue to provide professional development 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 statewide governance, coordination and planning.
8. Continue to strengthen the College's international and external communications.
9. Enhance the College's resource base in order to maintain the quality of its education, training, support services, and activities.
10. Develop and enhance 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 continuous development, review and evaluation of the College's total learning environment.
13. Increase educational opportunities through the use of learning/extension centers and state-of-the-art telecommunication systems.

Lansing
Community
College

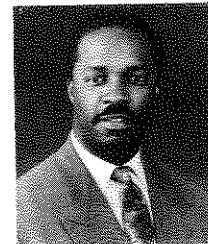
BOARD OF TRUSTEES



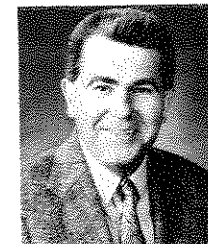
Sharon A. Reid
Chair



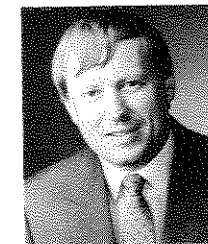
Melvin M. Villarreal, Ph.D.
Vice Chair



Ronald A. Nichols, M.D.
Secretary



Joseph M. Kildea
Treasurer



James E. Byrum
Trustee



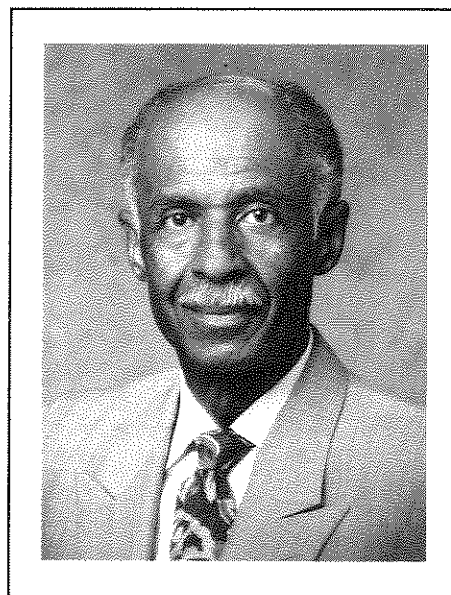
Dorothy D. Jones
Trustee



M. Kate Murphy
Trustee



A MESSAGE FROM THE PRESIDENT



Dear Students:

On behalf of the Board of Trustees and the faculty and staff at LCC, welcome to Lansing Community College.

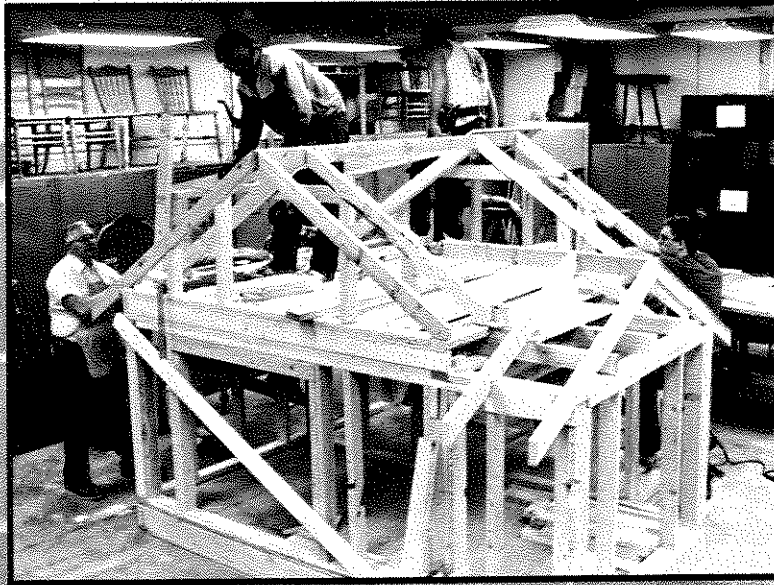
This catalog represents a changed educational framework for Lansing Community College. For the first time, the College will operate on a semester calendar rather than a term calendar. These changes were made to help strengthen our instructional programs. We believe our new academic structure will allow us to provide better service to our students and our community.

Our commitment to you is based on a partnership between the College, our students and the community. You are the central focus of our College and its broad array of programs and services.

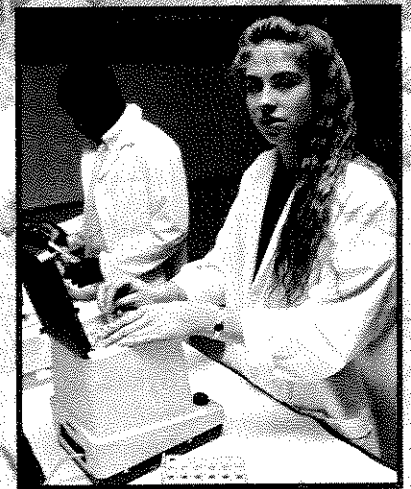
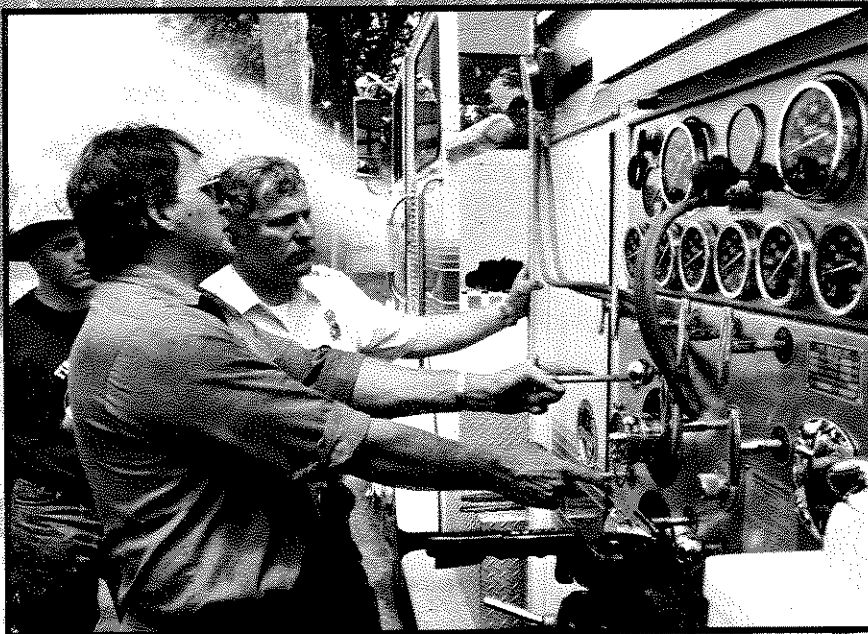
Lansing Community College is truly a comprehensive community college. As you use this catalog to plan your LCC experience, we ask that you do your best to reach your potential. We will do our best to provide a learning environment to make this possible.

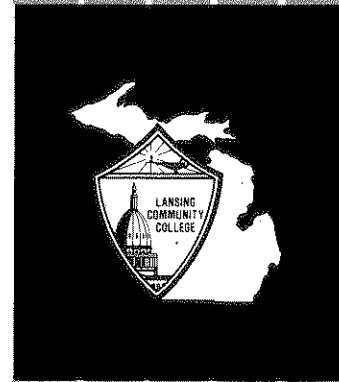
Cordially,

Abel B. Sykes, Jr.
President
Lansing Community College



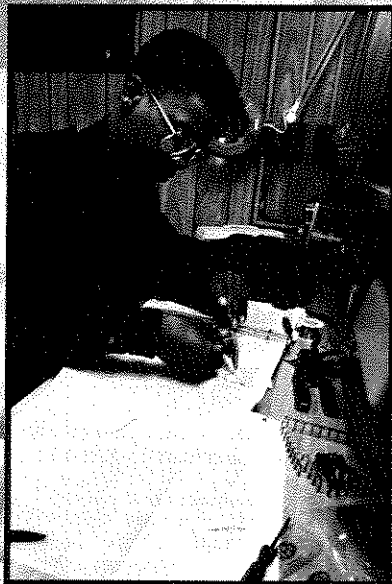
LANSING COMMUNITY COLLEGE





L A N S I N G
C O M M U N I T Y
C O L L E G E

General
INFORMATION



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ACADEMIC CALENDAR

Fall Semester 1993

Classes Begin	August 31
Labor Day	September 6
Thanksgiving	November 25 - 28
Last Day of Classes	December 23

Spring Semester 1994

Classes Begin	January 15
Spring Break	March 7 - 13
Last Day of Classes	May 13
Graduation Day	May 15

Summer Session 1994

Classes Begin	June 13
Independence Day	July 4
Last Day of Classes	August 8

Registration information and dates are published in the Schedule Book for each semester or call the Office of the Registrar.

POLICIES, PROCEDURES AND REGULATIONS

ADMISSIONS INFORMATION

GENERAL ADMISSION CRITERIA

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. 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. In all cases, students should be aware that admission to the College does not guarantee admission to a particular program.

GENERAL ADMISSION PROCEDURES

- A. Procedures for completing the admission application are as follows:
 1. Complete all items requested on 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. The counselor or principal will complete the lower portion of the application and mail it along with high school records to Lansing Community College.
 4. Other applicants may forward the application and fee to 25-Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901-7210.
 5. Lansing Community College provides placement assessment testing and recommendations for students in courses requiring proficiency in reading, writing, mathematics and science.
- B. Some courses require particular basic skills proficiency levels prior to enrollment. Students are encouraged to arrange for testing and follow-up advising prior to registration to avoid delays. 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.
 - Math**—Mathematics Laboratory located in Room 309 (third floor) of the Arts & Sciences Building, phone: (517) 483-1900.
 - Science**—Science Department located in Room 408 (fourth floor) of the Arts & Science Building, phone: (517) 483-1092.Placement testing is also given in English as a second language, vocabulary, and spelling for designated students.

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.

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:

- Health Career Applicants
- International Student Applicants
- Dual Enrollment—Special Admission
- Other Special Circumstance Applicants

All questions and requests for specific information regarding these special circumstance admission procedures should be directed to Lansing Community College, 25-Admissions Office, P.O. Box 40010, Lansing, Michigan, 48901-7210, or call (517) 483-1200.

SPECIAL PROGRAM/SPECIAL CIRCUMSTANCE ADMISSION

Health Careers Technology Programs

Applicants to any Health Career Technology Program at Lansing Community College should contact the Admissions Office for specific information concerning the process and prerequisites. Call (517) 483-1254 or write 25-Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901.

International Applicants

Lansing Community College's international student admission procedures have been developed to create a positive experience for the international student, the service community, and the College community.

Admissions requirements for international students are affected by U.S. Immigration and Naturalization Service (USINS) regulations. In accordance with USINS regulations, any individual who is not a U.S. citizen and who has been admitted to the U.S. on temporary resident status will be classified as an international student at Lansing Community College. Individuals who have refugee, immigrant, or resident alien status are not international students.

The visa classification of each international applicant determines the admission requirements and the attendance regulations applied to the applicant. For details on the requirements for each visa type, the applicant should refer to the International Admissions Application packet. To request the packet contact: 25-Admissions Office, Lansing Community College, P.O. Box 40010, Lansing, MI 48901-7210.

General admission requirements for all types of visas are (1) be at least 18 years old; (2) prove successful completion of studies equivalent to U.S. high (secondary) school; (3) provide proof of competency in the English language; and (4) provide additional documents as required by the USINS visa classification.

Admission to LCC as an international student will be considered after receipt of the application, \$10 application fee, and all required documents. **All admission material must be received by the College no later than eight weeks prior to the first day of on-campus registration for the semester of attendance.** Applicants outside the U.S. are advised to apply as early as possible to allow for mail delays, to obtain visas and exit permits, and to make travel arrangements.

The Admissions Office will provide to admitted applicants information regarding USINS regulations, academic advising, and College policies governing international students. Prior to registering for classes, international students will be asked to participate in placement tests administered to the general college population. If evaluation of these placement tests indicate a need for improvement of English language skills, the student will be required to enroll in appropriate language courses.

Admission 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 staff, international student advisor, faculty, and administrative staff.

The International Student Services Committee has been established in the Division of Student and Academic Support with the following membership:

1. Dean of the Student and Academic Support Division
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 as follows:

1. To serve as a body to review guidelines for admission.
2. To serve as an appeal and review body for admission services to international students.
3. 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 semester of attendance with the College. Lansing Community College does not keep such documents beyond legally required time limits.

Dual Enrollment Program

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.

To be eligible for the Dual Enrollment Program, an applicant must:

1. be working toward high school graduation requirements;
2. have attained **junior or senior high school standing** prior to applying for the program;
3. have written recommendation from his/her high school principal or representative.

The final decision for acceptance rests with Lansing Community College.

Application procedures for Dual Enrollment are as follows:

1. Applicant must complete a college application.
2. Applicant must obtain written approval from his/her high school principal or representative.
3. Applicant must then submit an 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 along with a high school transcript to the Admissions Office at Lansing Community College.

PLEASE NOTE: A recommendation from the high school counselor or representative must be submitted for each semester of attendance. A high school transcript must be submitted for each year of attendance.

Special Admission Program

To be eligible for the Special Admissions Program, an applicant must

1. be working toward high school graduation requirements;
2. have attained freshman or sophomore high school standing prior to applying for the program;
3. have written approval from his/her parent or guardian, high school counselor or representative approvals, and LCC departmental approval.

The final decision for acceptance rests with Lansing Community College.

Applicant procedures for Special Admissions are as follows:

1. Applicant must complete a Special Admissions Supplemental Application.
2. Applicant must obtain written approvals as stated on the Special Admissions Supplemental Application.
3. Applicant then must submit the 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 semester of attendance.

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

Court and Conference Reporting Program

Applicants to the Court and Conference Reporting Program at Lansing Community College must provide proof of high school graduation (or equivalent). For more information about program prerequisites, students should contact the Court and Conference Reporting Program at (517) 483-1611.

Guest Applicants

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

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 (7) 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 semester 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 departmental chairperson and a representative and a counselor appointed by the Dean of Student and Academic Support.

If the applicant is not satisfied with the decision of the Admissions Board of Review, an appeal may be made to the Admissions 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 semester of application.

Members of the Admissions Board of Appeals are Dean of Student and Academic Support, a departmental chairperson, the dean of the division of the applicant's curricular choice, and a representative from 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 Admissions Office regarding the decision(s) of these Boards.

The applicant will be notified in writing of the decision(s) of the Boards.

FINANCIAL AID INFORMATION

The Student Financial Services Program at Lansing Community College assists students who demonstrate need in meeting some of the college costs that cannot be met by personal or family resources. An objective method of need determination approved by the Federal government is used to evaluate the student's and family's financial circumstances. Some scholarships are available 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. 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. Enrollment in a program of study abroad that is approved for credit by Lansing Community College is considered to be enrollment at Lansing Community College for purposes of a student applying for federal student financial assistance.

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 that 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. Students may contact the Financial Aid Office for information.
- 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 years in high school. Students may receive an "honorary" award not based on need or a 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 a Free Application for Federal Student Aid. Students must submit the Federal Pell Grant Student Aid Report, received through the mail, to the 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 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 and 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 must meet the low income financial guidelines.
- Women's Resource Center Grants are available for tuition and child care for displaced homemakers and special populations. Students apply through the Women's Resource Center, Student Personnel Services Building, 2nd Floor.
- Center for Aging Education Tuition Assistance is available to persons 60 years of age or older for up to four (4) credits per semester. Students must meet moderate income guidelines. Students apply through the Center in 207 Old Central Building 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 a Free Application for Federal Student Aid.
- Federal Family Education Loan Program includes the following loans. Specific guidelines pertaining to eligibility and the application process are available in the Financial Aid Office.
 - (1) Stafford Guaranteed Student Loan (GSL) are for students that have needs which cannot be met with other types of financial aid. Students apply following the same procedure outlined for the Perkins loans. In addition, they must 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.
 - (2) Supplemental Loan for students (SLS) are higher interest loans for self-supporting adult students who do not qualify for other types of financial aid or who 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.
 - (3) Parent Loan 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.
- MI-LOAN is a Middle Income Loan provided by the State of Michigan. Criteria used to determine eligibility is similar to that of Stafford or Supplemental Loans. The one major difference is that the MI-Loan is a credit-based loan.
- Short-Term Loans are available on a limited basis through the Student Financial Services Office for tuition and books.

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 a Free Application for Federal Student Aid.
- 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: 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
- Michigan Commission on Indian Affairs
- Private Donor Scholarships
- Veterans' Benefits
- Michigan 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 Admission and Financial Assistance Form must be completed and returned to: 28-Student Financial Services, Lansing Community College, 430 N. Capitol, Box 40010, Lansing, Michigan 48901.
2. A Federal Financial Aid Application must be submitted.

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 Scholarship forms are available through district high schools' counseling offices.

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

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 March prior to the school year for which attendance is planned. Applications will be accepted after March, 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 following: the LCC Application for Admission 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 a student's need based upon available funds. All financial assistance applications are confidential.

Rights and Responsibilities of Students Receiving Financial Assistance

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

Need and Financial Assistance Package

Financial need is determined by subtracting the expected family contribution and other financial resources from the appropriate College budget. The College will attempt to meet the student's need within the limitations of available resources. Also, if any errors are made by the College in determining eligibility for assistance or awarding of assistance, they will 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

Fall and Spring Semester

Financial assistance is offered to students based on enrollment as a full-time student, 12 credit hours or more per semester. If a student enrolls in less than 12 credits, his/her award is prorated to meet their enrollment. For example, if a student enrolls in 9-11 credits, he/she would receive 75 percent of his/her award.

If a student enrolls in 6-8 credits, he/she would receive 50 percent of their award. If a student enrolls in less than six credit hours, they will not be eligible for most federal programs. A student enrolled in 3-11 credits may be eligible for the Michigan Adult Part-time Grant.

Summer Semester

Summer semester is shorter than fall and spring semesters. Students need only be enrolled for six credits to be considered full-time for purposes of financial aid, five credits to be considered three quarter time, and three credits to be considered half-time. Enrollment for less than three credits will make a student ineligible for financial aid. The length of the summer semester also makes a difference in the calculation for the maximum financial aid allowable for that period. Generally, the amount of financial aid will be less for a student enrolled in the summer semester compared to the regular fall and spring semesters.

Courses Not Eligible For Financial Aid Payment

Federal regulations prohibit the payment of courses classified as below the secondary level and audited courses for non-credit. These courses do not count when determining financial aid eligibility and cannot be billed to financial aid.

Budgeting Financial Aid Package

The student is responsible for properly budgeting all financial aid offered for each semester. 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 semester at the Cashier's Office 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 semester at the end of on-campus registration. Final checks are printed at the end of the 50 percent refund period. Students 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 semester from the adjusted amount based on credit enrollment and writing a check for a portion of the remainder.

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 students receiving federal financial aid are returned to accounts in the following order: (a) to outstanding balances on FFEL Program loans; (b) to outstanding balances on Federal Direct Loans; (c) to outstanding balances on Federal Perkins Loans; (d) to Federal Pell Grant Awards; (e) to Federal SEOG awards; (f) to awards under the FWS Program; (g) to other Title IV student assistance; and (h) to the student.

Students attending LCC for the first time who completely withdraw during the first 60 percent of an enrollment period will have some portion of their tuition and fees refunded. 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 non-attendance, 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 follows:

1. Students must maintain a grade point average (GPA) above a 1.99 on a semester and cumulative basis.
2. Students must complete 60 percent or more of the credits attempted on a semester and cumulative basis.

3. Students receiving financial aid at Lansing Community College for the first time and who do not make satisfactory academic progress are required to attend an orientation session in order to remain eligible for their aid.
4. After five semesters of enrollment, students are required to have a cumulative grade point average (GPA) 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 semester but less than five semesters of enrollment, the student may be readmitted and allowed to re-enroll under an educational contract with Project STAY. A student will 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 to a 2.00 or greater and has a cumulative completion ratio of at least 60 percent of all courses attempted.

Students who do not successfully complete the semester of their educational contract with Project STAY will be cancelled from financial assistance.

After four semesters, students with GPAs 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.

Students applying for Federal Family Education Loans must have completed at least one semester of prerequisites or core courses with a 2.0 GPA at 60 percent completion prior to submitting their application for a loan. Students with more than one semester of enrollment must complete the two semesters prior to the beginning of the loan period and the semesters within the loan period with a minimum grade point average (GPA) of 2.00 for each semester. They must also successfully complete at least 60 percent of the courses attempted in each of the two semesters 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 non-attendance.

A student will not be awarded federal financial assistance at Lansing Community College beyond 120 credits. A transfer student will not be awarded Federal financial assistance beyond 120 credits, including transfer credits accepted by LCC. Exceptions are:

1. Students who have attempted 120 credits or have 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. However, all student information is confidential and will not be released over the telephone or to anyone other than the student.

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 Life
5. The Business Manager or his/her designee
6. The Dean of Student and Academic Support Division (or his/her designee)

The functions for 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.

Veterans Information

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.

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 semester. 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 and Academic Support Division.

Lansing Community College, in recognition of the special needs of active-duty service persons in having access to and completing 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.

Satisfactory Progress for Veterans' Benefits Eligibility

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

HOUSING

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

REGISTRATION INFORMATION

REGISTRATION PROCEDURES

Each semester Lansing Community College publishes a Class Schedule Booklet which identifies courses offered for that semester. This booklet includes general information on the dates, times, and location of registration. Students may register for classes according to instructions which are published in the booklet.

Some courses require basic skills proficiency levels. Students are encouraged to arrange for testing and advising prior to registration to avoid delays when registering.

SEMESTER CLASS SCHEDULES

Lansing Community College offers a highly diversified program of evening, Saturday, and Sunday courses on-campus and at off-campus learning centers for those who choose to attend class outside of regular daytime class sessions.

TUITION AND FEES

Residency

I. Eligibility for Paying Resident Tuition

- A student must be an American citizen, refugee, immigrant, 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.

- The following applies to students under 18 years of age:
 - The student's parents or legal guardians have resided within the LCC district for at least six months immediately prior to the first day of the semester.
 - The student is married and has resided within the LCC district at least six months immediately prior to the first day of the semester.
 - The student is unmarried and is recognized as "emancipated" (receives no financial support from parent or legal guardian) and has resided within the LCC district for at least six months immediately prior to the first day of the semester.
 - 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.)
 - 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.
- The following applies to students over 18 years of age:
 - The student has resided within the LCC district at least six months immediately prior to the first day of the semester.
 - 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.
 - 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 the semester of enrollment. 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.

- Property tax receipts
- Rental or lease agreement
- Canceled rent checks (one for each month of residency)
- 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:
 - Deed-Abstract of Title
 - Current Tax Statement

III. Petitioning for a Change in Residency Status

Upon registering for classes, a student shall be notified of his/her residency status.

- If the student feels that his/her residency status is not correct, the student may furnish the required proof of residency and the residency status will be corrected.
- After acceptance into the College as a non-resident, a student who has resided in the College district for six (6) months and can furnish the required proof of residency can have his/her residency status changed.
- If a change of residency status is approved by the published deadline date, the difference between resident and non-resident tuition for the current semester shall be refunded.
- Adjustments in tuition due to a change in residency are not retroactive to previous semesters.

IV. Non-Resident Owners of In-District Property

Non-resident students owning property in the LCC district will receive credit once a year 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 Office of the Registrar with the paid property tax receipt.

Payment of Tuition and Fees

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

Tuition per Credit Hour	
Resident Students	\$41.00*
Non-Resident Students	\$67.00*
Out-of-State Students	\$94.00*
International Students	\$94.00*

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

Fees for All Students*

Application Fee (new students and guest students, non-refundable)	\$10.00
Registration Fee (all students, each semester, non-refundable)	\$15.00
Activities Fee (each semester)	
1-6 credit hours	\$1.50
7-11 credit hours	\$4.50
12 or more credit hours	\$7.50
Check Processing Fee (for check returned to the College as not payable)	\$10.00

Course fees vary and are published in the Class Schedule Booklet each semester.

*TUITION AND FEES ARE SUBJECT TO CHANGE THROUGH THE ACTION OF THE BOARD OF TRUSTEES.

Refund Policy (Applies to Semester Length Classes Only)

Fall, Spring, and Summer Semesters

- Withdrawal during first week of semester — 100% of tuition and fees
- Withdrawal during second week of semester — 50% of tuition only
- Withdrawal after second week of semester — No refund*

* Students attending LCC for the first time who completely withdraw during the first 60 percent of an enrollment period will have a portion of their tuition and fees refunded. Students receiving financial aid will receive refunds only if repayment to financial aid sources is not required.

Refunds are not retroactive to previous semesters. Questions relating to refunds should be addressed to the Office of the Registrar.

STUDENT CREDIT REQUIREMENTS

Student credit requirements beginning fall 1993 are as follows:

Fall and Spring Semesters

full-time enrollment	12 cr.
three-quarters enrollment	9 cr.
one-half enrollment	6 cr.

Summer Semester (8 weeks)

full-time enrollment	6 cr.
three-quarters enrollment	5 cr.
one-half enrollment	3 cr.

CANCELLED CLASSES

The College reserves the right to cancel classes which do not have sufficient enrollment. Students enrolled in classes which are cancelled will have the opportunity to add another class or receive a refund.

DROPS AND ADDS

During the drop/add period specified in the Class Schedule Booklet, a student may make changes in his/her schedule beginning with the first day of walk-in registration. A student may withdraw from a course before the end of the fourth week without academic penalty. Drops will not be processed after the last day of the semester.

Dropping and adding courses involves the following procedures which must be completely carried out by the student so that the student's records in the Office of the Registrar may be accurately maintained:

1. Pick up Drop-Add Form at the Office of the Registrar.
2. Fill out the form completely with information requested.
3. Return form to the Office of the Registrar for proper recording. Do not leave until processing of the form has been completed and a copy has been received.

Departmental signatures and grade at time of drop are required on the drop after the fourth week of the semester.

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. All students have the option of changing from "credit" to "audit" or from "audit" to "credit" through the end of the fourth week of classes. Students electing to change from audit to credit are responsible for having coursework up-to-date at the time the change is made and must have instructor approval after the first week of the semester. In addition, students receiving any type of financial assistance should be aware that exercising this option may have an impact on their financial assistance or on student employment at the College. Any student balance due created by a change in credit or audit status must be paid by the student. Changes in audit or credit status must be requested by the student through the Office of the Registrar.

WITHDRAWAL

I. Student Initiated Withdrawal

- A. If a student finds it necessary to withdraw from the College, he/she should contact the Office of the Registrar immediately and complete a Drop Form.
- B. If the withdrawal takes place within the established refund period for each semester, a student withdrawing will receive a refund.
- C. If a student withdraws prior to the end of the fourth week of the semester, no final grade is issued and the withdrawn class is not recorded on the academic record. A copy of the Student-Initiated Drop Form is maintained in the Office of the Registrar.
- D. If a student withdraws after the end of the fourth week of the semester, 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.

II. Administrative Withdrawal

It may be in the best interest of the student and/or College community that a 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 in accordance with written procedure established by each department and with the co-recommendation of the respective departmental chairperson. An administrative withdrawal may be based on the following: (1) student non-attendance, (2) lack of prerequisites for a particular course, and/or (3) student behavior that interferes with the instructional process.

- A. In the case where a student fails to meet the attendance requirements of the class, the instructor may initiate an administrative withdrawal through the Office of the Registrar.
- 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. At this time, 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.
- 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. 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 Office of the Registrar in writing that the student be administratively withdrawn. The classroom instructor, with the co-recommendation of the appropriate departmental chairperson, may also recommend that a member of the counseling staff meet with the instructor and the student to review the circumstances of the student's behavior and to work out a possible alternative.

In all cases of administrative withdrawal, a student who is withdrawn prior to the end of the fourth week of the semester will not receive a grade and no record of attempting the class will appear on the academic record. A copy of the administrative withdrawal form is maintained in the Office of the Registrar. A student who is withdrawn after the end of the fourth week of the semester will be given a grade at the time of withdrawal.

Any student who is administratively withdrawn may appeal the withdrawal. Lines of appeal for administrative withdrawal are presented in the catalog in the section entitled "Due Process" under the heading entitled "Student Appeals."

III. 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 Office of the Dean of the Student and Academic Support Division if
1. Emergency health services are required, or
2. It appears that there has been a violation of the law.
- B. Call only the Office of the Dean of Student and Academic Support 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. Assistance from the Office of the Dean of Student and Academic Support and/or the counselors is available, if desired.
- D. If there appears to be a violation of the law or a College regulation, the Office of the Dean of Student and Academic Support (or designee) shall contact the counseling staff, and a member of the 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 Office of the Dean of Student and Academic Support when no health-related problem is evident or when it is determined that the department can be of no further service.

- 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 Office of the Dean of Student and Academic Support 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.
- 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.

ACADEMIC INFORMATION

ACADEMIC DEFINITIONS

The following are definitions of academic terms commonly used at Lansing Community College.

Associate Degree: The associate degree consists of a minimum of 60 semester credits in designated courses. It is earned with a minimum of a 2.00 cumulative GPA, successful completion of a specified course in government, and is recorded on the official academic record.

Certificate of Achievement: The certificate of achievement consists of a minimum of 30 semester credits in designated courses. It is earned with a minimum of a 2.00 cumulative GPA and is recorded on the official academic record.

Certificate of Completion: The certificate of completion consists of fewer than 30 semester credits in designated courses. It is earned with a minimum of 2.00 cumulative GPA and is not recorded on the official academic record.

Credit Hour: A credit hour is 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 fewer than 800 instructional minutes.

Course: A course is a sequence of planned learning experiences leading to a set of expected learning outcomes. Course activities are normally scheduled over an academic semester. A student's successful completion of a course earns academic credit based on contact hours in class or in laboratories. The student also earns an academic grade which evaluates the student's success in achieving the expected outcomes. A course routinely includes tests, quizzes, a final examination, and regular out-of-class assignments. At Lansing Community College, a standard college-wide course syllabus has been created for each course. A course is publicized in the College Catalog and the Class Schedule booklet.

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

Curriculum: A curriculum is 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: A major is the predominant subject area within a curriculum.

Prerequisite: A prerequisite is a course or other requirement that must be successfully completed prior to participation in a subsequent course or activity. It may also be a skill or behavior that is judged essential to learning a subsequent, more complex skill or behavior.

Program: A program is the organizational structure of the College which provides or delivers instruction and/or services.

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% 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. "Incompletes" will not be counted toward the establishment of an earned grade point average (GPA) 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.

All incompletes issued prior to fall semester 1993 must be completed by the end of fall semester 1993 (or earlier if an earlier date was set by the instructor). Effective fall 1993, all incompletes must be completed by the end of the next regular semester unless an extension is requested in writing by the student and approved in writing by the instructor and department by the last day of the semester.

- An "X" (**audit**) 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.
- A "W" (**withdrawal**) 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 Office of the Registrar prior to the end of the fourth week of the semester, 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 semester will result in a "W" on the student's record. If the request for withdrawal is not approved, a grade consistent with the course requirement will be assigned by the instructor when final grades are submitted.
- An "R" (**return**) 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 (GPA), the number of honor points earned is divided by the number of credit/hours taken during the semester.

CREDIT/NO-CREDIT GRADING (P-Z)

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

- Course prerequisites and other criteria for enrolling in courses offered on the P-Z grading system shall be determined by the department or division offering the course.
- Courses offered on the P-Z grading system will be published as being graded only on the P-Z grading system and the course syllabus will be explicit regarding this fact.
- Courses graded on the P-Z system may be counted toward an associate degree or certificate based on approval of the appropriate dean. A maximum of 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 is as follows:

- Grades on the P-Z system are not included in computing the semester or cumulative grade average.
- The grades granted on the P-Z system are determined with definition of P and Z as follows:
 - P (credit)** represents a level of performance equivalent to a regular number grade of 2.00 or above on a 4.00 system.
 - Z (no credit)** represents a level of performance less than a 2.00 on a 4.00 system: no credit is granted.

All courses attempted on the P-Z grading system will appear on the student's academic record.

GRADE REPORTS

An official academic grade report will be mailed to the student approximately one week after the close of each semester. 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 departmental office for review and approval by the departmental chairperson. The completed grade change form is then forwarded to the Office of the Registrar for posting on the student's

permanent academic record. Completed grade change forms are not to be carried by the petitioning student to the Office of the Registrar and will not be processed. Students will be officially notified in writing by the Office of the Registrar after a grade change has been completed.

ACADEMIC STANDING POLICIES

Table for Determining Academic Standing

Following is the table for determining your academic standing at Lansing Community College. To use this table do the following:

- 1) On your grade report or academic transcript, locate your cumulative grade point average (GPA) and the total number of credits completed.
- 2) Find your position in the left-hand column of the table according to your total number of credits.
- 3) Read across the page to your right until you locate the column which includes your current cumulative grade point average (GPA). This column heading indicates whether you are in the "Good Standing Range," the "Warning Range," or the "Withdrawal Range."

Definitions of the various academic ranges at Lansing Community College are listed immediately after the table. Please refer to these definitions for an exact explanation of your academic status. A detailed explanation of the academic withdrawal appeal process has been included.

NOTE: 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 GPA may be within the overall College's "Good Standing Range."

ACADEMIC STATUS

Semester Credits Completed	Good Standing Cumulative GPA	Warning Range Cumulative GPA	Withdrawal Range Cumulative GPA
1-7	1.88 and above	1.00 - 1.87	.99-or less
8	1.89 " "	1.01 - 1.88	1.00 "
9	1.89 " "	1.04 - 1.88	1.03 "
10	1.90 " "	1.06 - 1.89	1.05 "
11	1.90 " "	1.09 - 1.89	1.08 "
12	1.91 " "	1.11 - 1.90	1.10 "
13	1.91 " "	1.14 - 1.90	1.13 "
14	1.92 " "	1.16 - 1.91	1.15 "
15	1.92 " "	1.18 - 1.91	1.17 "
16	1.93 " "	1.21 - 1.92	1.20 "
17	1.93 " "	1.23 - 1.92	1.22 "
18	1.94 " "	1.26 - 1.93	1.25 "
19	1.94 " "	1.28 - 1.93	1.27 "
20	1.95 " "	1.30 - 1.94	1.29 "
21	1.95 " "	1.33 - 1.94	1.32 "
22	1.96 " "	1.35 - 1.95	1.34 "
23	1.96 " "	1.38 - 1.95	1.37 "
24	1.97 " "	1.40 - 1.96	1.39 "
25	1.97 " "	1.42 - 1.96	1.41 "
26	1.98 " "	1.45 - 1.97	1.44 "
27	1.98 " "	1.47 - 1.97	1.46 "
28	1.99 " "	1.50 - 1.98	1.49 "
29	1.99 " "	1.52 - 1.98	1.51 "
30	2.00 " "	1.54 - 1.99	1.53 "
31	2.00 " "	1.57 - 1.99	1.56 "
32	2.00 " "	1.59 - 1.99	1.58 "
33	2.00 " "	1.62 - 1.99	1.61 "
34	2.00 " "	1.64 - 1.99	1.63 "
35	2.00 " "	1.66 - 1.99	1.65 "
36	2.00 " "	1.69 - 1.99	1.68 "
37	2.00 " "	1.71 - 1.99	1.70 "
38	2.00 " "	1.74 - 1.99	1.73 "
39	2.00 " "	1.76 - 1.99	1.75 "
40	2.00 " "	1.78 - 1.99	1.77 "
41	2.00 " "	1.81 - 1.99	1.80 "
42	2.00 " "	1.83 - 1.99	1.82 "
43	2.00 " "	1.86 - 1.99	1.85 "
44	2.00 " "	1.88 - 1.99	1.87 "
45	2.00 " "	1.90 - 1.99	1.89 "
46	2.00 " "	1.93 - 1.99	1.92 "
47	2.00 " "	1.95 - 1.99	1.94 "
48	2.00 " "	1.97 - 1.99	1.96 "
49	2.00 " "	1.97 - 1.99	1.96 "
50	2.00 " "	1.97 - 1.99	1.96 "
51	2.00 " "	1.97 - 1.99	1.96 "
52	2.00 " "	1.97 - 1.99	1.96 "
53	2.00 " "	1.97 - 1.99	1.96 "
54	2.00 " "	1.97 - 1.99	1.96 "
55	2.00 " "	1.97 - 1.99	1.96 "
56	2.00 " "	1.97 - 1.99	1.96 "
57	2.00 " "	1.97 - 1.99	1.96 "
58	2.00 " "	1.97 - 1.99	1.96 "
59	2.00 " "	1.97 - 1.99	1.96 "
60+	2.00 " "	1.97 - 1.99	1.96 "

Satisfactory Progress

Good Standing Range: A student whose cumulative grade point average is in the "Good Standing Range" is making satisfactory academic progress.

Warning Range: A student whose cumulative grade point average is in the "Warning Range" is making minimum satisfactory academic progress. This student is strongly advised to consult with the course instructor or department head, see a counselor, or request a tutor. Information about services to support student learning is available in the LCC Student Guidebook.

NOTE: Veterans' benefits recipients and students receiving financial aid should refer to the Financial Aid Information section of the catalog for additional information regarding academic progress.

Unsatisfactory Progress

Withdrawal Range: A student whose cumulative grade point average is in the "Withdrawal Range" is making unsatisfactory academic progress and will be withdrawn from the College. However, a student who falls in the "Withdrawal Range" during his/her first semester may be allowed to re-enroll on probation. If that student places in the "Withdrawal Range" again in any semester after that, the student will be withdrawn from the College.

Appeal of Academic Withdrawal

Any student who has been academically withdrawn from the College may appeal the withdrawal to the Academic Hearing Officer in the Student and Academic Support Division. 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 Academic Hearing Officer. The Board will be convened in an expeditious manner, and a decision will be rendered within seven (7) calendar days of the student's written appeal. Members of the Matriculation Board of Review are: a representative from the Office of the Registrar (chairperson), a representative appointed by the Dean of Student and Academic Support, and a counselor appointed by the Dean of Student and Academic Support. 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 (7) calendar days of the student receiving the decision of the Matriculation Board of Review. Members of the Board of Appeals are Dean of Student and Academic Support (chairperson), the dean of the division of the student's curricular choice, and the head of the counseling staff. The Board of Appeals may, upon reviewing the merits of the case, render a decision or schedule a hearing with the student prior to rendering a decision. The review by the Board of Appeals will be conducted in an expeditious manner and a decision will be rendered within seven calendar days of the date of the student's appeal. The decision of the Board of Appeals is final.

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

STUDENT RECORDS

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 semester. 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 average.

STUDENT ACCESS TO RECORDS

A student and/or parent of a student, if the student is a dependent and/or 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, but are 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 Office of 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.

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 aid or scholarships to students.
4. Authorized representatives of the Comptroller General of the United States, the Secretary of the Department of Health and Human Services and of the Department of Education, 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 by the College.
6. Accrediting organizations carrying out their accrediting function.
7. Persons in an emergency, if the knowledge of the information in fact is necessary to protect the health or safety of students or other persons.
8. Parents of a student who have established that student's status as a dependent according to Internal Revenue Code of 1954, Section 152.

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

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 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 submitting their requests in writing to the Office of the Registrar.

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

STUDENT TRANSCRIPTS

Official transcripts of a student's record at Lansing Community College will be mailed at the written request of the student. An official transcript is one which has the school seal and states the date of graduation if a degree has been granted.

A fee is charged for each transcript. All transcript requests require two working days' notice.

TRANSFER OF CREDITS

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 a counselor.

ACCEPTANCE AND EVALUATION OF TRANSFER CREDITS FROM OTHER INSTITUTIONS

Only official transcripts will be evaluated for transfer credit. The credit value of each of the courses will be determined by Lansing Community College. The College will accept as official transcripts only incoming transcripts that have appropriate signatures and official college seals and that are mailed directly to the Lansing Community College Office of the Registrar from an issuing institution. Transcripts or copies of transcripts carried by individuals may be used for academic advising or counseling, but transfer credits will NOT be posted to the Lansing Community College academic record from transcripts that have not been identified as official. It is the function of the Office of the Registrar of the College to verify the official status of all incoming transcripts prior to the evaluation and posting of transfer credit. All transcripts submitted to LCC for evaluation become the property of LCC.

The following evaluation information applies to transcripts received from both accredited and non-accredited institutions. Additional evaluation information which applies to transcripts from non-accredited institutions may be found under "Non-accredited Institutions."

Accredited and Non-Accredited Institutions

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. 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 does not have a department or area similar to the courses on incoming transcripts, no credit will be given.
2. Credits only, not grades, are transferred for 2.00 ("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 student may petition the departmental chairperson of his/her academic department to waive a requirement(s) in which he/she has previously earned the 1.0-1.5 or "D." Waiver of a

course requirement does not provide credit for a course. The departmental chairperson of the department concerned will notify the Office of the Registrar of all waivers.

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 assumed that the student is pursuing an entirely different curriculum and will not need previous course work.
4. 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. A determination on the evaluation will be made by the departmental chairperson in conjunction with the Office of the Registrar. Verification of the change can be made through the Office of the Registrar.

Non-Accredited Institutions

The following evaluation information applies to transcripts from non-accredited institutions:

1. The Office of the Registrar will forward a transcript from a non-accredited institution to the departmental chairperson of the department in which the student has enrolled.
2. The departmental chairperson has the following four prerogatives in evaluating transcripts issued by non-accredited institutions:
 - a. Credit may be granted with demonstration by the student of skills commensurate with the performance required for satisfactory completion of existing courses.
 - b. 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.
 - c. Credit may be granted upon demonstration of proficiency in a particular existing course by a comprehensive examination.
 - d. Credit may not be granted.
3. The departmental chairperson will return the transcript to the Office of the Registrar and indicate in writing the credits granted and the course equivalency at Lansing Community College. The final transcript evaluation will have the signature of the appropriate divisional dean.
4. When two or more instructional departments are involved, the departmental chairperson of the department in which the student is enrolled will be responsible for consulting with the additional departmental chairpersons. When two or more departments are involved, the written reply to the Office of the Registrar will include the signatures of each respective departmental chairperson and the respective dean.
5. Credits from non-accredited institutions are evaluated by the departmental chairperson of the area in which the student enrolled. If the student changes his/her curriculum, he/she should notify the Office of the Registrar, as there may be a difference in the evaluation.

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. 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 and Academic Support Building, (517) 483-1266.

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

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

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

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. Learning experiences must be directly related to the program (curriculum) or degree and must be 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. Prior to payment of the processing fee and submitting a 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 Office of the Registrar, including as much supporting documentation as possible. 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 must accompany submission of the form and portfolio. 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.

Assessment Committee

The completed Experiential Learning Processing Form and portfolio of supporting documents will be forwarded by the Office of the Registrar to the respective divisional dean. The dean will assign the portfolio to an appropriate and impartial assessor for review and credit assessment. Assessors 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 assessor 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.

Documentation

All experiential learning must be documented by the student. Documentation may be defined as (but not limited to) complete job descriptions, copies of course materials and outlines, certificates, training reports, signed supervisory verifications and evaluations on letterhead, and any other descriptive information that may provide a clear understanding of a student's background and competencies. Lansing Community College requires certification that the work or training experience is the student's own. The portfolio containing the Experiential Learning Processing Form and all supporting documents will be retained by the College. A maximum of 10 semester hours of experiential learning may be applied towards an LCC associate degree. (Twenty credits must be earned at Lansing Community College to comply with the College's residency requirements.)

Applicability of Credit

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

Student Appeal Procedures

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

CREDIT BY EXAMINATION

Comprehensive Exams

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

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 departmental chairperson signatures of approval.
3. After obtaining the required signatures, the student returns the signed application to the Cashier's Office for payment of tuition.
4. The student will complete an examination for each course in which he/she hopes 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, after being evaluated by the instructor, will be maintained on file in the departmental 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 semester in which the examination was taken or when processing has been completed.

Other Examinations

Lansing Community College accepts credit based on results from the following examinations: College Level Examination Program (CLEP), Advanced Placement Examination (APE), and the Defense Activity for Non-Traditional Education Support (DANTES). Students in need of information about these examinations should contact the Office of the Registrar.

GRADUATION REQUIREMENTS, CERTIFICATES, AND DEGREES

INSTITUTIONAL REQUIREMENTS FOR CERTIFICATES OF ACHIEVEMENT

Certificates of achievement are granted to all students who meet graduation requirements. A minimum of 30 semester credit hours is required for this certificate.

To graduate from Lansing Community College with a certificate of achievement, a student must do the following:

1. Complete a course of study approved by the College.
2. Maintain a minimum grade point average of 2.0.
3. Earn toward graduation at least 10 semester credits in attendance at Lansing Community College.
4. File an application for graduation with the Office of the Registrar one semester preceding the semester of graduation.
5. Satisfy all general and specific requirements of Lansing Community College including the fulfillment of all financial obligations.
6. Have the approval of the administration and the Board of Trustees.

NOTE: Students seeking a certificate of achievement may not follow curricular guides which predate their first semester of enrollment.

INSTITUTIONAL REQUIREMENTS FOR ASSOCIATE DEGREES

Associate degrees are granted to all students who meet graduation requirements. A minimum of 60 semester credit hours is required for an associate degree. Those students who maintain a 3.75 grade point average will be graduated summa cum laude; those who maintain a 3.50 grade point average will be graduated magna cum laude; those with a 3.25 will be graduated cum laude. Students must complete 40 semester credit hours of work at Lansing Community College to qualify for honors.

To graduate from Lansing Community College with an associate degree, a student must meet the following institutional requirements:

1. Complete a course of study approved by the College.
2. Maintain a minimum grade point average of 2.0.
3. Earn toward graduation at least 20 semester credits in attendance at Lansing Community College.
4. File an application for graduation with the Office of the Registrar one semester preceding the semester of graduation.
5. Complete a course in political science. POLS 120, American Political System, or POLS 121, State and Local Government, will satisfy this requirement for all degree programs. (NOTE: LABR 208, Labor Relations, will satisfy this requirement for certain programs only as indicated on specific curriculum guides.)
6. Satisfy all general and specific requirements of Lansing Community College including the fulfillment of all financial obligations.
7. Have the approval of the administration and the Board of Trustees.

NOTE: Students seeking an associate degree may not follow curricular guides which predate their first semester of enrollment.

Starting fall semester 1994, the College plans to begin implementation of a general education core as an institutional requirement for graduation with an associate degree.

CRITERIA FOR THE ASSOCIATE DEGREE IN ARTS AND THE ASSOCIATE DEGREE IN SCIENCE

In addition to meeting the institutional associate degree requirements previously outlined, students seeking an associate degree in arts or an associate degree in science must also meet the following requirements effective fall semester 1993:

- A. The student is required to take a core of at least eight (8) credits in each of the following areas: **Writing/English, Humanities, Science/Mathematics, and Social Science.**

1. The eight required hours in the **Writing/English** area can be fulfilled by taking either WRIT 121 and ENGL 122, or WRIT 121 and WRIT 122. Those students permitted to waive WRIT 121 must elect a second course with any of the course codes below and with a number 200 or higher.

ENGL	HUMS	PHIL	SPCH
FREN	JAPN	RELG	WRIT
GRMN	JRNL	SIGN	
HIST	LING	SPAN	

2. The eight required hours in the **Humanities** area must include any course from Group A and any course from Group B.

Group A courses are: ENGL 211, HIST 211, HUMS 211, HUMS 213, PHIL 211, or RELG 211.

Group B courses are: ENGL 212, HIST 212, HIST 214, HUMS 212, HUMS 214, PHIL 212 or RELG 212.

It is recommended that students take a course from Group A before Group B.

3. The eight required hours in the **Social Science** area must include one four-credit course chosen from POLS 120 or POLS 121 and one four-credit course chosen from SOCL 120, ECNM 120, PSYC 200, or GEOG 200.
4. The eight required credits in the **Science/Mathematics** area may be fulfilled either by Option A or Option B.

Option A

Four credits in physical science, including laboratory experience, from the following courses and course pairs:

ASTR 201	GEOG 200	GEOG 225	PHYS 201
CHEM 151 & 161	GEOG 220	GEOG 230	PHYS 215 & 225
CHEM 182 & 192	GEOG 221	NSCI 121	
GEOG 114	GEOG 222	NSCI 131	

and four credits in biological science, including laboratory experience, from the following courses and course pairs:

ANAT 145	BIOL 123	BIOL 210	GEOG 114	NSCI 132
ANAT 151	BIOL 127	BIOL 250	GEOG 116	SCIS 124
ANAT 121	BIOL 128	BIOL 260	MICRO 203 & 204	
BIOL 201	BIOL 201	GEOG 112	NSCI 122	

Option B

Four credits in physical or biological science, including laboratory experience, from any of the courses and course pairs in Option A and four credits of mathematics from courses with the course code MATH and with numbers 121 or higher.

- B. In addition to Limited Choice Requirements specified on curriculum guides, other courses may be counted toward Arts or Sciences degrees. These courses must be selected from the following:

1. Unrestricted number of credit hours—from courses with any of the course codes below and with numbers 120 and higher:

ANAT	CPSC	FREN	HUMS	METR	PHYS	SIGN	VCBL
ANTH	ECNM	GEOG	INST	MICR	POLS	SOCL	WRIT
ASTR	EDUC	GEOG	JAPN	NSCI	PSYC	SPAN	
BIOL	ENGL	GRMN	JRNL	OCNL	READ	SPCH	
CHEM	ENRI	HIST	LING	PHGY	RELG	SPEL	
CHIN	ESLA	HONR	MATH	PHIL	SCIS	STAT	

2. Unrestricted number of credit hours—from the following courses:
 CHIN 101 GRMN 101-102 SPAN 101-102
 FREN 101-102 JAPN 101-102

3. Credit hours restricted to six—from courses with any course codes listed in B.1. above, and with numbers 110 through 119.

4. Credit hours restricted to six—from the following courses:
 ARTS 101 HUSE 100 IMAG 117 LEGL 115 MUSC 168 MUSC 199
 ARTS 132 HUSE 110 IMAG 202 MGMT 228 MUSC 173 OEDC 110
 ARTS 155 HUSE 111 IMAG 207 MTEC 106 MUSC 174 OEDC 111
 ARTS 201 IMAG 111 IMAG 226 MTEC 110 MUSC 182
 BUSN 118 IMAG 114 LABR 200 MTEC 256 MUSC 185

C. Courses which are not listed in these criteria do not count toward the associate degrees in arts or in science.

D. Students pursuing an arts or science degree must follow an approved curriculum guide. Consultation with an LCC academic advisor is recommended.

Students may request specific course substitutions by submitting a "Course Substitution and Waiver Authorization for Degree Screening" form to the office of the Dean of the Liberal Studies Division.

A student may appeal a decision not to grant an associate degree in arts or in science for lack of fulfillment of the above criteria. Students may file appeals to the office of the Dean of the Liberal Studies Division.

CRITERIA FOR THE ASSOCIATE DEGREE IN APPLIED ARTS AND THE ASSOCIATE DEGREE IN APPLIED SCIENCE

In addition to meeting the institutional associate degree requirements previously outlined, students seeking an associate degree in applied arts or an associate degree in applied science must also complete course requirements of specific programs for specialized areas of study as presented in the curricular guide for each degree program.

CRITERIA FOR THE ASSOCIATE DEGREE IN BUSINESS

In addition to meeting the institutional associate degree requirements previously outlined, students seeking an associate degree in business must complete the requirements of specific programs within an area of study as presented in the curricular guide for each degree program.

CRITERIA FOR THE GENERAL ASSOCIATE DEGREE

Students seeking a general associate degree must fulfill the institutional associate degree requirements previously outlined. Credits earned from any course offered by Lansing Community College will apply toward the 60-hour credit requirement for this degree. To fulfill the institutional political science requirement, students must complete POLS 120, American Political System, or POLS 121, State and Local Government.

HOW TO APPLY FOR THE ASSOCIATE DEGREE OR CERTIFICATE OF ACHIEVEMENT

The student submits his/her application for degree/certificate to the Office of the Registrar. It is important that the student attach copies of any authorized course substitutions or waivers and a copy of the curricular guide he/she has

been following to the application. Transition students must also attach a copy of the Curriculum Completion Plan form to the application. Copies of the student's academic record, current semester schedule, and curricular guide (if not submitted by the student) are attached to the application.

1. If any requirements remain after initial review by the Office of the Registrar, the student will be sent a Degree Audit Report along with an unofficial copy of his/her transcript. Any exceptions to the courses listed on the audit report must be noted on the form by the student's departmental chairperson or authorized representative, stamped by the departmental office, and be returned to the Office of the Registrar. A copy will be attached to the Application for Degree. The student will be responsible for completing the remaining courses unless a revised 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 chairperson and divisional dean for approval. When the application is returned to the Office of the Registrar, the student is sent a letter indicating he/she must successfully complete the current semester.

The application is held on file until the current semester grades are recorded and successful completion of the semester is verified. Applications for students who do not successfully complete the semester 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 semester in advance of graduation. The procedure outlined above may take a full semester to complete. Soon after the end of the semester, 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 semester.

SEMESTER TRANSITION PROGRAM COMPLETION INFORMATION

Students who first enroll at Lansing Community College for fall semester 1993 and thereafter will be considered semester students, not transition students. The new semester system requirements will apply to them, and they must follow semester curricular guides effective fall 1993.

Students who started degree or certificate programs at LCC prior to fall semester 1993 and who continue their studies on the semester system are considered transition students. In order to complete college requirements or curriculum requirements for their declared major, transition students should meet with an academic advisor to complete an individual Curriculum Completion Plan.

PLEASE NOTE: All Curriculum Completion Plans must be approved by departmental chairpersons.

Transition students must be on either the Quarter Option or the Semester Option. No mixing of quarter and semester requirements is permitted. The options are described below.

Quarter Option: The Quarter Option is a Curriculum Completion Plan for completing unfulfilled quarter system requirements with semester credits and courses. Effective fall 1993, transition students with fewer than 45 earned quarter credits (including those transferred from another institution) toward a specific degree—or less than 50 percent earned quarter credits toward a certificate—must choose the Semester Option.

Semester Option: The Semester Option is a Curriculum Completion Plan indicating how quarter courses and credits will be applied to semester system requirements. All transition students are eligible to choose the Semester Option.

Beginning with fall 1993, curricular guides will be valid for a period of five years. The inclusive dates will be printed on each guide. All quarter-based curricular guides expire at the end of summer semester 1997.

TRANSFER INFORMATION

Students planning to transfer to another institution should be aware that universities and colleges differ widely in the courses they accept for transfer. A student intending to transfer should follow the transfer curriculum guide of the institution to which he/she intends to enroll. Transfer guides are not LCC degree guides. As indicated on certain transfer guides, however, a student may receive an LCC degree for completing a specific transfer guide if additional LCC requirements are also met. In order to achieve maximum transferability of courses, students should consult with an academic advisor.

MACRAO Transfer Agreement

In 1973 the Michigan Association of Collegiate Registrars and Admissions Officers proposed the MACRAO Transfer Agreement. The MACRAO Transfer Agreement was created to simplify the transfer of students from one institution to another. The agreement stipulates that 30 semester credit hours of 100-level and above, compatible, general course work will be granted smooth transferability to participating universities. These credits will be applied toward a student's general education requirements. **Completion of requirements for the MACRAO Transfer Agreement does not necessarily mean that a student has completed the requirements for a specific Lansing Community College Associate Degree.**

The basic two-year requirements are:

English Composition	-	6 semester hrs min
Natural Science	-	8 semester hrs min
Social Science	-	8 semester hrs min
Humanities	-	8 semester hrs min

The following establishes the approved list of LCC courses under the four major distribution requirements for the MACRAO Transfer Agreement. A course can be used to satisfy only one category even though it may appear in more than one category.

I. **English and Composition** - (minimum of 6 semester credit hours)

Any **one** of the following combination of Writing and English courses:

WRIT 121 **OR** WRIT 121 **OR** WRIT 131 **OR** WRIT 131
ENGL 122 **OR** WRIT 122 **OR** ENGL 132 **OR** WRIT 132

A student who is permitted to waive WRIT 121 must elect a second course from the 200-level offerings in writing or English. Waiver of WRIT 121 should be printed on the student's transcript.

II. **Science and Mathematics** - (minimum of 8 semester credit hours)

NSCI 121 & 122 **or** NSCI 131 & 132 **or** courses in at least two (2) subject areas, with a minimum of one laboratory science course. Highlighted courses indicate a laboratory course.

ANAT 145,151,152,201

ASTR 201

BIOL 121,127,128,201,202,250,260,270

CHEM 151,161,152&162,182&192,251&272,252&272

GEOL 200,221,222,230

MATH 121,122,126,130,141,151,152,201,253,254,260

METR 220

MICR 203 & 204

NSCI 121,122,131,132

OCNL 225

PHGY 202

PHYS 191,201,202,215&225,216&226

STAT 170,215

III. **Social Science** - (minimum of 8 semester credit hours)

Courses must be taken in more than one subject area.

ANTH 270,275,276

ECNM 120,130

GEOG 121,121,200,202,203

POLS 121,121,130,200,250,270,280

PSYC 175,200,202,203,204,205,209,210,221,222,240,250

SOCL 120,254,255,260,280 288

One course may be selected from: GERO 100, SOWK 101

IV. **Humanities** - (minimum of 8 semester credit hours)

HUMS 213 and 214 or courses in at least two of the following area:

Art History: HUMS 121, 211, 212, 220

Foreign Language: FREN 101,102, 201, 202; GRMN 101,102, 201, 202;

JAPN 101,102, 201, 202; SPAN 101,102, 201, 202

History: ECON 211; HIST 150, 210, 211, 212, 214, 220, 230, 260

Humanities: HUMS 215, 220

Literature: ENGL 201, 202, 203, 211, 212, 220, 240, 245, 250, 260, 265,

266, 270, 290; HUMS 160

Performing Arts: MUSC 199, 240, 241, 245, 248, 249, 251; THEA 210

Philosophy/Religion: PHIL 151,152,153, 211, 212, 260; RELG 211, 212,

241, 242, 250

NOTE:

1. POLS 120 or POLS 121 is **required** for an associate degree from LCC. See the College Catalog for additional LCC degree requirements.

2. Students are advised to also review specific transfer curricular guides e.g. some transfer institutions may require both a biological and physical science to satisfy the requirements for the degree.

For further information and advising, contact a Lansing Community College counselor located in either room 105 of the Arts & Sciences Bldg., phone: (517) 483-1191 or room 208 of the Student Personnel Services Bldg., phone: (517) 483-1157.

The following four-year institutions are signatory to the MACRAO Transfer Agreement:

- *Adrian College
- Albion College
- *Alma College
- Aquinas College
- Baker College
- Calvin College
- Central Michigan University
- *Cleary College
- Davenport College
- Detroit College of Business
- Eastern Michigan University
- Ferris State University
- *GMI Engineering and Management Institute
- Grand Valley State University
- Hope College
- Kalamazoo College
- *Lake Superior State University
- Lawrence Technological University
- *Madonna College
- Michigan Christian College
- *Michigan State University
- *Michigan Technological University
- Muskegon Business College
- Northern Michigan University

- Northwood Institute
- *Oakland University
- Olivet College
- Saginaw Valley State University
- St. Mary's College
- *Siena Heights College
- Spring Arbor College
- Western Michigan University

*Some limitations may apply. Check with individual college/university.

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 10 semester credit hours must be completed at LCC in the division in which the degree is sought, nonrepetitive of previously earned credits.
2. All requirements for an associate degree in either arts, applied arts, business, science, or applied science must be met.
3. No additional degree will be granted in the same program or curriculum in which the first degree was earned.
4. An additional degree must be within a specific program or curriculum.
5. Exceptions to the above should be appealed to the office of the respective dean.

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

A student who has earned a bachelor's degree from an 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 10 semester 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. Exceptions to the above should be appealed to the office of the dean of the division in which the associate degree is sought.

STUDENT RIGHTS, RESPONSIBILITIES, AND CONDUCT

The College adheres to the principle that the campus climate provide for students maximum freedom and necessary order. In order to ensure this principle, the College has established procedures for the redress of grievances by the individuals accused in such proceedings. In addition, general rules and regulations have been established by the College to ensure the protection of student rights and the efficient operation of College programs. In cases of non-compliance with these regulations, it is the intention of the College to impose discipline which is consistent with the impact of the offense on the College community. The College also reserves the right to pursue criminal and/or civil action where warranted.

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.

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 semester.

Disclosure of Health Concerns

Lansing Community College takes appropriate and reasonable precautions to protect the health and safety of students in the classroom. However, some courses may require students to work with chemicals and/or equipment which may be hazardous to some students, such as those with certain medical conditions. Students should inform instructors of any special health-related conditions which may be negatively affected by instructional materials or equipment used in the classroom. Students with special health concerns are strongly encouraged to raise any questions about such matters prior to their enrolling in a class.

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. These opportunities include the following:

1. Completing 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. Presenting suggestions regarding instructional quality to their instructors, their instructor's departmental chairperson 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. Serving 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.

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

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 wilfully 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."

GENERAL RULES AND REGULATIONS

Academic Honesty

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. Alteration, duplication, or falsification of a College document, form or authorized signature is considered by the College to be an extremely serious offense and is subject to disciplinary action. In addition to imposing internal disciplinary action for such offenses, the College reserves the right to pursue legal action when it is deemed appropriate.

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.

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.

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.

Drug and Alcohol Regulations

In recognition of (1) the serious health risks associated with the illegal use of controlled substances and (2) the abuse of alcohol, and in conformance with the Board of Trustees policies 4416 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 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 or 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.

Field Trips

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

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.

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 semester, 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 semester until such accounts are paid.

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 Life.

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.

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.

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.

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.

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

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.

Plagiarism

A student is guilty of plagiarism when he/she 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.

*Robert, Henry M. Roberts Rules of Order (Revised), Scott Foresman and Co., 1951, p. 5.

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.

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.

Vandalism

Property of the College, as well as that of individuals, should be respected. Theft of any kind, the destruction or mutilation of media resources materials, or the equipment, or buildings or grounds of the College is inconsistent with the objectives of the College and good citizenship, and therefore subject to disciplinary action.

Video Cassette

The federal copyright law, Title 17 of the United States Code, provides copyright protection of "original works of authorship," including "motion pictures and other audiovisual 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 audiovisual works may be used for purposes such as "teaching (including multiple copies for classroom use), scholarship, or research" without violation, and audiovisual materials purchased or rented by the College have the written consent of the copyright owners and, therefore, are legally appropriate for classroom use.

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.

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 Life.
 - 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.
9. Lansing Community College respects the constitutional rights of freedom of expression. There are, however, responsibilities which are attendant to the exercising of these constitutional rights. The following statements are made to provide an operational balance between the rights and responsibilities of the freedom of expression regarding the contents of posters:
- a. The content of posters shall avoid the liabilities of libel; obscenity; invasion of privacy; and incitement of disorder, violence, and disruption of the normal operation of the College.
 - b. The contents of posters shall support the principles of nondiscrimination against individuals and groups of individuals based on race, color, religion, sex, national origin, age, height, weight, marital status, handicap, and sexual orientation.
 - c. The contents of posters should avoid projecting a negative image of individuals and groups of individuals based on race, color, religion, sex, national origin, age, height, weight, marital status, handicap, and sexual orientation.

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 Life. A meeting will be held between the appealing poster sponsor or sponsors with the Director of Student Life to discuss the appeal. If the appeal is not resolved, a formal appeal may be presented to the Director of Student Life. 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 Life 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 Life, a second written appeal may be made to the Dean of Student and Academic Support Division. 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 and Academic Support Division for review. The appeal to the Dean of Student and Academic Support Division must be dated and signed by the appealing party. The Dean of Student and Academic Support Division 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 and Academic Support Division 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.

Regulations for Use of Student Literature Table

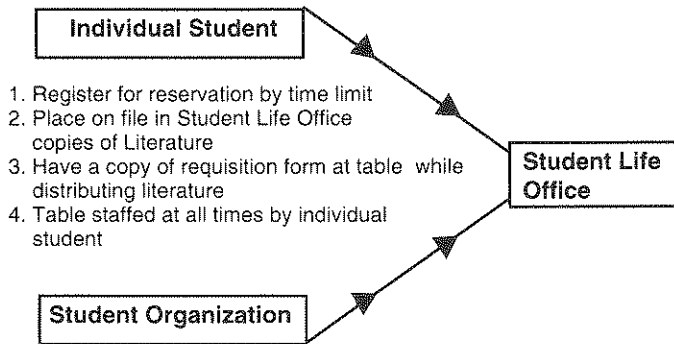
Lansing Community College is continually aware of and supportive of the concepts of freedom of expression, particularly those provided by the First Amendment of the Constitution of the United States. The College also perceives that one of its functions is to provide a wide range of learning experiences 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 outside 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 semesters.
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 Life 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 Life 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 Life 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, an invasion of 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



1. Register for reservation by time limit
2. Place on file in Student Life 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

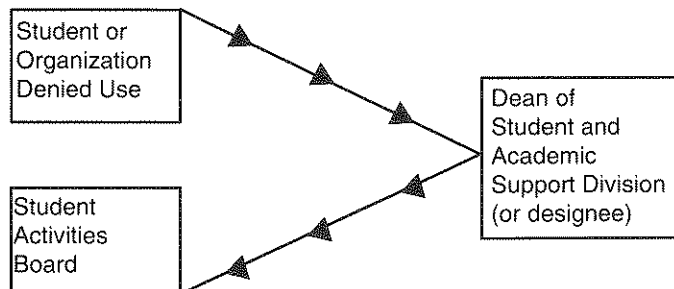
1. Register for reservation by time limit
2. Place on file in Student Life Office and with organization advisor cop of literature
3. Have copy of registration form at table while distributing literature
4. Table staffed at all times by members of organization

Appeal of Denial of Use of Literature Table

Any individual, registered student or recognized student club or organization which has been denied access to the student literature tables or has been 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 and Academic Support Division (or designee) within 10 calendar days of the denial or requirement to halt distribution. The Dean of Student and Academic Support Division (or designee) 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 and Academic Support Division 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 and Academic Support Division. 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.

Appeal of Denial Flow Chart



Sexual Harassment and Discrimination

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.

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 individuals 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 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 unwelcome.

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, handicap, or sexual orientation. This 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 'Elliot-Larson Civil Rights ACT' MIL. 37.2101, et seq, as amended prohibits all forms of discrimination and defines sexual harassment.

Sexual Harassment/Discrimination Complaint Process

The guidelines/procedures below apply to LCC students who may desire to file a complaint regarding sexual harassment/discrimination. The investigation of all sexual harassment/discrimination complaints will be handled through the Affirmative Action/Equal Employment Opportunity (AA/EEO) Office. Sexual harassment/discrimination is unlawful and all complaints of sexual harassment/discrimination must be reported.

I. Responsibility to Report

Prompt reporting of all complaints is strongly urged since it is often difficult to trace the facts of an incident or incidents long after they have occurred. It is recommended that complaints be filed within sixty (60) calendar days of the alleged incident. All complaints will be investigated. Individuals making a complaint or taking part in the investigation of a complaint will not be subject to retaliation.

II. Filing a Complaint

Students who feel they are being sexually harassed or discriminated against should contact the AA/EEO Office, (517/483-1858). In addition to meeting with the AA/EEO Officer or designee, students filing a complaint will be asked to complete a sexual harassment/discrimination complaint form. (Sexual harassment/discrimination complaint forms are available in the following offices: Personnel Department, offices of Divisional Deans, and the Affirmative Action Office.)

III. Investigation Procedures

A. Investigator(s)

After receiving a complaint, the AA/EEO Officer will designate a specially trained person or persons to investigate the alleged complaint. Besides investigating complaints of sexual harassment/discrimination, this investigation team (or individual) may make recommendations for resolution, corrective action, and/or disciplinary action when designated by the AA/EEO Officer.

B. Timetable

An investigation will begin no later than twenty (20) working days of receipt of the sexual harassment/ discrimination complaint form or immediately following a request from the AA/EEO Officer.

C. Complainants

The AA/EEO Officer will contact the complainant and inform him/her when the investigation will occur. The complainant may be asked to submit additional information, if necessary, for the investigation to continue.

D. Notification

The AA/EEO Officer will inform the alleged harasser/discriminator of the complaint as soon as is practicable or necessary. The results of the investigation will be revealed to the alleged harasser/discriminator upon the completion of the investigation.

E. Confidentiality

At each step of this procedure, the College will take appropriate action to protect the privacy of individuals involved in the complaint. Both in fact-finding and in the final disposition of the complaint, efforts will be made to maintain confidentiality. During the investigation stage, the College may have to contact witnesses or other individuals involved. This will not be considered a breach of confidentiality.

IV. Resolution

Based on the results of the investigation, appropriate action will be taken by the College. Complaints may be dismissed or resolution could include disciplinary action up to and including dismissal.

If through an investigation of sexual harassment/ discrimination other wrongdoings are found, these issues will be dealt with separately from the sexual harassment/discrimination complaint.

Regulation Revisions and Additions

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.

When a student is accused of violating general rules and regulations of the College, except those involving Academic Standing Policies, the procedures described below will be followed:

1. The student will be notified by certified letter that an alleged violation has occurred. In the letter, the student will be directed to make an appointment with the appropriate College official to review the facts concerning the alleged violation in order to determine if formal charges should be prepared. In the event that the student fails to contact the appropriate College Official within ten (10) class days (excluding Saturday and Sunday) of receiving the certified letter, a "hold" may be placed on the student's record which will result in the student's enrollment being delayed.
2. If a decision is made to prepare formal charges, the student shall be notified by an appropriate College official that he/she is being accused of violating a regulation and that he/she may elect to do one of the following:
 - a. The student may admit the alleged violation and request, in writing, that the administrative officer take whatever action seems necessary;
 - b. The student may admit the alleged violation and request a hearing before the Judicial Board regarding the discipline imposed;
 - c. The student may deny the alleged violation, in which case the administrative officer shall refer him/her to the Judicial Board.
3. Prior to the Judicial Board hearing, the student shall be entitled to the following:
 - a. Written notification of the time and place of the hearing;
 - b. A written, detailed statement of the charges so that the student may prepare his/her defense;
 - c. Written notification of the names of the witnesses directly responsible for having reported the alleged violation or written notification of how the alleged violation came to the Board's attention.
4. The student shall be entitled to appear in person and present his/her defense to the Judicial Board and may call witnesses in his/her behalf. The student may also elect not to appear before the Judicial Board. Should he/she elect not to appear, the hearing shall be held in his/her absence.
5. The student shall be entitled to be accompanied by a person of his/her choice. If this person is in the form of legal counsel, the student must notify the Office of the Dean of the Student and Academic Support Division at least ten (10) days prior to the scheduled hearing date.
6. The student or his/her representative may be allowed to ask questions of the Judicial Board or of any witnesses.
7. The student shall be entitled to an expeditious hearing of his/her case.
8. The student shall be entitled to an explanation of the reasons for any decision rendered against him/her.
9. A student who wishes to contest the decision of the Judicial Board may request that the President of the College (or his/her designee) review the decision of the Judicial Board. The student must request this review within ten (10) scheduled class days (excluding Saturday and Sunday) of notification of the Judicial Board's decision. Decisions rendered by the President (or his/her designee) will be final. A student who is not satisfied with a decision at this level has recourse to civil court action.

The standard of proof to be followed by the Judicial Board of Lansing Community College is the standard of "preponderance of evidence." Decisions rendered by the Judicial Board will be made by a simple majority vote of the total membership of the Judicial Board. In addition, the Judicial Board shall be empowered to make recommendations based on decisions rendered.

Membership of the Judicial Board

The Judicial Board will consist of the following members:

1. The Dean of the Student and Academic Support Division or his/her designee; (NOTE: This member will serve as chairperson. However, when the Judicial Board is hearing an appeal based on a disciplinary decision of the Office of the Dean of the Student and Academic Support Division, the Dean of the Student and Academic Support Division will relinquish the chair, and a temporary chairperson will be elected by the remaining members of the Judicial Board from the remaining members of the Judicial Board.)

2. One College administrator appointed by the Dean of the Student and Academic Support Division;
3. Two students appointed by the President of the Student Government from the student body with consent of the Student Government, with one alternate appointed in the same way, to serve in the absence of any student member;
4. Two faculty members appointed by the dean of the division in which the concerned student is enrolled or matriculating, with one alternate faculty member appointed in the same way, to serve in absence of any faculty member.

Disciplinary Action

Students violating the general rules and regulations of the College and students committing academic offenses, other than those involving Academic Standing Policies, shall be subject to disciplinary action which is appropriate to the nature of the offense and which may take into account the student's previous conduct record. Disciplinary action may be imposed by the Dean of the Student and Academic Support Division (or his/her designee) or, in the case of academic offenses, by the classroom instructor or divisional dean (or his/her designee). Examples of such disciplinary action include the following:

1. Reprimand;
2. Probation;
3. Restrictions on activities or privileges;
4. Requirements of restitution;
5. Denial or revocation of a College honor or degree;
6. Suspension;
7. Dismissal.

The student may appeal any decision regarding disciplinary action as described below.

Student Appeals

The Judicial Board will hear cases referred to it by administrative officers of the College or by individual students through the established lines of appeal. An appeal is defined as a review of a previous decision and the process used in reaching that decision. Before using the formal appeal process, students are encouraged to first meet with faculty members to attempt to resolve issues in an informal manner.

The line of appeal used will depend upon the type of case involved. In all cases, students are required to state their appeal (or complaint) in writing at the time they begin the formal appeal process.

1. Student Appeal of Disciplinary Action for Violation of General Rules and Regulations

In appealing a disciplinary action based on a violation of general rules and regulations of the college (explosives, alcoholic beverages, or mistreatment of college property, for example), the student shall use the following line of appeal:

- a. The Dean of the Student and Academic Support Division (or his/her designee);
- b. The Judicial Board of the College;
- c. The President (or his/her designee).

Note: A student will have 10 scheduled class days (excluding Saturday and Sunday) to appeal a decision after notification of that decision at a prior level.

2. Student Appeal of A Violation of Academic Rules and Regulations or of Academic Disciplinary Action

In appealing an academic charge based on a violation of the academic rules and regulations (plagiarism or cheating, for example), and in appealing academic disciplinary action (loss of credit, for example), the student shall use the following line of appeal:

- a. The faculty member involved (when appropriate);
- b. The dean of the division involved (or his/her designee) in consultation with the department chair;
- c. The Judicial Board of the College;
- d. The President (or his/her designee).

In cases involving an academic charge or academic disciplinary action, the faculty members serving on the Judicial Board will be faculty members from the division which offers the class where the academic charge or disciplinary action is being appealed.

Note: A student will have 10 scheduled class days(excluding Saturday and Sunday) to appeal a decision after notification of that decision at a prior level.

3. Student Grade Appeals

When a student wishes to appeal a grade, he/she must do so by the end of the sixth week of the following semester or summer session. The line of appeal shall be as follows:

- a. The faculty member involved (when appropriate);
- b. The dean of the division involved (or his/her designee) in consultation with the department chair;
- c. The Judicial Board of the College;
- d. The President (or his/her designee).

When cases involving student grade appeals are heard by the Judicial Board, the faculty membership on the Judicial Board will be two faculty members from the division which offers the class where the grade is being appealed.

Note: A student will have 10 scheduled class days (excluding Saturday and Sunday) to appeal a decision after notification of that decision at a prior level.

4. Student Complaints

When a student wishes to lodge a complaint against an instructor for alleged mistreatment of students, except in cases of sexual harassment/discrimination (found in this catalog under "Sexual Harassment/Discrimination"), the line of appeal in the complaint process shall be as follows:

- a. The faculty member involved (when appropriate);
- b. The dean of the division involved (or his/her designee) in consultation with the department chair;
- c. The Judicial Board of the College;
- d. The President (or his/her designee).

When cases involving student complaints are heard by the Judicial Board, the faculty membership on the Judicial Board will be two faculty members from the division which offers the class where the complaint for alleged mistreatment is being lodged.

Note: A student will have 10 scheduled class days (excluding Saturday and Sunday) to appeal a decision after notification of that decision at a prior level.

5. Student Appeal of Administrative Withdrawal

Whenever the Office of the Registrar receives the recommendation for an administrative withdrawal, the Office of the Registrar will notify the student in writing that he/she is being administratively withdrawn. The lines of appeal for administrative withdrawal decisions are as follows:

Line of Appeal of Administrative Withdrawal for Non-Attendance and for Lack of Course Prerequisites

- a. The instructor (if appropriate);
- b. The dean of the division involved (or his/her designee) in consultation with the departmental chair;
- c. Judicial Board of the College;
- d. President (or his/her designee).

Line of Appeal of Administrative Withdrawal for Inappropriate Classroom Behavior

- a. The dean of the division involved (or his/her designee) in consultation with the departmental chair;
- b. Judicial Board of the College;
- c. President (or his/her designee).

If a student appeals an administrative withdrawal to the dean of the appropriate division (as noted above in the lines of appeal), the student will receive written notification of the time and place of the appeal. If the student does not 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.

Note: In cases of administrative withdrawal, a student will have five scheduled class days (excluding Saturday and Sunday) to appeal a decision after notification of that decision at a prior level.

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, maintains clear and thorough records of student progress, and keeps students informed throughout the course;
- G. Encourages intelligent, independent thought 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.

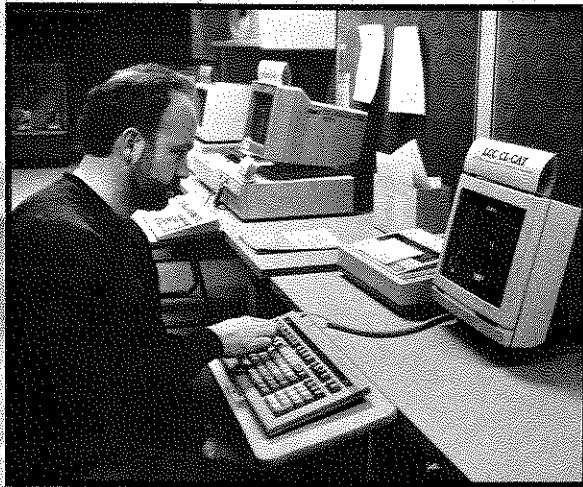
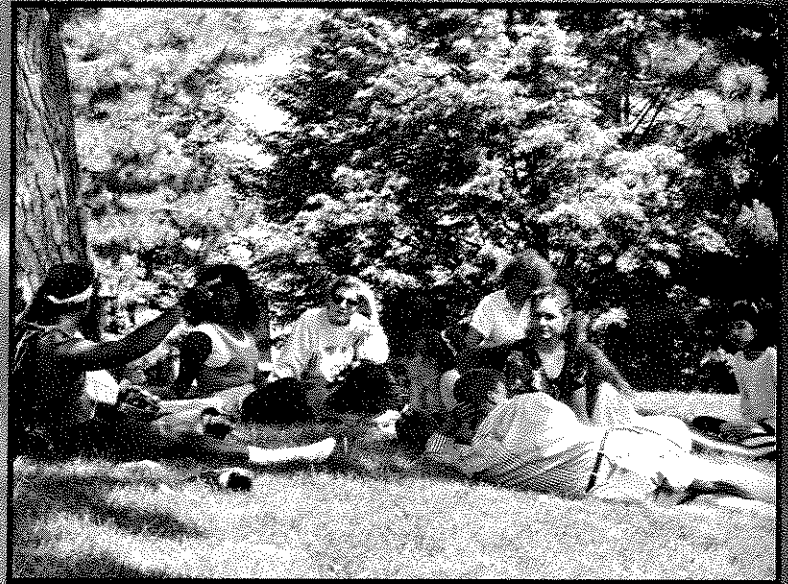
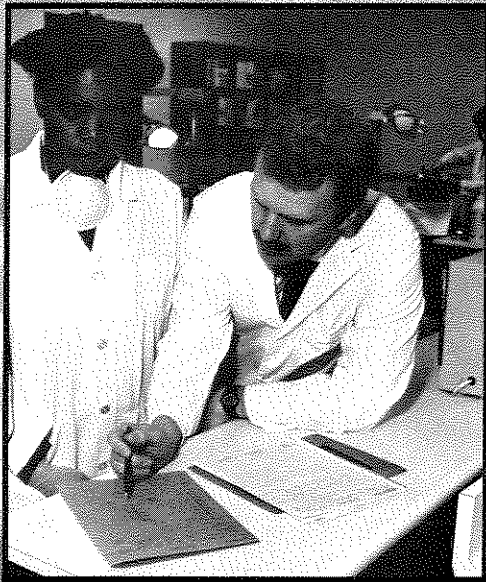
*Recommendations of the College-Wide Faculty Evaluation Committee: current agreement between the Board of Trustees and the Lansing Community College Chapter of the Michigan Association for Higher Education.

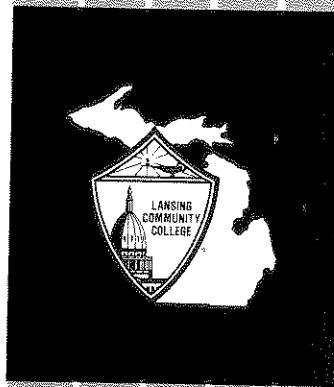
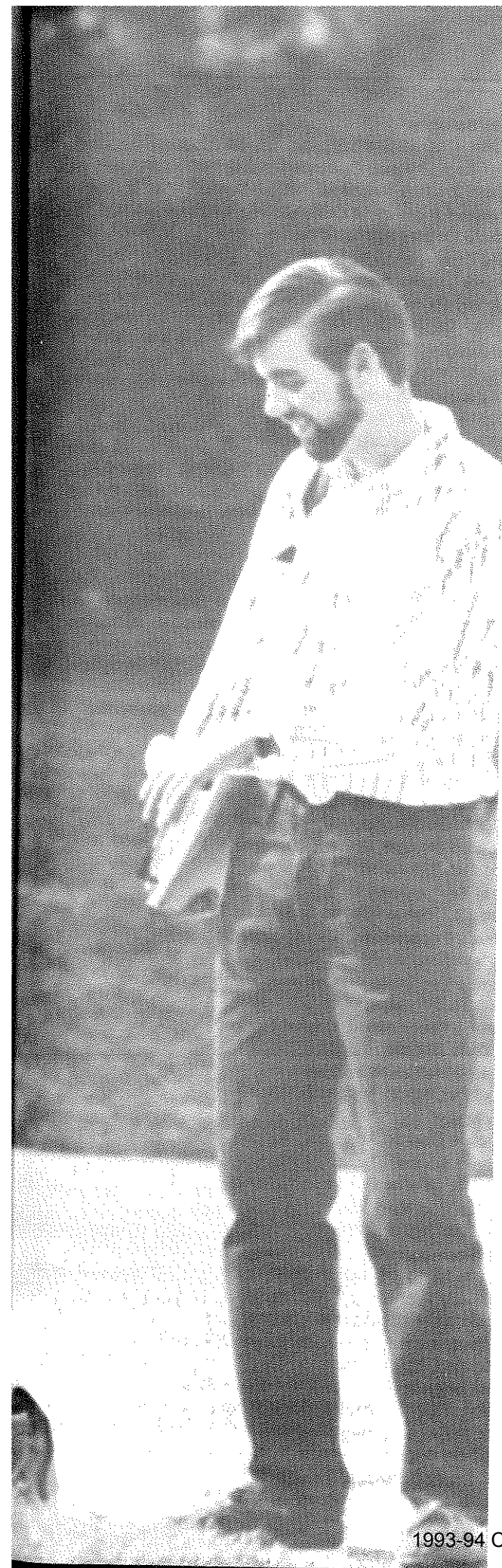
SPECIAL PROGRAMS AND SERVICES

Lansing Community College has many programs and services for students, including the following: Honors Programs, International Programs, Sister College Agreement with Atlanta University Center, Reserve Officer Training Corps, Foundation, New Horizons for Minorities, Women's Resource Center, Center for Aging Education, Office of Handicapped Student Services,

Physical Education and Athletics, Counseling, Orientation, Testing, College and High School Articulation, Academic Advising, Tutoring, Educational and Vocational Information, Financial Aid, Work Study, Employment Placement and Student Activities. For more information see the Student Guide Book.







L A N S I N G
C O M M U N I T Y
C O L L E G E

Degree
& CERTIFICATE
PROGRAMS

DEGREE AND CERTIFICATE PROGRAMS

The following is a list of degree and certificate programs offered by Lansing Community College. Copies of curriculum guides for each of these programs are available in department offices, file drawers around campus, and the counseling office. For additional information about these programs a student should contact the counseling office or an academic advisor.

Programs Leading to an Associate Degree

Accounting

Associate Degree Business

Accounting, C.P.A. Exam Preparation

Associate Degree Business

Administrative Assistant

Associate Degree Business

African American History Major

Associate Degree Arts

American Studies Major

Associate Degree Arts

Architectural Technology

Associate Degree Applied Science

Architectural Technology/Computer Graphics

Associate Degree Applied Science

Auto Body Repair

Associate Degree Applied Science

Automotive Maintenance

Associate Degree Applied Science

Aviation Flight Technology

Associate Degree Applied Science

Aviation Maintenance Technology

Associate Degree Applied Science

Avionics

Associate Degree Applied Science

Banking Management, AIB Diploma Program

Associate Degree Business

Biology

Associate Degree Science

Building Maintenance

Associate Degree Applied Science

Business Administration

Associate Degree Business

CAD/CAM Engineering Technician

Associate Degree Applied Science

Chemical Technology

Associate Degree Science

Chemistry

Associate Degree Science

Child Development/Early Childhood Education

Associate Degree Arts

Civil Technology

Associate Degree Applied Science

Communication Design

Associate Degree Applied Arts

Computer Graphics Animation

Associate Degree Applied Arts

Computer Graphics Commercial Art

Associate Degree Applied Arts

Computer Operations Management

Associate Degree Business

Computer Sales Specialist

Associate Degree Business

Computer Science

Associate Degree Science

Computer Security and Controls

Associate Degree Business

Computerized Numerical Control Programmer

Associate Degree Applied Science

Court and Conference Reporting

Associate Degree Business

Credit Union Management

Associate Degree Business

Criminal Justice, Corrections

Associate Degree Business

Criminal Justice, Police Academy

Associate Degree Business

Criminal Justice, Security Administration

Associate Degree Business

Criminal Justice, Transfer

Associate Degree Business

Dance Career

Associate Degree Applied Arts

Dance Transfer

Associate Degree Applied Arts

Data Processing

Associate Degree Business

Dental Hygienist

Associate Degree Applied Science

Diesel Engine Technology

Associate Degree Applied Science

Drafting and Design

Associate Degree Applied Science

Drafting and Design, Body Design

Associate Degree Applied Science

Drafting and Design, Chassis Design

Associate Degree Applied Science

Electrical Technology

Associate Degree Applied Science

Electronics Technology, Biomedical Option

Associate Degree Applied Science

Electronics Technology, Communications Option

Associate Degree Applied Science

Electronics Technology, Digital Option

Associate Degree Applied Science

Emergency Medical Services

Associate Degree Applied Science

English Major

Associate Degree Arts

Executive Secretary

Associate Degree Business

Field Sales and Marketing

Associate Degree Business

Fine Art Foundation

Associate Degree Applied Arts

Fire Science Technology

Associate Degree Applied Science

Food Management Specialist

Associate Degree Business

Foreign Language

Associate Degree Arts

General, PreAccounting, Transfer

Associate Degree Business

General PreEconomics Transfer

Associate Degree Business

General Science, Associate in Science
Associate Degree Science

Geographic Resource & Environmental Technology
Associate Degree Applied Science

Geoscience
Associate Degree Science

Gerontology
Associate Degree Arts

Heating, Air Conditioning & Refrigeration
Associate Degree Applied Science

History Major
Associate Degree Arts

Horticulture
Associate Degree Applied Science

Hotel/Motel Management Specialist
Associate Degree Business

Human Services (General)
Associate Degree Arts

Humanities Major
Associate Degree Arts

Illustration
Associate Degree Applied Arts

Industrial Automation
Associate Degree Applied Science

Industrial Technology
Associate Degree Applied Science

Information/Word Processing
Associate Degree Business

Interior Design Assistant
Associate Degree Applied Science

International Administrative Assistant
Associate Degree Business

International Business
Associate Degree Business

International Studies
Associate Degree Arts

Landscape Architecture
Associate Degree Applied Science

Legal Assistant
Associate Degree Business

Legal Secretary
Associate Degree Business

Liberal Arts
Associate Degree Arts

Machine Maintenance
Associate Degree Applied Science

Machinist Toolmaker
Associate Degree Applied Science

Management General
Associate Degree Business

Managerial Accounting
Associate Degree Business

Marketing
Associate Degree Business

Mathematics
Associate Degree Science

Media Technology
Associate Degree Applied Science

Medical Secretary/Transcriptionist
Associate Degree Business

Microcomputer Systems
Associate Degree Business

Molecular Biology
Associate Degree Science

Music Commercial Performance
Associate Degree Applied Arts

Music Transfer
Associate Degree Applied Arts

Nursing, Second Year Career Ladder
Associate Degree Applied Science

Personnel/Labor Relations
Associate Degree Business

Philosophy and Religion Major
Associate Degree Arts

Photographic Imaging
Associate Degree Applied Science

Physics
Associate Degree Science

PreBusiness Transfer
Associate Degree Business

Programmer/Analyst
Associate Degree Business

Property Valuation & Assessment Admin.
Associate Degree Business

Psychology
Associate Degree Arts

Quality Assurance
Associate Degree Applied Science

Quality Management
Associate Degree Applied Science

Radiation Therapy
Associate Degree Applied Science

Radiologic Technology
Associate Degree Applied Science

Real Estate
Associate Degree Business

Records and Information Management
Associate Degree Business

Residential Building
Associate Degree Applied Science

Resource & Operations Management Systems
Associate Degree Applied Science

Respiratory Therapist
Associate Degree Applied Science

Secretarial/Word Processing in Technology
Associate Degree Business

Sign Language Interpreter
Associate Degree Arts

Social Science
Associate Degree Arts

Speech Communication, Associate in Arts
Associate Degree Arts

Substance Abuse
Associate Degree Arts

Technology General
Associate Degree Applied Science

Theatre, Acting Transfer
Associate Degree Applied Arts

Theatre, Design/Directing Transfer
Associate Degree Applied Arts

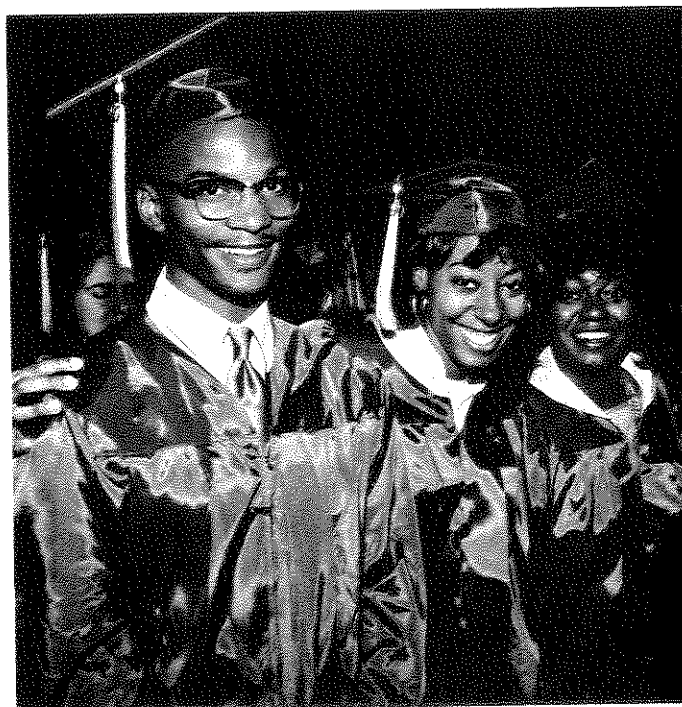
Theology, PreProfessional Major
Associate Degree Arts

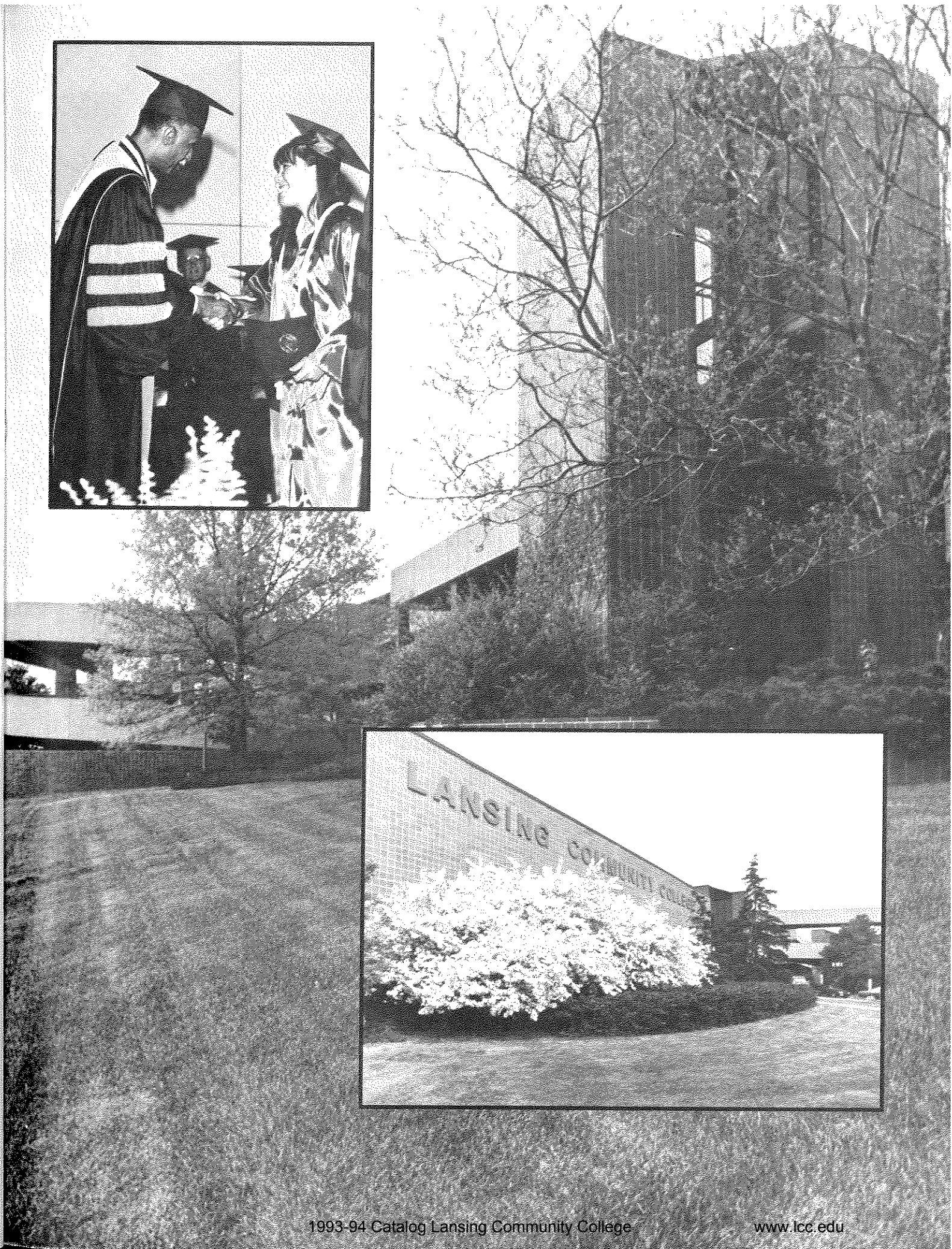
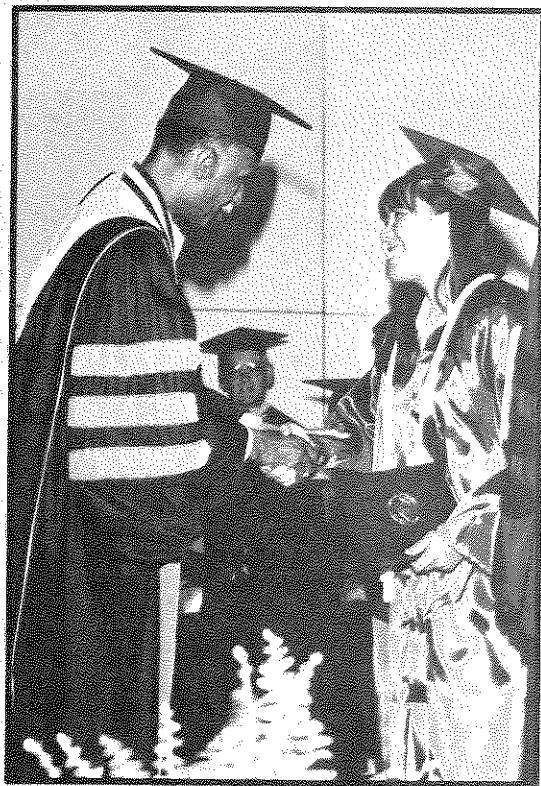
Tourism: Airline And Travel Agency Operations
Associate Degree Business

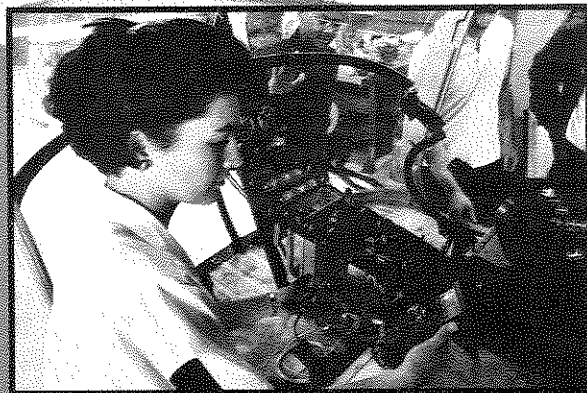
Welding Technology
Associate Degree Applied Science

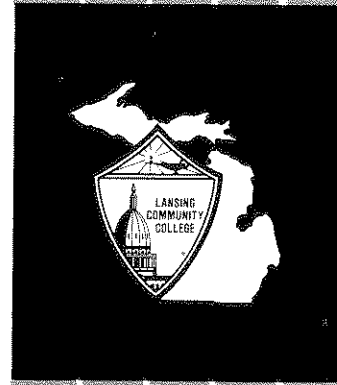
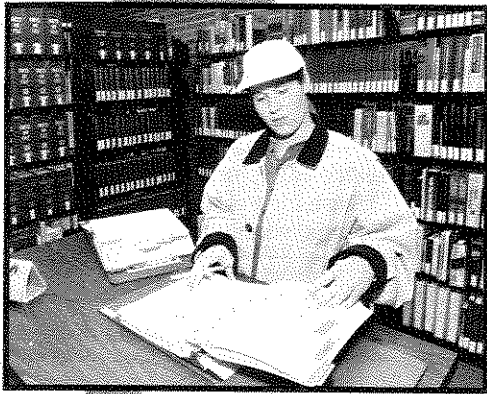
Programs Leading to a Certificate of Achievement

Auto Body Repair
Automated Office Specialist
Automotive Technology
Banking Management, AIB Diploma Program
Basic Emergency Medical Technology
Building Maintenance
Child Development/Early Childhood Education
Computer Operator
Computer Repair Technician
Dance Teaching
Dental Assistant
Diagnostic Medical Sonography
Diesel Engine Technology
Drafting and Design
Field Sales and Marketing
Food Management Specialist
Gerontology
Heating & Air Conditioning
Hotel Motel Management Specialist
Industrial Technology
Information/Word Processing
Machine Repair
Magnetic Resonance Imaging
Management
Management, Advanced
Manual Communication Specialist, Certificate
Marketing
Medical Assistant
Microcomputer Systems
Millwright
Nursing, First Year Career Ladder
Office Support
Paramedic
Power Equipment Repair
Residential Building
Respiratory Therapy Technician
Sign Language Interpreter, Certificate
Stenographer
Substance Abuse
Surgical Technology
Tool and Die Maker
Welding Technology









L A N S I N G
C O M M U N I T Y
C O L L E G E

Course

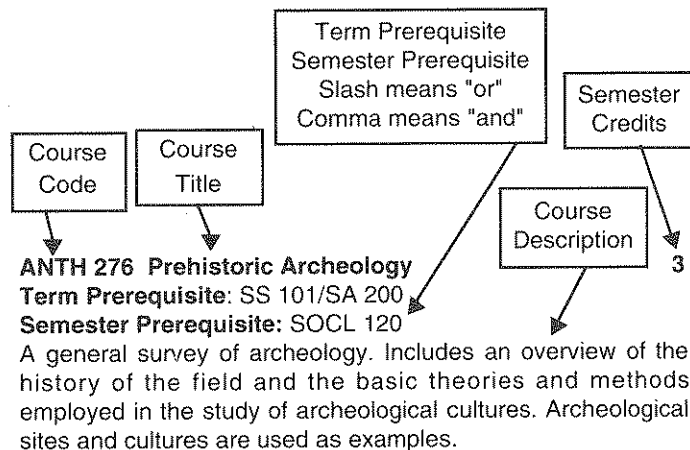
DESCRIPTIONS

HOW TO READ COURSE DESCRIPTIONS

Each course description has six (6) categories of information as follows:

1. Course code
2. Course title
3. Number of semester credit hours
4. Term prerequisites
5. Semester prerequisites
6. Course description

For example:



COURSE CODES USED IN DESCRIPTIONS

COURSE CODES USED IN DESCRIPTIONS

Courses are listed in course code order. The sequence is as follows:

ACCG	Accounting
AERO	Aerospace Studies
AHCC	Allied Health Courses
AIBL	American Institute of Banking: Lansing Area
ANAT	Anatomy
ANTH	Anthropology
ARCH	Architecture
ARTS	Art
ARWS	Art Seminars and Workshops
ASTR	Astronomy
AUTO	Automotive
AVAF	Aviation Airframe Maintenance
AVCE	Aviation Continuing Education
AVEL	Aviation Electronics
AVFT	Aviation Flight Training
AVGM	Aviation General Maintenance
AVGS	Aviation Ground School
AVIR	Aviation Instrument Repair
AVPP	Aviation Powerplant Maintenance
AVST	Aviation Simulator Training
BDCS	Business Development Seminars
BIOL	Biology
BLDR	Building Related
BLDT	Building Trades
BUSN	Business
CABS	Computer Applications Using Business Software
CACR	Court and Conference Reporting
CADD	Computer Aided Drafting and Design
CFPP	Certified Financial Planner Program
CHCE	Continuing Health Careers
CHDV	Child Development
CHEM	Chemistry
CHIN	Chinese
CHSE	Community Health Services
CISB	Computer Information Systems for Business
CIVL	Civil Technology
CJCT	Criminal Justice Continuous Training
CJUS	Criminal Justice
CNCP	Computerized Numerical Control Program
COMM	Communication
COOP	Cooperative Education
CPOA	Computer Office Applications
CPSC	Computer Science
CUAI	Credit Union Accounting and Insurance
CUMA	Credit Union Management
DADH	Dental Assistant/Dental Hygiene
DANC	Dance

DAST	Dental Assisting
DHYG	Dental Hygiene
DNTS	Dental Service Courses
DTDS	Drafting and Design
ECNM	Economics: Arts and Sciences
ECON	Economics: Business
EDUC	Education
ELCT	Electronics Technology
ELTE	Electrical Technology
EMSA	Emergency Medical Services
EMSB	Emergency Medical Services Seminars
EMTA	Emergency Medical Technology
ENGL	English
ENRI	Enrichment
ESLA	English as a Second Language
ESLT	English as a Second Language: Technical
FIRE	Fire Science
FREN	French
GEOG	Geography
GEOG	Geology
GERO	Gerontology
GRET	Geographical Resource and Environmental Technology
GRMN	German
HFCE	Health, Fitness, and Cardiac
HFWE	Health, Fitness, and Wellness
HIST	History
HMFS	Hotel/Motel and Food Service Operations
HONR	Honors
HORT	Horticulture
HAH	E.I.S.D. Allied Health
HSAT	E.I.S.D. Architecture
HSAB	E.I.S.D. Auto Body
HSAM	E.I.S.D. Auto Mechanics
HSBK	E.I.S.D. Banking
HSCA	E.I.S.D. Commercial Art
HSCS	E.I.S.D. Computer Information Systems
HSDT	E.I.S.D. Drafting
HSEC	E.I.S.D. Electronics Technology
HSHF	E.I.S.D. Hotel and Food Service Operations
HSIA	E.I.S.D. Industrial Automation
HSMK	E.I.S.D. Marketing
HSMT	E.I.S.D. Machine Trades
HSWT	E.I.S.D. Welding Trades
HUMS	Humanities
HUSE	Human Services
HVAC	Heating, Ventilating, and Air Conditioning
IASM	Industrial Automation Seminars
IDMS	Diagnostic Medical Sonography
IMAG	Photography Technology
IMRI	Magnetic Resonance Imaging

INAU	Industrial Automation
INST	Integrated Science for Teachers
INSU	Insurance
INTR	Interior Design
IPFL	International Program in Foreign Language
IPFT	International Program in Foreign Travel
IRAD	Radiation Therapy Technology
IRXT	Radiologic Technology
JAPN	Japanese
JRNL	Journalism
LABR	Labor Relations
LAND	Landscape
LEGL	Legal Assistant/Law
LING	Linguistics
MACH	Machine Tool Technology
MATH	Mathematics
MDCR	Management Development Restricted
MDCS	Management Development Seminars
MEDA	Medical Assistant
METR	Meteorology
MFGM	Manufacturing Maintenance
MGMT	Management
MICR	Microbiology
MILS	Military Science
MKTG	Marketing
MTEC	Media Technology
MUSC	Music
NSCI	Natural Science
NURS	Nursing
OADM	Office Administration
OCNL	Oceanology
OEDC	Outdoor Education Courses
PARA	Paramedic
PEAA	Physical Education: Professional
PEAB	Physical Education: Fitness
PEAC	Physical Education: Individual Sport
PEAD	Physical Education: Individual Dual
PEAE	Physical Education: Team Sports
PEAF	Physical Education: Aquatics
PEAG	Physical Education: Combative/Weight Training
PEAH	Physical Education: Indoor Activities
PEAI	Physical Education: Independent Study
PEAJ	Physical Education: Outdoor Activities
PHGY	Physiology
PHIL	Philosophy
PHON	Phonics
PHYS	Physics
POLS	Political Science
PSYC	Psychology
PVAA	Property Valuation and Assessment Administration
QSEM	Quality Assurance Seminars
QUAL	Quality Assurance
RDGR	Reading: Restricted
READ	Reading
REAL	Real Estate
RELG	Religion
RESP	Respiratory Therapy Courses
ROMS	Resource and Operations Management Systems
RSEM	Resource and Operations Management Systems Seminars
SAFE	Safety
SAVL	Saving and Loan
SCIS	Science Seminars
SDEV	Student Development
SIGN	Sign Language
SOCL	Sociology
SOWK	Social Work
SPAN	Spanish
SPCH	Speech Communication
SPEL	Spelling Development
STAT	Statistics
SURG	Surgical Technology
TDTP	Truck Driver Training Program
TECH	Technology General
THEA	Theater
TRVL	Tourism: Airline and Travel Agency Operations
USMT	U.S. Military Training
VCBL	Vocabulary Improvement
WELD	Welding Technology
WRIT	Writing



DESCRIPTIONS

ACCG 100 Practical Accounting for Non-Majors	3	4
Term Prerequisite: None		
Semester Prerequisite: None		
Given a student's need to learn how to prepare basic financial statements and perform other bookkeeping procedures, such as journalizing and posting economic information, and preparing trial balances and payroll, students will be able to accomplish these tasks according to generally accepted accounting principles.		
ACCG 101 Accounting Information for Management	3	2
Term Prerequisite: None		
Semester Prerequisite: None		
Given an entity's financial information, such as an income statement or balance sheet, the student will be able to use this information for analysis, budgeting, and decision-making according to industry guidelines.		
ACCG 140 Individual Income Taxes	3	4
Term Prerequisite: None		
Semester Prerequisite: None		
Given an individual's transactions for the year, such as income and expense items, students will be able to complete an individual income tax return and supporting schedules according to the Internal Revenue Code. The focus is on the completion of forms rather than the theoretical aspects of the tax law.		
ACCG 210 Principles of Accounting I	4	4
Term Prerequisite: MTH 012/Equivalent		
Semester Prerequisite: MATH 062/Equivalent		
Given an entity's financial information, such as a list of daily transactions, the student will be able to create income statements and balance sheets according to generally accepted accounting principles. This class introduces basic concepts of accounting, using a balance of theory and practice.		
ACCG 211 Principles of Accounting II	4	1
Term Prerequisite: MTH 102/Equivalent, 2.0 in ACC 210		
Semester Prerequisite: MATH 112/Equivalent, 2.0 in ACCG 210		
This is the second course in the two-semester introduction to accounting sequence. After completing the course students will be able to record transactions and prepare statements for manufacturing operations, prepare statement of cash flows, prepare budgets and other managerial reports, and do capital budgeting and short term decision-making.		
ACCG 220 Intermediate Accounting I	4	4
Term Prerequisite: 2.0 in ACC 212		
Semester Prerequisite: 2.0 in ACCG 211		
This course covers the more complex theoretical and practical aspects of accounting for cash, receivables, inventories, plant assets, intangibles, and natural resources. In addition, this course reviews the concepts of financial accounting which were covered in the Principles of Accounting courses.		
ACCG 221 Intermediate Accounting II	4	3
Term Prerequisite: 2.0 in ACC 221		
Semester Prerequisite: 2.0 in ACCG 220		
This course covers the more complex theoretical and practical aspects of accounting for investments, current liabilities and contingencies, long-term liabilities, leases, pensions, corporate income taxes, contributed capital, retained earnings, changes in estimates, accounting principle changes, error correction, statement of cash-flow, earnings per share, price-level changes, and financial statements analysis.		
ACCG 230 Cost Accounting	4	4
Term Prerequisite: ACC 212, ACC 260		
Semester Prerequisite: 2.0 in ACCG 211, ACCG 260		
This course develops the more complex aspects of break-even analysis, job and process costing, standards and budgets, capital budgets, and material management. Lotus and dBASE applications are stressed. Also, this course reviews the concepts of cost accounting which were covered in Principles of Accounting II.		
ACCG 231 Managerial Accounting	4	1
Term Prerequisite: 2.0 in ACC 230		
Semester Prerequisite: 2.0 in ACCG 230		
This course covers the more complex control and managerial aspects of information gathering, relevance, and decision-making in the areas of pricing, profitability, cost allocation, uncertainty, variance investigation, decentralization, executive performance measurement and strategic control systems.		
ACCG 240 Federal Income Tax I	4	4
Term Prerequisite: 2.0 in ACC 212		
Semester Prerequisite: 2.0 in ACCG 211		
This class is the first in a two semester sequence covering Federal Income Tax Law. After completing this course students will be able to complete a Federal Individual Income Tax return. Students will understand the Federal Laws governing the income an individual must report and allowable expenses and credits.		
ACCG 241 Federal Income Tax II	4	4
Term Prerequisite: ACC 240		
Semester Prerequisite: ACCG 240		
This is the second of two semester classes covering Federal Income Taxes. After completing this course students will be able to compute a Federal Corporate Income Tax return. They will understand and apply the underlying laws governing taxation of corporations, partnerships, and tax-exempt entities.		
ACCG 245 Accounting Internship	2	4
Term Prerequisite: Departmental Approval		
Semester Prerequisite: Departmental Approval		
This internship provides the student with on-the-job experience in the accounting field. It requires 160 hours of work experience.		
ACCG 250 Advanced Accounting	4	4
Term Prerequisite: 2.0 in ACC 222		
Semester Prerequisite: 2.0 in ACCG 221/Departmental Approval		
Given a student's need to acquire more in-depth knowledge of accounting topics, such as consolidations, foreign currencies, partnerships, and governmental entities, students will learn to perform calculations, record journal entries, and prepare financial statements according to generally accepted accounting principles, and the Governmental Accounting Standards Board.		
ACCG 251 Accounting Seminar	1	4
Term Prerequisite: Departmental Approval		
Semester Prerequisite: Departmental Approval		
With this course students will learn special topics of current interest.		
ACCG 260 Microcomputer Accounting Systems	4	4
Term Prerequisite: ACC 211		
Semester Prerequisite: ACCG 210		
The Accounting Systems course is designed to prepare students to deal with problems and issues related to computer based information systems and related accounting software with an emphasis on systems.		
ACCG 266 Independent Study in Accounting	1	4
Term Prerequisite: Departmental Approval		
Semester Prerequisite: Departmental Approval		
With this course students will learn advanced accounting topics as a part of a class, an independent study, or a project. Grading criteria and course objectives are determined at the first meeting. The course requires a minimum for each credit earned of either 16 classroom hours or 48 independent study hours.		
ACCG 271 Principles of Finance	3	4
Term Prerequisite: ACC 212		
Semester Prerequisite: ACCG 211		
This course emphasizes the short- and long-term decisions a financial manager may face. Topics include working capital management, risk, cost of capital, capital markets, long-term debt, stocks and dividend policy, mergers and acquisitions, and international financial markets as these topics relate to obtaining financing for a business.		
ACCG 280 Governmental Accounting	4	4
Term Prerequisite: ACC 212		
Semester Prerequisite: ACCG 211		
Given a public or not-for-profit entity's financial data, students will be able to record transactions and prepare financial statements according to the Governmental Accounting Standard Board's guidelines.		
ACCG 290 Auditing	3	4
Term Prerequisite: ACC 222/Departmental Approval		
Semester Prerequisite: ACCG 221/Departmental Approval		
Given an external audit, such as those conducted by public accounting firms, students will be familiar with audit terminology, and be able to perform entry level audit functions according to Generally Accepted Auditing Standards and Statements on Auditing Standards.		
ACCG 295 Accounting Theory Review	1	4
Term Prerequisite: Departmental Approval		
Semester Prerequisite: Departmental Approval		
This course is designed to provide C.P.A. exam candidates a background of information needed to complete the exam. Its focus is on the concepts and assumptions of accounting theory. Typical examination questions and problems are covered using current material and past exams.		
ACCG 296 Commercial Law Review	1	4
Term Prerequisite: Departmental Approval		
Semester Prerequisite: Departmental Approval		
This course is designed to provide C.P.A. exam candidates a background of information needed to complete the exam. Its focus is on the fundamental principles and the nature of our law for business. Typical examination questions and problems are covered using current material and past exams.		

ACCG 297 Auditing Review 1	AHCC 205 Cultural Diversity in Health and Illness 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide C.P.A. exam candidates a background of information needed to complete the exam. Its focus is on the concepts, assumptions, and procedures of the audit. Typical examination questions and problems are covered using current material and past exams.	Term Prerequisite: Departmental Approval Semester Prerequisite: Health Professionals The purpose of this course is to explore the cultural bond differences of health and illness. The relationship of social, cultural, political, and economic factors will be presented.
ACCG 298 Accounting Practice Review 2	AIBL 101 Principles of Banking 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide C.P.A. exam candidates a background of information needed to complete the exam. Its focus is on the concepts and assumptions of accounting practice. Typical examination questions and problems are covered using current material and past exams.	Term Prerequisite: None Semester Prerequisite: None 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.
ACCG 299 Complete CPA Review 5	AIBL 120 Economics for Bankers 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide C.P.A. exam candidates a background of information needed to complete the exam. Its focus is the concepts and assumptions of accounting theory and practice; the fundamental principles and the nature of our law for business; and the concepts, assumptions, and procedures of the audit.	Term Prerequisite: None Semester Prerequisite: None 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.
AERO 111 Organization of the U.S. Air Force 1	AIBL 130 Financial Planning for Bankers 2
Term Prerequisite: None Semester Prerequisite: None This course reviews the doctrine and mission of the U.S. Air Force and its history, organization, and structure. Oral and written communication skills will be developed. Includes a leadership laboratory.	Term Prerequisite: None Semester Prerequisite: None This course addresses the perspectives, principles, and practices of financial planning in an understandable, step-by-step format. Students will develop an understanding of the comprehensive process that looks at a customer's total financial picture and recommends strategies to achieve the customer's objectives.
AERO 112 U.S. Strategic Offensive and Defensive Forces 1	AIBL 170 Preparing for Supervision 1
Term Prerequisite: None Semester Prerequisite: None This course reviews the mission and functions of specific Air Force commands and role of commands in U.S. defense policy. It reviews the employment of contemporary military equipment and systems. Includes a Leadership Laboratory.	Term Prerequisite: None Semester Prerequisite: None 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.
AERO 211 The Development of Air Power: Ascension to Prominence 1	AIBL 171 Customer Service for Bank Personnel 1
Term Prerequisite: None Semester Prerequisite: None This course reviews the factors contributing to the change in nature of the military. It examines conflict and history of air power from its earliest beginnings through World War II. The evolution of air power concepts and doctrine is also reviewed. Includes a Leadership Laboratory.	Term Prerequisite: None Semester Prerequisite: None A seminar that emphasizes the development of better communications skills to benefit employees, customers, and the bank. Students will learn effective ways of establishing contact, exploring customer needs, defining and resolving problems, and closing the encounter.
AERO 212 The Development of Air Power: Key to Deterrence 1	AIBL 172 Product Knowledge 1
Term Prerequisite: None Semester Prerequisite: None This course examines the history of air power from the end of World War II through present times. It also reviews the role of technology in the growth of air power employment in military and non-military operations. Includes a Leadership Laboratory.	Term Prerequisite: None Semester Prerequisite: None A seminar that provides an understanding of the range of financial products a bank can offer. It also explains the needs that these products meet. Emphasis is placed on basic selling skills along with product knowledge.
AHCC 102 Nutrition 2	AIBL 173 Selling Bank Services 1
Term Prerequisite: Allied Health, BIO 101 Recommended Semester Prerequisite: BIOL 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.	Term Prerequisite: None Semester Prerequisite: None This course will help develop vital selling skills. Focusing on how a consumer makes the decision to buy, the course shows how to facilitate the process by proposing services that truly meet the customer's financial needs.
AHCC 104 Patient Care Principles 3	AIBL 174 Personnel and the Law .5
Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Surgical Technology/Radiologic Technology, AHCC 108 Recommended Principles of basic patient care are presented to assist the student in managing patients in the health-care setting. Information and simulated practice will include surgical aseptic techniques, infection control procedures, taking vital signs, handling medical emergencies, and other practices emphasizing the physical and emotional aspects of basic patient care.	Term Prerequisite: None Semester Prerequisite: None 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.
AHCC 106 Introduction to Pathology 2	AIBL 175 Bank Security for Customer Contact Personnel .5
Term Prerequisite: Allied Health Semester Prerequisite: Health Careers Applicant/Student General principles of pathology are discussed, rather than specific disease entities, to develop a new way of thinking about disease processes. Concepts of disease processes and their effect on normal structure and function of the body are emphasized.	Term Prerequisite: None Semester Prerequisite: None 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.
AHCC 108 Body Systems 3	AIBL 176 Compliance Management 1
Term Prerequisite: Allied Health Semester Prerequisite: Health Careers Applicant/Student An introductory course for health career students to provide a survey of the human body and its systems. Practical application of physiological concepts is emphasized.	Term Prerequisite: None Semester Prerequisite: None This seminar takes 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.

<p>AIBL 177 Officer Calling Skills .5 Term Prerequisite: None Semester Prerequisite: None 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. Students will learn and practice techniques designed to generate and maintain solid business relationships with commercial clients.</p>	<p>AIBL 221 Branch Banking Series 3 Term Prerequisite: None Semester Prerequisite: None A variety of topics are presented in this class to help new and prospective branch managers prepare for their new responsibilities. Credit, human resource management, managing sales in the branch, and marketing are presented to help students sharpen their skills and perform their job more effectively.</p>
<p>AIBL 178 Problem Loans 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>ANAT 145 Introductory Anatomy and Physiology 3 Term Prerequisite: None Semester Prerequisite: None An introductory course in human anatomy and physiology which combines lecture and laboratory experiences to provide a basic understanding of the structure and function of body systems. Designed for vocational programs, including dental assistant and medical transcriptionist, as well as non-science majors.</p>
<p>AIBL 179 Consumer Bankruptcy .5 Term Prerequisite: None Semester Prerequisite: None This seminar presents, in non-technical terms, the history and development of the bankruptcy code, the specific provisions of the 1984 bankruptcy amendments and federal judgeship act affecting Chapters 7 and 13 filings, and the ways in which banks can minimize losses from customer bankruptcies.</p>	<p>ANAT 151 Anatomy and Physiology I 3 Term Prerequisite: None Semester Prerequisite: None First course of a two-semester sequence in human anatomy and physiology emphasizing the structure and function of cells and tissues; the skeletal, muscular and nervous systems; and special sense organs.</p>
<p>AIBL 180 Real Estate Documentation 1 Term Prerequisite: None Semester Prerequisite: None This course emphasizes the basics of loan processing and underwriting. Students will develop skills necessary to conduct loan interviews, process loan applications, act on a loan decision and close real estate loans.</p>	<p>ANAT 152 Anatomy and Physiology II 3 Term Prerequisite: 2.0 Minimum in ANAT 151 Semester Prerequisite: 2.0 Minimum in ANAT 151 The second of a two semester sequence emphasizing structure and function of the endocrine, digestive, respiratory, circulatory, urinary and reproductive systems. Includes fetal development and genetics.</p>
<p>AIBL 181 Personal Banker .5 Term Prerequisite: None Semester Prerequisite: None This course provides an overview of the personal banking concept and explains how personal banking skills are integrated into each job. It also outlines general sales, communication, and problem-solving skills needed to assume the personal banker role and how those skills work within relationship banking.</p>	<p>ANAT 201 Human Anatomy 4 Term Prerequisite: 2.0 Minimum in BIO 101, CEM 110/Equivalent/Pass Proficiency Exams Semester Prerequisite: BIOL, CHEM Recommended 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.</p>
<p>AIBL 206 Money and Banking 3 Term Prerequisite: AIB 120/Departmental Approval Semester Prerequisite: AIBL 120/Departmental Approval This course presents a fundamental treatment of how money functions in the U.S. and world economies. Topics include the concept of money supply, the role a bank plays as a money creator and participant in the nation's payment mechanism, monetary and fiscal policies, the federal reserve, and more.</p>	<p>ANTH 270 Cultural Anthropology 3 Term Prerequisite: SS 101/SA 200 Semester Prerequisite: SOCL 120 This course compares ways of life for societies worldwide using anthropological theory and methodology. Basic institutions of human society, such as kinship, religion, law, politics, and economics are examined to provide a better understanding of the diversity of contemporary societies. Focuses on non-Western societies.</p>
<p>AIBL 207 Consumer Lending and Loan Training 3 Term Prerequisite: None Semester Prerequisite: None This course offers essential information about the maze of regulations that govern credit practices and reviews loan processing, cross-selling, and collections. Case studies and role plays are offered to acquaint students with effective loan interviewing skills and hands-on training to improve the quality of the credit decision.</p>	<p>ANTH 275 Physical Anthropology and Archeology 3 Term Prerequisite: SS 101/SA 200 Semester Prerequisite: SOCL 120 Introduces human biological and cultural evolution, mechanisms of evolution, biological and cultural evidence from the fossil record, culture as an adaptive mechanism, and modern human variation.</p>
<p>AIBL 208 Commercial Lending and Loan Documentation 3 Term Prerequisite: ACC 210/Departmental Approval Semester Prerequisite: ACCG 210/Departmental Approval This course focuses on how the commercial lending business is organized, how it contributes to bank profitability, and the total commercial lending process. Students will learn the credit-granting process which will help ensure asset quality, avoid pitfalls, and protect the bank's integrity.</p>	<p>ANTH 276 Prehistoric Archeology 3 Term Prerequisite: SS 101/SA 200 Semester Prerequisite: SOCL 120 A general survey of archeology, includes an overview of the history of the field and the basic theories and methods employed in the study of archeological cultures. Archeological sites and cultures are used as examples.</p>
<p>AIBL 212 Analysis of Financial Statements 3 Term Prerequisite: ACC 210/Equivalent Semester Prerequisite: ACCG 210/Equivalent Provides the opportunity to further develop the skills necessary to conduct a comprehensive and effective financial analysis of a business borrower in order to assess repayment capacity.</p>	<p>ARCH 100 Introduction to Architecture 3 Term Prerequisite: None Semester Prerequisite: None This course is for students with no previous experience in basic architectural drafting. Students will be introduced to the proper techniques of architectural line work, lettering, orthographic projection, and axonometric drawings. Techniques of architectural dimensioning, the use of symbols, and the production of a basic floor plan will be accomplished.</p>
<p>AIBL 214 Law and Banking: Principles 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>ARCH 101 Architectural Drafting I 4 Term Prerequisite: AT 100 Semester Prerequisite: ARCH 100/Equivalent This course is the first of a four-part (core) series of residential and light commercial architectural drafting courses. Students will use previously obtained basic drafting techniques to draw a series of residential details. The development of professional quality drafting, lettering, research, and communication techniques will be emphasized.</p>
<p>AIBL 215 Law and Banking: Applications 2 Term Prerequisite: AIB 214 Recommended Semester Prerequisite: AIBL 214 Recommended This course is an introduction to laws pertaining to secured transactions, letters of credit, and the bank collection process. Students will review the legal implications of normal activities and transactions in banking operations, the impact of the law, and applicable bank regulations.</p>	<p>ARCH 102 Architectural Drafting II 4 Term Prerequisite: AT 231 Semester Prerequisite: ARCH 101 This course is the second in a four-part (core) series of residential and light commercial architectural drafting courses. Students will use previously obtained basic drafting techniques and knowledge of residential detailing to design and draft basic architectural design problems, residential floorplans, elevations, and building sections.</p>

ARCH 121 Visual Communication I	3	ARCH 202 Architectural Drafting IV	4
Term Prerequisite: None		Term Prerequisite: AT 233	
Semester Prerequisite: None		Semester Prerequisite: ARCH 201, ARCH 271 Concurrently	
Students with very little or no previous experience in the production of architectural graphics will be introduced to the basic techniques of sketching, axonometric, and perspective drawings. The theory and production of the most commonly used professional techniques of black and white architectural rendering and basic modeling will be studied.		This course is the conclusion in a four-part (core) series of residential and light commercial architectural drafting courses. Students will use previously obtained drafting, research, and presentation skills to complete the working drawing floor plans, elevations, sections, and details for the light commercial projects started in the preceding course.	
ARCH 122 Visual Communication II	3	ARCH 211 Design Studio I	3
Term Prerequisite: AT 152		Term Prerequisite: AT 231	
Semester Prerequisite: ARCH 121/Equivalent		Semester Prerequisite: ARCH 101	
This course is a continuation of Visual Communication I. Students will gain knowledge of basic color rendering techniques using a variety of media.		This course is an introduction to the basic theories and methods of architectural design, problem-solving techniques, and design methodologies using contemporary architects as examples. Students will be given a series of problem-solving exercises and will be instructed in developing presentation and verbal techniques to present their solutions.	
ARCH 123 Visual Communication III	3	ARCH 212 Design Studio II	3
Term Prerequisite: AT 253		Term Prerequisite: AT 162	
Semester Prerequisite: ARCH 122		Semester Prerequisite: ARCH 211	
The ability to realistically depict three dimensional architectural spaces and related entourage, using the students' previously obtained graphic production knowledge, is the goal of this course. An emphasis on developing the use of light and shadow and the true depiction of textures and materials will be taught.		This course will use the skills developed in ARCH 211 to expand the student's understanding and processes for designing three-dimensional architectural space. Using models and various graphical mediums, students will explore the effects of scale, circulation, light, color, and texture on the spaces and forms created.	
ARCH 126 Model Building	2	ARCH 213 Facilities Design	3
Term Prerequisite: None		Term Prerequisite: AT 233	
Semester Prerequisite: None		Semester Prerequisite: ARCH 201/Concurrently	
Students in this course will enhance their design and communications skills by developing various techniques for building three-dimensional architectural models. Examples constructed will range from the most basic of study models using readily available materials to more sophisticated presentation models.		In this course, students will explore, tour, and study the design theory behind a full range of structures used for office and manufacturing purposes. Systems of manufacturing and how they relate to the structures which house them will be studied.	
ARCH 128 Residential Planning	2	ARCH 221 Architectural DataCAD I	4
Term Prerequisite: None		Term Prerequisite: AT 230	
Semester Prerequisite: None		Semester Prerequisite: ARCH 101/Concurrently	
This course is designed for beginning through advanced students of architecture who want to study the theories behind the design of the American single-family residence. Architectural styles, planning concepts, the writing of design criteria programs, and the production of basic diagrams through finished concept drawings will be accomplished.		This entry level course introduces the computer-aided drafting and design software, DataCAD, on an IBM PC computer. Students will create basic residential plans using two dimensional editing functions. DataCAD's AEC and 3-D Modeler will also be used for presentations and commercial drawing applications. No previous computer experience is necessary.	
ARCH 131 City Planning	3	ARCH 222 Architectural DataCAD II	4
Term Prerequisite: None		Term Prerequisite: AT 277	
Semester Prerequisite: None		Semester Prerequisite: ARCH 221	
This is an introduction to the field of urban and regional planning. The development of planning theory, process, and practices, such as urban design, environmental and land-use planning, transportation, economic development, housing, and community facilities will be studied. The history of various cities and their development will also be studied.		This advanced level course continues to develop the students' skills using the DataCAD software. Complex three dimensional entities including contours, mesh surfaces, and surfaces of revolution will be used on models and site plans. The photo-realistic rendering program Velocity will be introduced for a variety of perspective drawings.	
ARCH 141 Architectural History I	3	ARCH 225 Architectural DataCAD Project Lab	2
Term Prerequisite: None		Term Prerequisite: AT 278	
Semester Prerequisite: None		Semester Prerequisite: ARCH 222	
Beginning with ancient times, this course studies the major civilizations which have contributed to the development of the architecture of world civilizations. A wide variety of visual media will be used to present the major theories, works, and personalities in architecture and the decorative arts through the Renaissance.		This is an advanced level, computer-aided drafting and design independent study course using DataCAD software. After completing all available structured DataCAD courses, the students will outline, research, design, and construct a project of their own selection with the approval and guidance of the instructor.	
ARCH 142 Architectural History II	3	ARCH 231 Architectural AutoCAD I	4
Term Prerequisite: AT 247 Recommended		Term Prerequisite: AT 230	
Semester Prerequisite: ARCH 141 Recommended		Semester Prerequisite: ARCH 101/Concurrently	
This course, the second in a series, examines the greatest works and principal figures in world architectural history from the 1600s forward. Using a variety of visual media this course will look at the principal works, theories, and individuals who have had the greatest impact on architecture and decorative arts to the present day.		This entry level course introduces AutoCAD, a PC-based computer graphic system, for architectural applications. No computer experience is needed. Students will concentrate on two-dimensional drawing and editing functions for creating floor plans, elevations, and building sections. An introduction to three-dimensional modeling techniques will also be covered.	
ARCH 146 Preservation and Adaptive Re-use Architecture	2	ARCH 232 Architectural AutoCAD II	4
Term Prerequisite: None		Term Prerequisite: AT 265	
Semester Prerequisite: None		Semester Prerequisite: ARCH 231	
This course is designed as an overview of the principles and practices of preservation, restoration and adaptive re-use architecture. Students will have the opportunity to work on a project of their choosing while being introduced to research methods, publications, and examples of preservation and new uses for existing structures.		This course is a continuation of AutoCAD I. Complex three dimensional shapes and solids will be used to model designs for presentation graphics. The rendering program AutoShade will be used to realistically enhance the models. An introduction to Auto LISP programs will also be covered.	
ARCH 201 Architectural Drafting III	4	ARCH 235 Architectural AutoCAD Project Lab	2
Term Prerequisite: AT 232		Term Prerequisite: AT 266	
Semester Prerequisite: ARCH 102, ARCH 141		Semester Prerequisite: ARCH 232	
This course is the third of a four-part (core) series of residential and light commercial architectural drafting courses. Students will use previously obtained drafting, research, and presentation skills to design, delineate, present, and draft a light commercial project from basic schematics to working drawings.		This is an advanced level, computer-aided drafting and design independent study course using AutoCAD software. After completing all available structured AutoCAD courses, the student will outline, research, design, and construct a project of his/her own selection, with the approval and guidance of the instructor.	

<p>ARCH 241 Architectural AES Computer Graphics I 4 Term Prerequisite: AT 230 Semester Prerequisite: ARCH 101/Concurrently This course is designed as an entry level computer-aided drafting and design course using the AES software. Students will learn to build command strings in the modeling program to construct 3-D geometry, edit, create layers, plot, apply text and dimensions, and open and close graphic windows.</p>	<p>ARCH 297 Architectural Project Lab 4 Term Prerequisite: 2nd Year Student/Approval Semester Prerequisite: 2nd Year Student/Approval This course provides the second-year architecture student with the opportunity to pursue a project of personal interest under the supervision of an instructor. With the approval and under the guidance of the instructor, the student will outline, research, design, and construct a project of his/her own selection.</p>
<p>ARCH 242 Architectural AES Computer Graphics II 4 Term Prerequisite: AT 243 Semester Prerequisite: ARCH 241 This course will build on the knowledge gained in ARCH 241 and will add additional applications in modeling, file management, plotting, and rendering.</p>	<p>ARTS 005 Computer Graphics Lab .5 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval, Currently Enrolled Art Student ARTS 005 determines the time for the student's attendance in the Computer Graphics Laboratory; it is not a course. ARTS 005 enables the student to utilize the laboratory equipment and software to create individualized computer graphics for art courses conducted in a traditional classroom environment.</p>
<p>ARCH 261 Architectural CADAM Computer Graphics I 4 Term Prerequisite: AT 230 Semester Prerequisite: ARCH 101/Concurrently This course is an introduction to the CADAM drafting software system. Students will learn to create multiview drawings with dimensions and notes. Emphasis will be placed on producing architectural working/detail drawings.</p>	<p>ARTS 101 Design I 3 Term Prerequisite: None Semester Prerequisite: None Universal elements and principles of design, design theory and vocabulary with emphasis on composition and its application to black and white media.</p>
<p>ARCH 262 Architectural CADAM Computer Graphics II 4 Term Prerequisite: AT 262 Semester Prerequisite: ARCH 261 This is an advanced level architectural computer-aided drafting and design course using Mainframe CADAM software. Students will learn how to use the advanced features of CADAM which include overlay, file management, standard library creation, sets and attributes, 3-D construction, grouping, and an introduction to the AEC design base software.</p>	<p>ARTS 102 Design II 3 Term Prerequisite: ART 101 Semester Prerequisite: ARTS 101 A continuation of two-dimensional design principles with emphasis on color theory, color interaction, properties, principles, and qualities of color.</p>
<p>ARCH 265 Architectural CADAM Computer Graphics Project Lab 2 Term Prerequisite: AT 262 Semester Prerequisite: ARCH 262 This is an advanced level computer-aided drafting and design independent study course, using CADAM software. After completing all available structured CADAM courses, students will outline, research, design, and construct a project of their own selection with the approval and guidance of the instructor.</p>	<p>ARTS 103 Design III 3 Term Prerequisite: ART 102 Semester Prerequisite: ARTS 102 Line, shape, form, value, and texture are explored using a variety of three dimensional materials and applying principles and elements of design.</p>
<p>ARCH 271 Structural Theory 4 Term Prerequisite: AT 230/Concurrently Semester Prerequisite: ARCH 101/Concurrently This course introduces the principles of statics and relates the application of physical forces to structural materials and elements. The structural and design properties of steel, wood, and concrete will be studied. The ability to read structural tables and accurately make calculations will be emphasized.</p>	<p>ARTS 111 Computer Graphics/Art I 3 Term Prerequisite: ART 101, ART 131, CPS 100 Semester Prerequisite: ARTS 101, ARTS 131, CPSC 120, Departmental Approval A beginning course for students interested in creating artistic images with the aid of a computer. Emphasis is on hands-on training using sophisticated, user-friendly artistic software. Students must show evidence of design and drawing skills to receive department approval.</p>
<p>ARCH 273 Environmental Systems 4 Term Prerequisite: AT 230 Semester Prerequisite: ARCH 101/Concurrently This course is designed for architecture and interior architecture students. All elements affecting the interior environment of a commercial or residential structure, such as lighting, HVAC systems, and acoustics, will be studied. Calculations and the sizing of systems will be part of all sections.</p>	<p>ARTS 112 Computer Graphics/Art II 3 Term Prerequisite: ART 102, ART 111 Semester Prerequisite: ARTS 102/Concurrently, ARTS 111, Departmental Approval A continuation of Computer Graphics I (ARTS 111) with emphasis on color and digitizing images with the aid of a computer to create more sophisticated work. Knowledge of color theory recommended.</p>
<p>ARCH 276 Alternative Structures 2 Term Prerequisite: AT 230 Semester Prerequisite: ARCH 101/Concurrently The study of post and beam, underground, stress skin, and other alternative methods of construction will be studied in this course.</p>	<p>ARTS 120 Electronic Design I 3 Term Prerequisite: ART 101 Semester Prerequisite: ARTS 101/Concurrently An introductory hands-on course designed to provide the student with a working knowledge of page layout and related software programs utilizing a Macintosh computer. Emphasis on electronic publishing applications.</p>
<p>ARCH 278 Energy Systems 3 Term Prerequisite: None Semester Prerequisite: None A examination of all commonly used passive and active energy systems, energy efficient design, and the materials relating to insulation of residential and commercial construction will be reviewed in this course.</p>	<p>ARTS 121 Electronic Design II 3 Term Prerequisite: ART 120, ART 143, ART 150 Semester Prerequisite: ARTS 120, ARTS 163, ARTS 180, Departmental Approval An advanced hands-on course in electronic publishing techniques with an emphasis on graphic design and layout. Expands on concepts introduced in Electronic Design I (ARTS 120). Includes word processing, scanning, digitizing, and manipulation of graphics.</p>
<p>ARCH 283 Materials of Construction 4 Term Prerequisite: AT 230 Semester Prerequisite: ARCH 101/Concurrently This course consists of the evaluation of the various characteristics of all materials commonly used in residential and light commercial structures. Students will develop a sensitivity to the use of building products based on a knowledge of their properties, limitations, and availability.</p>	<p>ARTS 131 Drawing 3 Term Prerequisite: ART 101 Semester Prerequisite: ARTS 101/Concurrently A studio class using a variety of tools and methods. Introduces realism, abstraction, and stream of consciousness, using materials such as pencil, ink, and conte crayon.</p>
<p>ARCH 295 Architectural Project Lab 2 Term Prerequisite: 2nd Year Student/Approval Semester Prerequisite: 2nd Year Student/Approval This course provides the second-year architecture student with the opportunity to pursue a project of personal interest under the supervision of an instructor. With the approval and under the guidance of the instructor, the student will outline, research, design, and construct a project of his/her own selection.</p>	<p>ARTS 132 Life Drawing 3 Term Prerequisite: ART 101, ART 131 Semester Prerequisite: ARTS 101, ARTS 131 Basic concepts, approaches, and techniques involving drawing the human figure, using materials such as pencil, ink, charcoal, and conte crayon.</p>
<p>ARCH 297 Architectural Project Lab 4 Term Prerequisite: 2nd Year Student/Approval Semester Prerequisite: 2nd Year Student/Approval This course provides the second-year architecture student with the opportunity to pursue a project of personal interest under the supervision of an instructor. With the approval and under the guidance of the instructor, the student will outline, research, design, and construct a project of his/her own selection.</p>	<p>ARTS 137 Perspective Drawing 3 Term Prerequisite: None Semester Prerequisite: None Basic principles of perspective drawing utilized in product and architectural illustration. Includes one-, two-, and three-point perspective. For both Commercial Art and Fine Art students.</p>

ARTS 140 Printmaking I	3	ARTS 180 Communication Design I	3
Term Prerequisite: ART 101		Term Prerequisite: ART 101, ART 145	
Semester Prerequisite: ARTS 101/Concurrently		Semester Prerequisite: ARTS 101, ARTS 162	
An introduction to the various printmaking techniques, tools, and vocabulary of the printmaker. Includes etching, embossing, monoprinting, and linoleum cut.		An overview of the corporate image and the designer's role in developing relevant design materials, including the logotype and its varied applications. Color, paper, and type selection for the individual client will be emphasized.	
ARTS 141 Printmaking II	3	ARTS 181 Communication Design II	3
Term Prerequisite: ART 135		Term Prerequisite: ART 150, ART 102, ART 143, ART 120	
Semester Prerequisite: ARTS 140, Departmental Approval		Semester Prerequisite: ARTS 120/Concurrently, ARTS 102, ARTS 163, ARTS 180	
Students expand on processes and concepts introduced in Printmaking (ARTS 140). Emphasizes refining technical skills and conceptual development.		An overview of publication and advertising design and the designer's role in the creative organization of typography, photography, and illustration. Emphasis on editorial concept, format, and design considerations.	
ARTS 142 Advanced Printmaking	3	ARTS 182 Communication Design III	3
Term Prerequisite: ART 139		Term Prerequisite: ART 120, ART 210, MKT 140	
Semester Prerequisite: ARTS 141, Departmental Approval		Semester Prerequisite: ARTS 120, ARTS 181, MKTG 140, Departmental Approval	
An opportunity for the advanced student to continue with his/her personal exploration and development of printmaking skills under the guidance of an instructor.		An advanced course involving the design of promotional graphics, both two- and three-dimensional, and utilizing innovative design and media considerations. Students will work through the design process from initial concept to final presentation.	
ARTS 145 Screen Printing I	3	ARTS 200 Painting I	3
Term Prerequisite: None		Term Prerequisite: ART 102, ART 131	
Semester Prerequisite: None		Semester Prerequisite: ARTS 102, ARTS 131	
An introduction to basic silkscreen stencil processes with an emphasis on registration techniques. Includes constructing a frame and making a phototransparency.		An introduction to objective oil painting concepts in the realistic tradition. Examines basic materials, tools, and handling qualities.	
ARTS 146 Screen Printing II	3	ARTS 201 Painting II	3
Term Prerequisite: ART 140		Term Prerequisite: ART 200	
Semester Prerequisite: ARTS 145, Departmental Approval		Semester Prerequisite: ARTS 200	
Students expand on processes and concepts introduced in Screen Printing (ARTS 145). Exploration and experimentation with more complex techniques and problems. An in-depth study of photographic processes and combining paper, cut film and block out stencils.		A continuation of Painting (ARTS 200) emphasizing more advanced techniques and increasingly complex problems in oil painting.	
ARTS 147 Advanced Screen Printing	3	ARTS 202 Advanced Painting	3
Term Prerequisite: ART 141		Term Prerequisite: ART 201	
Semester Prerequisite: ARTS 146, Departmental Approval		Semester Prerequisite: ARTS 201, Departmental Approval	
An opportunity for the advanced student to continue with his/her personal exploration and development of screen printing skills under the guidance of an instructor.		An opportunity for the advanced student to continue with his/her personal exploration and development of painting skills under the guidance of an instructor.	
ARTS 155 Art Form Development I	4	ARTS 203 Figure Painting	3
Term Prerequisite: RDG 150, WRI 112		Term Prerequisite: ART 102, ART 132	
Semester Prerequisite: WRIT 112, READ 115		Semester Prerequisite: ARTS 102, ARTS 132	
A survey of the history of art as a formal language which deals with universal themes. Examines how and why particular subjects and styles are unique to the following cultures: Pre-Historic, Native American, Pre-Columbian, African, Ancient (near East and Mediterranean), Byzantine, Islamic, Medieval, and the Far East.		An introductory course in the human figure using various media with primary concentration on oil painting.	
ARTS 156 Art Form Development II	4	ARTS 204 Watercolor I	3
Term Prerequisite: ART 155, ART 156		Term Prerequisite: ART 102, ART 131	
Semester Prerequisite: ARTS 155		Semester Prerequisite: ARTS 102, ARTS 131	
A survey of the history of art as a formal language which deals with universal themes. Examines how and why particular subjects and styles are unique to the following time periods: Renaissance, Mannerist, Baroque, Rococo, Romantic, Modern, and Post-modern. Personal styles of significant artists are also covered.		An introduction to the art of transparent watercolor. Examines paper characteristics, degrees of wetness, brushes and tools, and various techniques in producing watercolor art works.	
ARTS 162 Typography and Layout Indication	3	ARTS 205 Watercolor II	3
Term Prerequisite: ART 101		Term Prerequisite: ART 204	
Semester Prerequisite: ARTS 101/Concurrently		Semester Prerequisite: ARTS 204	
Use of type in communications design with an emphasis on creativity. Includes history of typography, type style identification, classification, and selection. Student will be introduced to the tools, materials, and techniques necessary to professionally render comprehensive layouts.		A continuation of Watercolor (ARTS 204) emphasizing more advanced techniques and increasingly complex problems using watercolor.	
ARTS 163 Pre-Press Production Techniques	3	ARTS 206 Advanced Watercolor	3
Term Prerequisite: None		Term Prerequisite: ART 206	
Semester Prerequisite: None		Semester Prerequisite: ARTS 205, Departmental Approval	
Keyline and paste-up techniques for pre-press production including pagination, color separations, copy preparation, and paper selection. Includes an overview of printing terminology and processes. Emphasis on professional accuracy.		An opportunity for the advanced student to continue with his/her personal exploration and development of watercolor skills under the guidance of an instructor.	
ARTS 170 Computer Graphics for Media	3	ARTS 213 Illustration/Black and White	3
Term Prerequisite: Departmental Approval		Term Prerequisite: ART 131, ART 132, ART 147	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: ARTS 131, ARTS 132, ARTS 137	
An introduction to computer graphic techniques for students whose major emphasis is video production.		Illustrative techniques utilized to convert preliminary pencil drawings to finished ink drawings. Includes a variety of contemporary, realistic black and white techniques in both solid line and wash. Emphasis on sound draftsmanship and solving simple problems through illustration.	
ARTS 171 Computer Graphics for Photography	3	ARTS 214 Illustration/Color	3
Term Prerequisite: Departmental Approval		Term Prerequisite: ART 213, ART 204	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: ARTS 213, ARTS 204	
An introduction to computer manipulation of photographic images for art and photography majors.		Full color illustration techniques in tempera, dyes, and mixed media. Stylized drawing techniques and design-oriented composition assignments, with an emphasis on problem-solving for specific outlets such as editorial and collateral materials.	

ARTS 215-ARTS 280

<p>ARTS 215 Marker Illustration Techniques 3 Term Prerequisite: ART 102, ART 147 Semester Prerequisite: ARTS 102, ARTS 137 Development of basic rendering techniques using design markers with emphasis on stylization and simplification. Students will practice illustrating architectural and product subjects commonly used in visual communications industries.</p>	<p>ARTS 235 Computer Graphics/3-D Animation II 3 Term Prerequisite: ART 116 Semester Prerequisite: ARTS 234, Departmental Approval A continuation of 3-D Animation I (ARTS 234). Emphasis on creation of more complex models and animations. Introduction of sound and video editing.</p>
<p>ARTS 216 Cartoon Drawing Techniques 3 Term Prerequisite: ART 132, ART 147 Semester Prerequisite: ARTS 132, ARTS 137 Cartoon illustrations from simple spots to complex compositions. Emphasis on strong stylized drawing, dramatic exaggerated action, simple but imaginative characterizations, and uncluttered ink rendering techniques. Exercises in pencil, fiber-tipped pen, and brush and ink.</p>	<p>ARTS 240 Basic Art for Elementary Teachers 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>ARTS 218 Fashion Illustration I 3 Term Prerequisite: ART 132 Semester Prerequisite: ARTS 132 Drawing the fashion figure in contemporary proportion; accurate garment sketching in black and white techniques including marker, India ink wash, pencil, conte, and charcoal.</p>	<p>ARTS 262 Advanced Illustration 3 Term Prerequisite: ART 214 Semester Prerequisite: ARTS 214, Departmental Approval An opportunity for the advanced student to continue with his/her personal exploration and development of illustration skills under the guidance of an instructor. The student must submit written application and portfolio to receive department approval.</p>
<p>ARTS 219 Fashion Illustration II 3 Term Prerequisite: ART 218 Semester Prerequisite: ARTS 218 A continuation of Fashion Illustration (ARTS 218) using contemporary color techniques including pencils, markers, crayons, watercolor, acrylic paints, and paper squares. Layout, composition with multiple figures, and collage are introduced. Emphasis on development of personal drawing style and creative decision-making.</p>	<p>ARTS 267 Advanced Drawing 3 Term Prerequisite: ART 131 Semester Prerequisite: ARTS 131, Departmental Approval An opportunity for the advanced student to continue with his/her personal exploration and development of drawing skills under the guidance of an instructor. The student must submit a written application and portfolio to receive department approval.</p>
<p>ARTS 220 Advanced Fashion Illustration 3 Term Prerequisite: ART 219 Semester Prerequisite: ARTS 219, Departmental Approval An opportunity for the advanced student to continue with his/her personal exploration and development of fashion illustration skills under the guidance of an instructor.</p>	<p>ARTS 268 Advanced Life Drawing 3 Term Prerequisite: ART 132 Semester Prerequisite: ARTS 132, Departmental Approval An opportunity for the advanced student to continue with his/her personal exploration and development of life drawing skills under the guidance of an instructor. The student must submit a written application and portfolio to receive department approval.</p>
<p>ARTS 221 Airbrush Techniques I 3 Term Prerequisite: None Semester Prerequisite: None Introduction to the operation and techniques of the airbrush in shading and creating textures in both black and white and color. Assignments include rendering metallic surfaces and transparent objects and working with multiple light sources.</p>	<p>ARTS 269 The Portfolio 2 Term Prerequisite: SD 127 Semester Prerequisite: SDEV 127/Concurrently, Departmental Approval The student will assemble his/her best work under instructor supervision into a cohesive, relevant presentation for the purpose of securing employment in a chosen career area. Intended to be a terminal course in the Art Program.</p>
<p>ARTS 222 Airbrush Techniques II 3 Term Prerequisite: ART 221, ART 102 Semester Prerequisite: ARTS 221, ARTS 102 A continuation of Airbrush Techniques (ARTS 221) with an emphasis on more complex airbrushing problems including product rendering and textiles applications with work on areas of specialization.</p>	<p>ARTS 270 Computer Graphics Independent Study 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individual pursuit of special projects not incorporated in regular class offerings. The student must submit a written application detailing his/her project to receive department approval.</p>
<p>ARTS 223 Advanced Airbrush Techniques 3 Term Prerequisite: ART 222 Semester Prerequisite: ARTS 222, Departmental Approval An opportunity for the advanced student to continue with his/her personal exploration and development of airbrush skills under the guidance of an instructor.</p>	<p>ARTS 272 Printmaking Independent Study 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individual pursuit of special projects not incorporated in regular class offerings. The student must submit a written application detailing his/her projects to receive department approval.</p>
<p>ARTS 230 Computer Graphics/Business Presentations 3 Term Prerequisite: ART 112 Semester Prerequisite: ARTS 112, Portfolio Review, Departmental Approval Presentation and analytical graphics for business applications with emphasis on composition and artistic enhancement.</p>	<p>ARTS 274 Commercial Art Independent Study 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An individual pursuit of special projects not incorporated in regular course offerings. Students must submit a written application detailing their projects for department approval.</p>
<p>ARTS 232 Computer Graphics/2-D Animation 3 Term Prerequisite: ART 112, ART 216 Semester Prerequisite: ARTS 112, ARTS 216, Departmental Approval 2-D character animation using the computer as a tool. Emphasis is on the history, theory, and principles of animation.</p>	<p>ARTS 276 Art Independent Study 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individual pursuit of special projects not incorporated in regular class offerings. The student must submit a written application detailing his/her project to receive department approval.</p>
<p>ARTS 233 Computer Graphics/2-D Interactive 3 Term Prerequisite: Departmental Approval Semester Prerequisite: ARTS 232, Departmental Approval A course which uses 2-D Animation skills to create interactive presentations. Emphasis is on basic programming concepts.</p>	<p>ARTS 280 Computer Graphics Internship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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. A minimum of 15 hours per week.</p>
<p>ARTS 234 Computer Graphics/3-D Animation I 3 Term Prerequisite: ART 113 Semester Prerequisite: ARTS 112, Portfolio Review, Departmental Approval An introduction of 3-D solid modeling, rendering techniques and animation on a desktop graphics system. Introduction of the principles of designing for video.</p>	

ARTS 281 Art Internship	3	ARWS 222 Calligraphy II	1
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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. A minimum of 15 hours per week.		Term Prerequisite: ARW 221 Semester Prerequisite: ARWS 221 A continuation of Calligraphy I (ARWS 221) emphasizing a variety of tools, materials, and techniques. Students will progress to more complex problems and experiment with aesthetic expression as skills progress.	
ARTS 282 Commercial Art Internship	3	ARWS 224 Cartooning Workshop	1
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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. A minimum of 15 hours per week.		Term Prerequisite: None Semester Prerequisite: None Emphasizes simple but imaginative characterizations and dramatic exaggerated action in a variety of media including pencil, fibertipped pen, and brush and ink. Previous drawing experience helpful.	
ARWS 120 Basic Drawing	1	ARWS 226 Newsletter Design Workshop	1
Term Prerequisite: None Semester Prerequisite: None An introductory course using a variety of materials including pencil, charcoal, and ink. For non-majors.		Term Prerequisite: None Semester Prerequisite: None Students will learn to produce a visually appealing newsletter with emphasis on designing for optimal readability. Includes design of masthead and format and use of typography for text, headings, and subheadings. Use of graphics and photography.	
ARWS 131 Computer Graphics Workshop	1	ASTR 201 Introductory Astronomy	4
Term Prerequisite: None Semester Prerequisite: None A condensed hands-on workshop introducing computer graphics utilizing sophisticated, user-friendly artistic software. Programming skills are not necessary.		Term Prerequisite: None Semester Prerequisite: None A non-mathematical survey of astronomy. Topics include ancient astronomy, the night sky, telescopes, space exploration, the solar system, stellar evolution, neutron stars and black holes, galaxies and quasars, cosmology, and the expanding universe. The LCC planetarium and observatory augment laboratory activities which illustrate important concepts in astronomy.	
ARWS 133 Introduction to Pagemaker	1	AUTO 100 Auto Service I	3
Term Prerequisite: None Semester Prerequisite: None 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.		Term Prerequisite: None Semester Prerequisite: None This course is intended to provide the student with an extensive orientation to an automotive repair facility, while developing tool and equipment usage skills needed to advance in the automotive repair field.	
ARWS 134 Introduction to Freehand	1	AUTO 101 Basic Automotive Seminar	.25
Term Prerequisite: None Semester Prerequisite: None 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.		Term Prerequisite: None Semester Prerequisite: None This seminar is designed to introduce the student to the techniques and requirements of basic automotive maintenance.	
ARWS 135 Desktop Design Fundamentals	.75	AUTO 110 Auto Electrical Theory	5
Term Prerequisite: None Semester Prerequisite: None 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 hands-on computer course.		Term Prerequisite: AUT 100/Concurrently Semester Prerequisite: AUTO 100/Concurrently This course presents the fundamental principles of theory, operation, construction, diagnosis, service, and repair of the electrical components of automobiles and trucks.	
ARWS 141 Watercolor Workshop	1	AUTO 120 Auto Drive Train	2.5
Term Prerequisite: None Semester Prerequisite: None A condensed learning experience introducing the student to 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.		Term Prerequisite: AUT 100/Concurrently Semester Prerequisite: AUTO 100/Concurrently This course presents the techniques necessary to service and repair manual transmissions, both rear and front-wheel drive, clutches, drive shafts, and differentials.	
ARWS 145 Landscape Painting and Drawing	1	AUTO 121 Automatic Transmissions	5
Term Prerequisite: None Semester Prerequisite: None Emphasis on the use of color, perspective and compositional strategies of the landscape. Most sessions spent in the field. All media welcome.		Term Prerequisite: AUT 100, 120 Semester Prerequisite: AUTO 100, 120 A course in rear and front-wheel-drive automatic transmission repair covering theory of operation, vocabulary, diagnosis techniques, repair procedures, and testing methods.	
ARWS 190 Matting and Framing Techniques	1	AUTO 122 Advanced Transmission	2.5
Term Prerequisite: None Semester Prerequisite: None An overview of the various materials and techniques for displaying and exhibiting artwork. Students will apply demonstrated techniques to matting and framing their work.		Term Prerequisite: AUT 121, 122 Semester Prerequisite: AUTO 121 This course focuses on larger transmissions such as those used in large vans and medium-duty trucks. (4WD automatics are included.)	
ARWS 200 Handmade Paper	1	AUTO 130 Automotive Engines	2.5
Term Prerequisite: None Semester Prerequisite: None A condensed learning experience introducing the student to the art of handmade paper. Emphasis on pulpmaking and casting techniques. Students will progress to more complex problems as ability develops.		Term Prerequisite: AUT 100/Concurrently Semester Prerequisite: AUTO 100/Concurrently This course provides a background in principles, design, operation, and service procedures of gasoline engines and preparation for practical experience in engine maintenance and service.	
ARWS 221 Calligraphy I	1	AUTO 133 Small Engine Repair	2.5
Term Prerequisite: None Semester Prerequisite: None Introduces 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.		Term Prerequisite: None Semester Prerequisite: None This is a basic course covering servicing and repair of two-cycle and four-cycle small gas engines. Each student is required to supply a small engine for laboratory work.	

AUTO 135 Chain Saw Repair	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
This is a 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.			
AUTO 136 Marine Engine Repair	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
This course covers the basics of outboard engine servicing including carburetion, ignition, and troubleshooting malfunctions.			
AUTO 137 Motorcycle Repair	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
This course covers the theory of operation of a motorcycle and basic service procedures, including tune-up, wheel service, brake service, and drive mechanism.			
AUTO 140 Automotive Brakes	2.5		
Term Prerequisite: AUT 100/Concurrently			
Semester Prerequisite: AUTO 100/Concurrently			
This course covers servicing both drum and disc brakes, including adjustment, shoe replacement, drum and disc turning, pad replacement and hydraulic system service.			
AUTO 150 Automotive Suspension	2.5		
Term Prerequisite: AUT 100/Concurrently			
Semester Prerequisite: AUTO 100/Concurrently			
This course covers the suspension systems on automobiles and light trucks. Included is inspection, parts replacement, and extensive instruction on the use of four-wheel alignment equipment.			
AUTO 160 Auto Air Conditioning	2.5		
Term Prerequisite: AUT 110			
Semester Prerequisite: AUTO 110			
Instruction in the operating principles of auto air conditioning systems and repair procedures.			
AUTO 165 General Auto Mechanics	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
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.			
AUTO 166 General Auto Mechanics and Women	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
Student will gain fundamental understanding of how an automobile works and will be able to perform basic maintenance and repair procedures. Topics include engines, fuel and exhaust, electrical system, cooling and lubrication, steering, brakes, and suspension. Lab work includes changing oil and filters, belts, hoses, tires, bulbs, and fuses.			
AUTO 180 Auto Body Welding/Metal Finishing	5		
Term Prerequisite: None			
Semester Prerequisite: None			
This course presents metal welding as it applies to auto body repair. Included are gas, spot, and wire-feed welding, brazing, heat shrinking, and plasma arc cutting. This course also teaches basic sheet metal repair, body shop tools and their proper use, along with materials used to repair minor damaged panels.			
AUTO 182 Major Collision Repair	5		
Term Prerequisite: AUT 181			
Semester Prerequisite: AUTO 180			
This course teaches the restoration of a collision-damaged automobile to its original condition, including estimating the total job, glasswork, and painting. Instruction in repair of larger, dented panels with the emphasis on replacing panels.			
AUTO 184 Uni/Frame Repair	2.5		
Term Prerequisite: AUT 183			
Semester Prerequisite: AUTO 182			
This course is an introduction to the basics of frame straightening, covering aligning the frame or unitized body to original specifications.			
AUTO 185 Basic Auto Painting	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
This is an auto painting course designed to teach basic refinishing procedures. The student must refinish at least one panel in acrylic enamel and acrylic lacquer by the end of the course.			
AUTO 186 Advanced Painting	5		
Term Prerequisite: AUT 185			
Semester Prerequisite: AUTO 185			
This course teaches advanced auto painting techniques for spot repair, color matching, and troubleshooting—including 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.			
AUTO 188 Auto Body Repair and Painting	4		
Term Prerequisite: AUT 180, 181, 185			
Semester Prerequisite: AUTO 180, 182, 185			
This is a combined course of auto body repair and painting. It provides an opportunity to practice the techniques learned in Metal Finishing I and Painting I.			
AUTO 200 Basic Diesel Maintenance	5		
Term Prerequisite: None			
Semester Prerequisite: None			
This course covers the operational theory of heavy-duty diesels, maintenance operations, model identification, and system maintenance, including fuel systems, lubrication system, cooling system, and naturally-aspirated, supercharged, and turbocharged intake systems and their repair.			
AUTO 202 Diesel Engine Rebuilding	5		
Term Prerequisite: AUT 201			
Semester Prerequisite: AUTO 200			
This course covers rebuilding, including proper disassembly procedures, and inspection and repair of diesel engine components. Emphasis is on proper engine analysis prior to overhaul and proper run-in upon completion of overhaul.			
AUTO 203 Diesel Fuel Systems	2.5		
Term Prerequisite: AUT 201			
Semester Prerequisite: AUTO 200			
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.			
AUTO 215 Engine Performance	5		
Term Prerequisite: AUT 210/Departmental Approval			
Semester Prerequisite: AUTO 110			
A broad-based course covering the technology necessary to diagnose and repair driveability and electrical and fuel-related problems in automobiles and light trucks. This course will include instruction on carburetors and mechanical fuel pumps.			
AUTO 220 Truck Drive Lines	2.5		
Term Prerequisite: Departmental Approval			
Semester Prerequisite: AUTO 100/Concurrent			
This course covers the theory and application of the power train system—including clutches, torque converters, transmissions and final drives.			
AUTO 225 Automotive Computers	5		
Term Prerequisite: AUT 111, 210			
Semester Prerequisite: AUTO 215			
This course covers the theory of operation and repair procedures on computerized engine and fuel-control systems and operation of duty-cycle meters, tachometers, computerized engine analyzers, digital high-impedance multimeters, and other equipment used in servicing electronic engine-control systems.			
AUTO 240 Air Brakes	2.5		
Term Prerequisite: Departmental Approval			
Semester Prerequisite: AUTO 100/Concurrent			
This course covers brake systems, their component parts, troubleshooting, design, and control systems.			
AUTO 272 Tune Up and Electrical Laboratory	6		
Term Prerequisite: AUT 112, Instructor Approval			
Semester Prerequisite: AUTO 215, Instructor Approval			
This is a laboratory course designed to develop trade-entry skills in tune up and electrical repair.			
AUTO 273 Brake Laboratory	6		
Term Prerequisite: AUT 140, Instructor Approval			
Semester Prerequisite: AUTO 140, Instructor Approval			
This is a laboratory course designed to develop trade-entry skills in brake repair.			
AUTO 274 Suspension Laboratory	6		
Term Prerequisite: AUT 150, Instructor Approval			
Semester Prerequisite: AUTO 150, Instructor Approval			
This is a laboratory course designed to develop trade-entry skills in suspension repair.			
AUTO 276 Automatic Transmission Laboratory	6		
Term Prerequisite: AUT 122, Instructor Approval			
Semester Prerequisite: AUTO 122, Instructor Approval			
This is a laboratory course designed to develop trade-entry skills in transmission repair.			

<p>AUTO 280 Automotive Service Laboratory 6 Term Prerequisite: AUT 100, Instructor Approval Semester Prerequisite: AUTO 100, Instructor Approval This laboratory course is designed to provide work experience and develop trade-entry skills in general and light line repair.</p>	<p>AVAF 246 National Airframe Certification Procedures 1 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Study of the Federal Aviation Regulations pertaining to national certification as a licensed airframe mechanic. Includes testing in all required areas of study as prerequisite to receiving authorization to take the general and airframe national certification tests administered by representatives of the Federal Aviation Administration.</p>
<p>AUTO 285 Automotive Internship 6 Term Prerequisite: Director Approval Semester Prerequisite: Director Approval Students are able to earn credits while employed as a technician in auto mechanics, auto body, or diesel heavy equipment repair. A pre-enrollment interview between the student and department director is required. The director must approve the training station and working conditions.</p>	<p>AVAF 252 Helicopter Maintenance I 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers the theory of flight, structural designs, and systems of helicopters. Also studies maintenance practices used in the construction, inspection, and repair of helicopters.</p>
<p>AVAF 125 Aircraft Systems I 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval The study of fuel management, transfer, defueling, and fuel dump systems. The course covers the procedures used to inspect, check, service, troubleshoot, and repair aircraft fuel systems and fuel system components. Course material emphasizes fluid quantity indicating, fluid pressure, and warning systems.</p>	<p>AVAF 254 Helicopter Maintenance II 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Advanced studies in maintenance practices used in the construction, inspection, and repair of helicopters.</p>
<p>AVAF 126 Aircraft Systems II 6 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval The study, analysis, repair of aircraft landing gear and brake systems and their related warning systems. Includes the study, inspection, servicing, and repair of aircraft hydraulic and pneumatic systems and their related components.</p>	<p>AVCE 131 VFR Pilot Refresher Seminar .5 Term Prerequisite: Private Pilot License Semester Prerequisite: Private Pilot License This course is designed to update the knowledge of the private pilot. The focus of the course is on significant changes in Federal Aviation Regulations, Air Traffic Control Procedures, and pilot weather briefings.</p>
<p>AVAF 127 Aircraft Systems III 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers the inspection, checking, troubleshooting, servicing, and repair of aircraft heating, cooling, air-conditioning, pressurization, oxygen, ice and rain control, and fire protection systems.</p>	<p>AVCE 132 IFR Pilot Refresher Seminar .5 Term Prerequisite: Instrument Rating Semester Prerequisite: Instrument Rating This seminar is designed to update the knowledge of instrument-rated pilots. The focus of the course is on reviewing enroute and approach procedures, recent significant changes in Federal Aviation Regulations and Air Traffic Control Procedures, and pilot weather briefings.</p>
<p>AVAF 134 Aircraft Instruments 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Course covers inspection, checking, servicing, troubleshooting, repair of electronic flight instrument systems, both mechanical and electrical speed, altitude, temperature, pressure and flow instrument systems. Also, special removal and installation techniques applicable to aircraft instruments is included.</p>	<p>AVCE 133 Aviation Law Seminar .5 Term Prerequisite: None Semester Prerequisite: None This seminar acquaints the student with the legal aspects of aviation. The student will become familiar with Federal Aviation Administration enforcement actions, methods for limiting liability, buying and selling aircraft, titles and liens, and contracts.</p>
<p>AVAF 208 Aircraft Structures I 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course introduces the procedures for identification, inspection, testing, and repairing of wood, fabric-covered, and sheet metal aircraft. It covers the installation and removal of conventional rivets, the forming of aircraft sheet metal, the installation of special rivets and fasteners, and an introduction to applying finish-ing materials.</p>	<p>AVCE 134 Using LORAN-C .5 Term Prerequisite: None Semester Prerequisite: None This seminar is designed to introduce the student to the principles of operation of LORAN-C. The student will understand the procedures for approval for using LORAN-C receivers during VFR and IFR operations, including the en route and terminal environment. The student will be familiar with the function of LORAN-C receiver components.</p>
<p>AVAF 209 Aircraft Structures II 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers assembly and rigging of fixed wing and rotary wing aircraft control structures. Provides practical application in removal, installation, and adjustment of flight controls by balancing, cable tension, and motion studies. Also includes aircraft inspection procedures to insure conformity with flight safety standards.</p>	<p>AVEL 100 Avionics for Pilots Seminar .5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Familiarization with the avionics systems used in modern aircraft focusing on their proper use. Methods of testing the systems in the aircraft without complex test equipment will be discussed. The terminology used in the avionics industry will be explored in order to enhance the students' communication with avionics technicians.</p>
<p>AVAF 210 Aircraft Structures III 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval An advanced course covering the inspection, repair, lay out, bending, and assembly of aircraft sheet metal. Inspection, testing, and repair of fiberglass, plastics, honeycomb, and composite and laminated structures is practiced. Installation and removal of special fasteners for bonded and composite structures and servicing of aircraft windows, doors, and interior furnishings is included.</p>	<p>AVEL 130 Avionics Installations 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course includes familiarization with the various types of wires and connectors used in the construction of aircraft wiring harnesses. The student will develop skills in soldering, aircraft wiring diagram reading, standard procedures, and weight and balance calculation.</p>
<p>AVAF 211 Aircraft Electrical I 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval The intermediate aviation electrical course concentrating on the theory, calculation, and measurement of A.C. electrical systems. Includes reading and interpreting aircraft electrical circuit diagrams, including those with solid state devices and logic functions. Also the installation, checking, and servicing of airframe and engine wiring, controls, switches, indicators, and protective devices is covered.</p>	<p>AVEL 150 Avionics Test Generation 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 151 Concurrently Covers the operational characteristics and proper operation of basic and specialized test equipment found in the avionics industry. Equipment covered includes multimeters, oscilloscopes, power supplies, multifunction ramp and bench test generators, wattmeters, time domain reflectometers, and spectrum analyzers.</p>
<p>AVAF 212 Aircraft Electrical II 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Studies the repair of airframe and engine electrical system components with emphasis on the inspection, checking, servicing, and repair of alternating and direct current systems. Also, general troubleshooting techniques are practiced with special emphasis on AC and DC electrical systems.</p>	<p>AVEL 151 Avionics Test Generation Lab 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 150 Concurrently Test equipment and theory discussed in AVEL 150 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.</p>

AVEL 190-AVFT 259

<p>AVEL 190 Receiver Troubleshooting 2 Term Prerequisite: Program Approval, AV 191 Concurrently Semester Prerequisite: Program Approval, AVEL 191 Concurrently Familiarization with basic superhetrodyne receiver principles and operation using block diagrams and component level theory. Various logical troubleshooting techniques are discussed.</p>	<p>AVEL 299 Advanced Avionics Laboratory 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Students will further develop troubleshooting and installations skills acquired in other courses. Students will work in an environment close to actual working conditions in most avionics repair stations.</p>
<p>AVEL 191 Receiver Troubleshooting Lab 2 Term Prerequisite: Program Approval, AV 190 Concurrently Semester Prerequisite: Program Approval, AVEL 190 Concurrently Familiarization with basic superhetrodyne receiver principles and operation. Various logical troubleshooting techniques will be put to practical use in the laboratory. Students construct, align, and troubleshoot an AM superhetrodyne receiver.</p>	<p>AVFT 099 Flight for Technicians 7.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course provides in-flight and ground training culminating in the award of the Federal Aviation Administration Private Pilot License to an LCC maintenance or aviation graduate or current student when approved by the director of the Aviation Center. Designed to enhance the technical knowledge and skill of the maintenance or avionics technician.</p>
<p>AVEL 200 Flight Line Testing 2 Term Prerequisite: Program Approval, AV 201 Concurrently Semester Prerequisite: Program Approval, AVEL 201 Concurrently A study of the avionics systems found aboard modern aircraft focusing on the flight line testing of such systems as VHF communications, VHF navigation, ADF, radar, autopilots, and others.</p>	<p>AVFT 201 Flight Training I 7.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in the single-engine, non-complex aircraft culminating in aeronautical knowledge, experience and skill in accordance with the Federal Aviation Administration Private Pilot Practical Test standards.</p>
<p>AVEL 201 Flight Line Testing Lab 2 Term Prerequisite: Program Approval, AV 200 Concurrently Semester Prerequisite: Program Approval, AVEL 200 Concurrently A practical study of the electronics systems found aboard modern aircraft, focusing on the flight line testing of such systems as VHF communications, VHF navigation, ADF, radar, autopilots, and others.</p>	<p>AVFT 202 Flight Training II 5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in single-engine non-complex airplane developing students' instrument, night, and cross-country flying skills.</p>
<p>AVEL 220 Avionics Systems I 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 221 Concurrently A study of the communications, navigation, and other systems found in modern aircraft, focusing on component level repair and testing to manufacturer's specifications. Students will have the opportunity to obtain factory certifications for the repair of various systems.</p>	<p>AVFT 203 Flight Training III 5.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides instruction in complex single-engine airplane developing students' skill at IFR navigation and ATC procedures in en route and terminal environment.</p>
<p>AVEL 221 Avionics Systems I Lab 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 220 Concurrently A hands-on study of the communications, navigation, and other systems found in modern aircraft, focusing on component level repair and testing to manufacturer's specifications.</p>	<p>AVFT 204 Flight Training IV 5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground instruction in complex airplane developing students' skill in IFR navigation and ATC procedures in en route and terminal environment. Further, student will develop skills at performing commercial proficiency flight maneuvers. At completion of course, student will take practical test for commercial/instrument pilot airplane.</p>
<p>AVEL 224 Avionics Regulation 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This 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 examination.</p>	<p>AVFT 205 CFI Flight Training 3.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in common primary training and complex airplanes. Student will develop instructional skills necessary to train pilots to certification in accordance with Federal Aviation Regulations. Student will take practical test for certified flight instructor airplane upon completion.</p>
<p>AVEL 230 Avionics Systems II 3 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 231 Concurrently A study of navigation, microwave pulse equipment, and other systems found in modern aircraft, focusing on component level repair and testing to manufacturers' specifications. Students will have the opportunity to obtain factory certification of the repair of various systems.</p>	<p>AVFT 206 Flight Instructor Instrument Flight Training 2.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in non-complex aircraft. Student will develop instructional skills necessary to train pilots for the instrument rating. Student will take practical test for the instrument flight instructor rating airplane upon completion.</p>
<p>AVEL 231 Avionics Systems II Lab 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval, AVEL 230 Concurrently A hands-on study of navigation, microwave pulse equipment, and other systems found in modern aircraft, focusing on component level repair and testing to manufacturers' specifications.</p>	<p>AVFT 207 Multi-Engine Flight Training 1.5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground instruction in multi-engine airplane. Student will take multi-engine practical test upon completion.</p>
<p>AVEL 295 International Avionics Systems 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Familiarization with safety practices near large aircraft. Review of instrument systems and discussion on how these systems are designed in airliners. Discussion of navigation, communication, and pulse systems as used in transport category aircraft. Discussion of the differences and similarities between FAA regulations and those of other countries.</p>	<p>AVFT 208 Multi-Engine Instructor Flight Training .75 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground instruction in multi-engine airplane. Student will develop instructional skills necessary to train students for multi-engine practical test. Student will take multi-engine instructor practical test upon completion.</p>
<p>AVEL 297 Avionics Internship 2 Term Prerequisite: Program Approval Semester 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 certified repair stations as established by the intern coordinator.</p>	<p>AVFT 209 Airline Transport Pilot Flight Training 1.25 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in multi-engine aircraft. At completion of course, student will take Airline Transport Pilot practical test.</p>
	<p>AVFT 259 Intern Flight Instructor 3.75 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground practical experience with mentor/instructor supervision for the entry-level flight instructor. Programmed for one semester with one student per entry-level instructor.</p>

<p>AVFT 290 Turbine Aircraft 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Provides in-flight and ground training in turbine-powered multi-engine aircraft. Culminates in aeronautical knowledge, experience, and maneuvering skills commensurate with that required of the entry-level first officer position for commercial turboprop aircraft.</p>	<p>AVGS 222 Flight Instructor Ground School 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course will prepare the student for the successful completion of the FAA Fundamentals of Instructing and the Flight Instructor-Airplane and Advanced Ground Instructor written exams. The student will develop a flight training syllabus with lesson plans for use in training pilots.</p>
<p>AVGM 111 Aviation General I 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course is designed to develop the skills and knowledge required to weigh an aircraft and record the appropriate data. It involves mathematical and basic physics principles related to aviation, including aerodynamics, theory of flight, aircraft structural design, and simple machines.</p>	<p>AVIR 140 Avionics Instruments I 1 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Familiarization with common aircraft instruments to include principles of operation, interpretation of indications, testing, proper handling, repair, and calibration. Students will learn the proper use of test equipment and instrument repair procedures.</p>
<p>AVGM 112 Aviation General II 6 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Introduces the Federal Aviation Regulations involving the mechanic's privileges and limitations and related aviation operations. Includes the selection and use of aviation publications, maintenance forms, records, reports, aircraft drawings, graphs and charts, symbols, blueprints, and system schematics. Also focuses on aircraft ground operations and servicing of related aircraft systems.</p>	<p>AVPP 185 Preventive Maintenance 2 Term Prerequisite: None Semester Prerequisite: None This course will cover the items described in the Federal Aviation Regulation Part 43, Appendix A, titled Preventive Maintenance. These items include the removal and installation of tires, servicing of wheel bearings, and cleaning fuel and oil strainers or filter elements. The safety, responsibility, and operations of various aircraft systems will be discussed.</p>
<p>AVGM 113 Aviation General III 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval The initial aviation electrical course offering instruction in basic electrical theory and its aviation application. It includes the calculation and measurement of voltage, current, resistance, continuity, and power; the theory, inspection and servicing of aircraft lead-acid and ni-cad batteries; and the construction of a volt-ohm meter.</p>	<p>AVPP 241 Reciprocating Engine 8 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Presents the theory and practices used in the removal, inspection, overhaul, service, repair, and installation of reciprocating engines. This course also studies the inspection, service, repair, and troubleshooting of reciprocating engine lubrication systems.</p>
<p>AVGM 114 Material and Processes 5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval The course covers identification and selection of the appropriate aviation hardware, hand tools, cleaning materials, fluid lines, and non-destructive testing methods. Included is performance of non-destructive testing, precision measurements, aircraft cleaning and corrosion control, fabrication, installation and testing of fluid lines.</p>	<p>AVPP 251 Reciprocating Engine Systems 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course covers the inspection, servicing, troubleshooting, and repair of reciprocating engine cooling and exhaust systems. In addition, the inspection requirements necessary to meet established conformity and standards of airworthiness are studied, and reciprocating engine operations and adjustments are conducted using F.A.A. and maintenance publication procedures.</p>
<p>AVGS 101 Private Pilot Ground School 4 Term Prerequisite: None Semester Prerequisite: None This course prepares the student for successful completion of the Federal Aviation Administration private pilot written examination. The student will learn basic aerodynamic theory, principles of aircraft/powerplant operation and performance, Federal Aviation Regulations, air traffic control procedures, meteorology, and navigation and flight physiology.</p>	<p>AVPP 253 Reciprocating Ignition Systems 5 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course covers the operation, analysis, inspection, service, and repair of reciprocating engine ignition systems and components. This includes magnetos, ignition harnesses, spark plugs, and starter systems.</p>
<p>AVGS 121 Aviation Meteorology 4 Term Prerequisite: AFT 100/Private Pilot License Semester Prerequisite: AVGS 101/Private Pilot License This course focuses on the application of meteorological theory to the practical aspects of flight planning. The student will understand basic concepts of weather theory; obtain weather briefings by using a personal computer; interpret weather charts, forecasts and reports, both domestic and international, (CiAO); make appropriate "go/no go" decisions.</p>	<p>AVPP 255 Reciprocating Induction Systems 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Study and analysis of reciprocating engine fuel systems and components. Includes inspection, checking, servicing, troubleshooting, and repair of carburetors, water injection systems, heat exchangers, superchargers, intake and induction manifolds, and other engine fuel system components. Also includes carburetor overhaul procedures.</p>
<p>AVGS 141 Fundamentals of Air Traffic Control 4 Term Prerequisite: None Semester Prerequisite: None This course will cover the history of ATC; procedures and regulations; field experience at local ATC facilities as well as working with "UNICOM"; analysis and prevention of traffic conflicts and an introduction to international ATC procedures, e.g., Eurocontrol.</p>	<p>AVPP 257 Aircraft Propeller Systems 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers the study, analysis, service and repair of aircraft propellers, systems, and controls. Includes propeller synchronizing, ice control, lubrication, balancing, pitch control, repair procedures and removal, and installation of both fixed-pitch and variable-pitch propellers.</p>
<p>AVGS 211 Instrument Pilot Ground School 4 Term Prerequisite: AFT 100/Private Pilot License Semester Prerequisite: AVGS 101/Private Pilot License This course prepares the student for the successful completion of the FAA instrument rating written examination. The student will learn operation and interpretation of the flight instruments, the use of en route, approach, SID, and STAR charts for navigation, air traffic control procedures, and meteorology as it applies to the instrument pilot.</p>	<p>AVPP 259 Turbine Engine I 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers the theory of operation and design of the varied turbine engine and turbine-driven auxiliary power unit types including the induction and cooling systems of each.</p>
<p>AVGS 221 Commercial Pilot Ground School 4 Term Prerequisite: AFT 100/Private Pilot License Semester Prerequisite: AVGS 101/Private Pilot License This course prepares the student for the successful completion of the FAA commercial pilot written examination. The student will develop knowledge of aerodynamics, high performance aircraft systems, aircraft performance, Federal Aviation Regulations, navigation and flight planning, and meteorology as it applies to commercial pilots.</p>	<p>AVPP 261 Turbine Engine II 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers inspection, checking, servicing, repair, removal, installation, and trouble-shooting of turbine engines and systems. Detailed study of the lubrication system and inspection procedures to insure conformity with F.A.A. specifications and standards is included.</p>

<p>AVPP 263 Turbine Engine Systems 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This course is a detailed study of turbine-engine ignition, pneumatic and electric starters, exhaust and thrust reverser, fire detection and protection, fuel metering and electronic fuel control systems, and components. It includes inspection, checking, servicing, repair, and troubleshooting procedures.</p>	<p>BDCS 207 Legal Considerations for Small Business .5 Term Prerequisite: None Semester Prerequisite: None This seminar will familiarize participants with the legal considerations of business formation, consumer protection, employee relations, competition, and benefit packages.</p>
<p>AVPP 265 Powerplant Instruments 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Covers the inspection, servicing, checking, troubleshooting, and repair of both reciprocating and turbine engine electrical and mechanical fluid rate-of-flow indicating, temperature, pressure, R.P.M., airflow and related systems and components.</p>	<p>BDCS 209 Financial Management for Small Business .5 Term Prerequisite: None Semester Prerequisite: None This seminar offers practical presentation, application, and practice of basic financial management techniques, such as analyzing and applying information from balance sheets, income statement, and cash flow statements.</p>
<p>AVPP 267 National Powerplant Certification Procedures 1 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Study of the Federal Aviation Regulations pertaining to national certification as a licensed powerplant mechanic. Includes testing in all required areas of study as prerequisite to receiving authorization to take the powerplant national certification tests administered by representatives of the Federal Aviation Administration.</p>	<p>BDCS 210 Customer Relations .5 Term Prerequisite: None Semester Prerequisite: None Anyone who sells, greets or provides services to customers can discover new ways for creating good customer relations. By communicating effectively, understanding customer personalities and how to deal with them, and assessing their own motivation and esteem needs, participants can serve their customers in a positive manner.</p>
<p>AVST 211 Flight Simulator I 1 Term Prerequisite: AFT 100 Semester Prerequisite: AVGS 101/Concurrently Provides flight simulator and ground training to develop student's basic attitude instrument flying skills. Course is intended to be taken concurrently with AVFT 201. Simulator used is GAT-I (or other approved simulator).</p>	<p>BDCS 211 Advertising for Small Business .5 Term Prerequisite: None Semester Prerequisite: None This seminar will teach how to plan, create, select, and evaluate advertising. Entrepreneurs can learn to develop an advertising plan that is unique to the special needs of their organizations.</p>
<p>AVST 212 Flight Simulator II 1 Term Prerequisite: AFT 100, AFT 211 Semester Prerequisite: AVGS 101, AVST 211 Provides flight simulator and ground training to develop student's skills in IFR navigation and ATC procedures in terminal environment. Course intended to be taken concurrently with AVFT 202. Simulator used is GAT-1 (or other approved simulator).</p>	<p>BDCS 212 Professional Sales .5 Term Prerequisite: None Semester Prerequisite: None This seminar is designed for salespeople who have attained the level of professional selling. They must increase knowledge, develop new techniques, and recognize and deal with obstacles. The seminar will help participants recognize how they achieved success, how to maintain status, and how to identify and use tools to continue their success.</p>
<p>AVST 213 Flight Simulator III 1 Term Prerequisite: AFT 150 Semester Prerequisite: AVGS 211, AVST 212 Provides flight simulator and ground training to further develop student's skills at IFR navigation and ATC procedures in en route and terminal environment. Course intended to be taken concurrently with AVFT 203. Simulator used is GAT-I (or other approved simulator).</p>	<p>BDCS 213 How to Staff Your Small Business .5 Term Prerequisite: None Semester Prerequisite: None A seminar to familiarize the participants with aspects of employment procedures including interviewing, evaluating, and the law.</p>
<p>AVST 214 Flight Simulator IV 1 Term Prerequisite: AFT 150 Semester Prerequisite: AVGS 211, AVST 213 Provides flight simulator and ground training to develop student's skill to level of instrument rating practical test standards. Student will perform simulated flights in en route and terminal environment including compliance with emergency procedures. Course intended to be taken concurrently with AVFT 204. Simulator used is GAT-I (or other approved simulator).</p>	<p>BDCS 214 Retail Selling for Small Business .5 Term Prerequisite: None Semester Prerequisite: None This program is designed to stress the importance of the salesperson to the business and give the participants a chance to review, update, and add to their selling skills.</p>
<p>AVST 215 Multi-Engine Flight Simulator 1 Term Prerequisite: AFT 215 Semester Prerequisite: AVST 214 Provides flight simulator training culminating in aeronautical knowledge and maneuvering skills in support of advanced visual and instrument flight training in multi-engine aircraft. Intended for the Flightmatic multi-engine simulator.</p>	<p>BDCS 215 Developing a Marketing Plan .5 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>BDCS 201 Starting a Business .5 Term Prerequisite: None Semester Prerequisite: None Entrepreneurs are usually required to wear many "hats" and may have no idea what skills and processes are involved in starting and operating a business. If you decide that owning a business is feasible, this class can help you find assistance to begin and maintain a business.</p>	<p>BDCS 216 Global Exporting .5 Term Prerequisite: None Semester Prerequisite: None Exporting is an endeavor for the patient and the strong of heart. It can result in opening new markets, increase company growth and profits, and contribute to the growth of the U.S. gross national product. The business person must anticipate the risks to determine if exporting is advantageous and if the obstacles can be overcome. This seminar helps participants to familiarize themselves with the risks and opportunities of exporting and apprise them of the resources available to help them make informed decisions about whether to export their products and services.</p>
<p>BDCS 202 Pitfalls to Avoid When Opening or Operating a Business .5 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>BDCS 217 Computers for Small Business .5 Term Prerequisite: None Semester Prerequisite: None In this seminar, participants learn the fundamentals of selecting and using computers in the small environment.</p>
<p>BDCS 205 Systems for Record Keeping .5 Term Prerequisite: None Semester Prerequisite: None This seminar increases the participants' working knowledge of the accounting process and the maintenance of accounting records, ledgers, and income statements, and the preparation for income tax time.</p>	<p>BDCS 220 Business: The Planning Process .5 Term Prerequisite: None Semester Prerequisite: None In this seminar, participants will learn 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.</p>

BDCS 223 Franchising/Evaluating and Buying a Business .5	BIOL 250 Entomology 3
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This program will familiarize the participants with the statistics needed, legalities involved, and the evaluation of the best seller's book in order to determine the business' worth. It will also acquaint participants with the considerations and background information needed to buy a franchise.	An introduction to the study of insect biology, including morphology, development, life cycles, behavior, and ecology. Control techniques of medical, agricultural, and household pests will be covered, as will the characteristics of social and aquatic insect communities. Laboratory and field work will emphasize identification of common Michigan insects.
BDCS 225 Writing a Business Plan .5	BIOL 260 Botany 3
Term Prerequisite: None	Term Prerequisite: 1 Term of Biology Recommended
Semester Prerequisite: None	Semester Prerequisite: 1 Semester of Biology Recommended
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.	An introduction to the study of plants that includes structure and function, development, and ecology. Emphasis will be placed on the diversity, adaptations, and life cycles of major plant groups. Laboratory will complement the basic concepts with emphasis on physiology, systematics, and species of value to medicine and agriculture.
BDCS 230 Small Business Taxes .75	BIOL 270 Human Genetics 3
Term Prerequisite: None	Term Prerequisite: BIO 101/Equivalent
Semester Prerequisite: None	Semester Prerequisite: BIOL 121/Equivalent
Federal, state and local governments assess a variety of taxes on business. This seminar will identify the various taxes which pertain to small businesses in Michigan and provide information on the tax returns used and filing responsibilities of the business.	Presents general principles of genetics with specific human application. Topics include Mendelian genetics, mitosis and meiosis, chromosome structure and aberrations, sex determination and x-linkage, molecular basis of inheritance, gene mutations, genetics of immune system, cancer genes, recombinant DNA technology, and genetic screening and counseling.
BIOL 121 Biology 3	BIOL 275 Molecular Biology I 4
Term Prerequisite: 2.0 Minimum in CEM 110/Equivalent	Term Prerequisite: BIO 274
Semester Prerequisite: Chemistry Recommended	Semester Prerequisite: BIOL 127/Departmental Approval
Topics include biological molecules, cell structure and function, the passage of materials across cell membranes, cell respiration, mitosis, meiosis, introductory genetics, and the relationship between DNA, RNA, and protein synthesis.	Introduces basic principles of molecular biology, DNA/RNA structure and function, gene regulation, and recombinant DNA technology. Laboratory emphasizes reagent preparation, culturing bacteria, isolating and purifying plasmid DNA from bacteria, restriction enzyme digests of DNA, and agarose gel electrophoresis.
BIOL 123 Seminar: Human Nutrition 2	BIOL 276 Molecular Biology II 4
Term Prerequisite: Biology Recommended	Term Prerequisite: 2.0 Minimum in BIO 275
Semester Prerequisite: Biology Recommended	Semester Prerequisite: 2.0 Minimum in BIOL 275
An introductory course in human nutrition. Topics include the role of nutrients; digestion, absorption and metabolism of nutrients; role of vitamins and minerals; and the introduction of current and controversial topics when relevant. Such topics can include fad diets, obesity, nutrition of athletes, food labels, alcohol, sugar, and food additives.	Continuation of BIOL 275. Advanced lecture topics in bacteriophage biology, gene analysis, gene sequencing, and research applications of gene cloning. Gene cloning experiments with M-13 bacteriophage and pVC plasmid vectors, site-specific mutagenesis, and DNA blotting and hybridization techniques.
BIOL 127 Cell Biology 4	BLDR 101 Basic Woodworking 2
Term Prerequisite: CEM 110/High School Chemistry	Term Prerequisite: None
Semester Prerequisite: CHEM 125/High School Chemistry	Semester Prerequisite: None
First of two biology courses for science majors. Lecture topics include chemistry of carbohydrates, lipids and proteins; structure and function of prokaryotic and eukaryotic cells; biochemistry of respiration; genetics and the regulation of gene expression. Laboratory stresses techniques of cell and molecular biology as well as genetics.	The students learn about 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.
BIOL 128 Organismal Biology 4	BLDR 102 Hand Tools for Wood 2
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This course examines adaptations of organisms to changing environments. Major emphasis is on physiological adaptations, natural selection, ethology, and ecology. Aquatic systems are examined in the laboratory; sampling techniques and statistical methods are used to analyze a local river.	This course covers the selection, use, and maintenance of tools used by the woodworker working by hand. It examines the tradition of hand tools as it relates to woodworking today. Students learn how to sharpen and maintain tools and how to select tools for special purposes.
BIOL 201 Zoology I 3	BLDR 103 Woodworking with a Router 3
Term Prerequisite: None	Term Prerequisite: BR 101
Semester Prerequisite: None	Semester Prerequisite: BLDR 101
Introduces characteristics of animal life. Includes chemical and physical aspects of life, cellular structures and their functions, cell division, introduction to histology and study of the integumentary, skeletal, muscular, digestive, respiratory, urinary, circulatory, nervous, endocrine and reproductive systems. Emphasis is on the vertebrates, principally the mammals.	This is an exploration of router applications and router techniques. Student projects are used to illustrate and demonstrate dovetail joints, decorative cuts, dadoes, rabbets, mortises and similar styles, design and construction of jigs and fixtures for special applications. The students furnish their own lumber for projects.
BIOL 202 Zoology II 3	BLDR 106 Furniture Making 2
Term Prerequisite: 2.0 Minimum in BIO 201/Departmental Approval	Term Prerequisite: BR 101
Semester Prerequisite: 2.0 Minimum in BIOL 201	Semester Prerequisite: BLDR 101
Begins with an introduction to heredity, population genetics, the theory of evolution and ecology. 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.	Design and construction of simple furniture, with emphasis on selection of materials, options in joint and fastening methods, construction techniques, assembly procedures and problem-solving.
BIOL 210 Natural Resource Conservation 3	BLDR 109 Build Your Own Cabinets 2
Term Prerequisite: None	Term Prerequisite: BR 101
Semester Prerequisite: None	Semester Prerequisite: BLDR 101
This course examines the renewable natural resources and the policies which govern their use in the United States. Laboratory investigations include measurement techniques, land use evaluations, and environmental problem-solving. These exercises will be oriented toward the completion of an environmental impact assessment covering a current local environmental situation.	This course offers a hands-on experience in building vanities, base cabinets and wall cabinets. It also covers use of tools and machines, cabinet construction, drawer construction, door style options, and formica work. Students supply their own lumber.

<p>BLDR 110 Wood Projects 2 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This course provides additional lab hours and individual instruction for students enrolled in Building Related and Building Trades courses, with requirements for construction of a term project.</p>	<p>BLDR 122 Furniture Finishing, Antiquing and Refinishing 3 Term Prerequisite: None Semester Prerequisite: None This course is designed to give the craftsman a basic knowledge of the furniture finishing process. The course includes sealing, staining, tinting, spray and brush application, removal of old finishes, minor repairs, selection of new finish, and surface preparation. Students bring their own projects.</p>	<p>BLDR 124 Paperhanging 3 Term Prerequisite: None Semester Prerequisite: None This course covers the preparation of surfaces, selection and care of tools, selection of materials and adhesives, estimating materials, layout, avoiding and correcting faults, and applications of paper and vinyl.</p>	<p>BLDR 132 General Home Maintenance 2 Term Prerequisite: None Semester Prerequisite: None This is an introductory course in general home maintenance. Topics are furnace maintenance, humidifiers, painting, hot water heaters, basic plumbing, and electrical repairs.</p>	<p>BLDR 134 Masonry Home Projects 2 Term Prerequisite: None Semester Prerequisite: None This course shows how to build home masonry projects to include barbecue pits, patching and repairing masonry walls, and patios. The student will learn the proper use of tools, proper mixes for mortar, and laying masonry units through hands-on work.</p>	<p>BLDR 142 Build Your Own Patio Deck 2 Term Prerequisite: None Semester Prerequisite: None Plan, estimate, lay out, and build your own patio floor or off-the-ground deck. Investigate materials, designs, structural considerations and costs. The course will include tips and techniques for getting the job done.</p>	<p>BLDR 144 Build Your Own Home 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for students who wish to build their own homes. Included are design considerations, land acquisition, selection of materials, choosing contractors, scheduling of work, financing, and landscaping. Guest speakers, who are experts in their various fields, provide the instruction.</p>	<p>BLDT 100 Introduction to Construction 3 Term Prerequisite: None Semester Prerequisite: None This course 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.</p>	<p>BLDT 103 Structural Print Reading 4 Term Prerequisite: Departmental Approval Semester Prerequisite: ARCH 100 This course covers symbols, conventions and abbreviations used in structural blueprints. The students will be able to recognize conventions and verbally describe their interpretation in trade or lay terms, according to standard architectural practices. Residential and commercial prints are used to show the relationship between working drawings and specifications.</p>	<p>BLDT 421 Residential Framing and Foundations 4 Term Prerequisite: None Semester Prerequisite: None Students will learn to frame residential buildings using accepted framing techniques, such as framing member spacing, framing floor systems, interior and exterior walls, and creating rough openings. This course covers the various types of foundations and the advantages and disadvantages of each. Hands-on methods are used.</p>	<p>BLDT 124 Remodeling, Shingling and Siding 4 Term Prerequisite: BT 121 Semester Prerequisite: BLDT 121 Students will learn to remodel, shingle and side a residential building. This course covers the analysis, designing, estimating, problem-solving, building practices, materials, and installation methods for remodeling, roofing, and exterior wall covering projects.</p>	<p>BLDT 126 Interior Carpentry 4 Term Prerequisite: BT 121 Semester Prerequisite: BLDT 121 Students will learn to finish the interior of a residential building. This course covers the materials, installation practices, and material takeoff to do the finish carpentry for a house to include windows, doors, base, chair rail, wood floors, stairs, simple built-ins, and cabinets.</p>	<p>BLDT 262 Builders Business License 4 Term Prerequisite: None Semester Prerequisite: None This course covers the principles of residential builder organizations and business practices, along with other useful information to help students pass the State of Michigan Builders License Exam. Preparation for a residential project from planning to actual construction and sale of the project is covered.</p>	<p>BLDT 277 Construction Cost Estimating 4 Term Prerequisite: BT 103 Semester Prerequisite: BLDT 103 Students will learn to do a structural material takeoff and a complete estimate for residential and light commercial buildings. The course uses standard estimating practices to estimate the cost of buildings, based on detailed blueprints.</p>	<p>BLDT 281 BOCA/Uniform Code 3 Term Prerequisite: None Semester Prerequisite: None Students will be introduced to the two most commonly used building codes in the United States. This course will emphasize the use, interpretation, and application of the Uniform and BOCA Building Codes. Requirement for materials, barrier-free design, and fire standards for residential and commercial construction will be emphasized.</p>	<p>BLDT 287 Residence Construction I 12 Term Prerequisite: Departmental Approval Semester Prerequisite: Instructor Approval Students will study and construct a residential building. All aspects of residential construction will be covered to include purchase of land, design, financing, purchase of materials, contacting sub-contractors, hands-on building techniques, sales, and landscaping. Participation implies enrollment in BLDT 288. Class meets 20 hours per week.</p>	<p>BLDT 288 Residence Construction II 12 Term Prerequisite: BT 123 Semester Prerequisite: BLDT 287 Students will study and construct a residential building. All aspects of residential construction will be covered to include purchase of land, design, financing, purchase of materials, contacting sub-contractors, hands-on building techniques, sales, and landscaping.</p>	<p>BLDT 296 Ceramic Tile Seminar .5 Term Prerequisite: None Semester Prerequisite: None This seminar will teach the basic principles for installation of ceramic tile. This includes the selection of types of tile, how to lay out the tile, preparation of the surface, care of tools used, and estimation of labor and materials.</p>	<p>BLDT 298 Builders License Review 1 Term Prerequisite: None Semester Prerequisite: None This is a two-day workshop designed to prepare individuals for the State of Michigan Residential Builder's Examination. This workshop will include concentrated instruction in blueprint reading, state regulations, building terms, basic math and construction codes.</p>	<p>BUSN 118 Introduction to Business 3 Term Prerequisite: None Semester Prerequisite: None Introduces students to principles, problems and practices related to the world of business. Topics covered include business management and organization, marketing, finance, economics, production, and international business.</p>	<p>BUSN 123 Principles of Association Management 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>BUSN 125 Written Communication for Business 3 Term Prerequisite: None Semester Prerequisite: None A course on how to write clearly, accurately, and quickly. Students will develop the skill of organizing their writing for the busy reader's needs by practicing writing letters, reports, memos and procedures—technical or non-technical in nature.</p>
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BUSN 191 Independent Study in Management	1	BUSN 255 Advanced Investments	2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students are allowed to undertake special research projects and/or individual readings to apply personal and professional experience to academic area of interest. Minimum of 16 hours work required, plus completion of written project report.		Term Prerequisite: BUS 254 Semester Prerequisite: BUSN 254 Students will use their knowledge of investment options to develop and implement a personal investment strategy. Investment objectives and influencing factors will be examined.	
BUSN 192 Independent Study in Management	2	BUSN 270 Updating Employee Policies—A Legal Perspective	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students are allowed to undertake special research projects and/or individual readings to apply personal and professional experience to academic area of interest. Minimum of 32 hours work required, plus completion of written project report.		Term Prerequisite: None Semester Prerequisite: None This seminar provides a comprehensive review of recent developments in employment laws and court decisions which impact employer policies and employee handbooks. Topics will include employment at will and just cause standards, EEO/AA policies, handicapper accommodations, wage and hour rules, work rules, and benefits.	
BUSN 193 Independent Study in Management	3	BUSN 271 A New Look at Employee Involvement	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students are allowed to undertake special research projects and/or individual readings to apply personal and professional experience to academic area of interest. Minimum of 48 hours work required, plus completion of written project report.		Term Prerequisite: None Semester Prerequisite: None Employee attitudes and working conditions in today's workplaces are discussed with an overview of participatory approaches which have seen short-lived success and wide-spread failure. Key elements of effective approaches to employee involvement and democratization of the workplace are presented, including concepts that may shape the workplace of the nineties.	
BUSN 201 International Business	3	BUSN 272 Providing Excellent Customer Service	.5
Term Prerequisite: BUS 118/Equivalent Semester Prerequisite: BUSN 118/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.		Term Prerequisite: None Semester Prerequisite: None Focuses on developing skills in employees who have direct customer contact. Targeted at organizations committed to empowering employees with the skills to deliver excellent service. Topics include understanding the importance of service excellence, understanding behavioral differences in people, and handling customer interactions, particularly conflict situations, in a professional, win/win manner.	
BUSN 229 Public Relations	2	BUSN 295 Entrepreneurship	2
Term Prerequisite: None Semester Prerequisite: None Students will be introduced to principles involved in creating and maintaining good public relations. Techniques for developing improved employer-employee relations, customer relations, and the total public relations effort will be discussed and applied.		Term Prerequisite: None Semester Prerequisite: None A survey of small-business operations to help aspiring business owners understand the nature and responsibilities of running a "going concern." Topics include marketing, finance, management, legal obligations, and the small-business environment.	
BUSN 236 Oral Communications for Business	3	BUSN 296 Writing a Business Plan	2
Term Prerequisite: None Semester Prerequisite: None Techniques of public speaking, examining the speaker, the audience, and the text from a business viewpoint. Also studying issues and potential problems pertaining to listening, persuasion, interpersonal and nonverbal communication. Students will practice and develop practical "stand up" presentation skills appropriate for a business setting.		Term Prerequisite: Departmental Approval Semester Prerequisite: BUSN 295/Departmental Approval Practical application of small-business management principles. Students will develop a business plan for a small business of their choice. This class is designed for students with the desire to actually own and operate a business of their own.	
BUSN 250 Personal Finance	2	CABS 100 Seminar: Special Subjects	.25
Term Prerequisite: None Semester Prerequisite: None Students will undertake a broad survey of topics including budgeting, smart shopping, buying a car, renting, buying or selling a home, credit requirements, investing, insurance, and estate and retirement planning. Not intended to be a financial planning course, but students will develop a fundamental knowledge of financial concerns.		Term Prerequisite: None Semester Prerequisite: None This series of seminars provides the successful participant with operational proficiency in using specific microcomputer software. The seminars also provide the students with some experience using commands, functions, and features of the software beyond the basic level. Extensive hands-on activity is the primary method used in learning.	
BUSN 251 Stock Market Essentials	3	CABS 102 Microcomputers for Non-Majors	2
Term Prerequisite: None Semester Prerequisite: None 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.		Term Prerequisite: None Semester Prerequisite: None Surveys concepts and uses of software applications: word processors, spreadsheets, and database managers. Terminology, problem-solving, and acquisition factors associated with personal computers are discussed. Hands-on computer use.	
BUSN 252 Personal Financial Planning	2	CABS 114 WordPerfect - Beginning	2
Term Prerequisite: None Semester Prerequisite: None This course provides students with practical information to guide personal financial decisions. It is designed to facilitate learning the process of financial planning to help students make informed choices about financial matters.		Term Prerequisite: Keyboard Familiarity Semester Prerequisite: Keyboard Familiarity Beginner-level instruction on use of WordPerfect. Topics include creating, editing, formatting, and storing word processing documents. Also learned are the use of the block technique, spell-checker, thesaurus, merge feature for form letters, and maintaining lists. Extensive hands-on activity.	
BUSN 254 Introduction to Investments	2	CABS 115 WordPerfect - Advanced	2
Term Prerequisite: None Semester Prerequisite: None This course covers the fundamental principles of investing and its role in our economy. Emphasis will be on developing terminology, types of investments, and personal financial planning such as mutual funds, real estate, CDs, money market funds, limited partnerships, insurance, IRAs, stock, and tax shelters. This is an overview course.		Term Prerequisite: CAB 114 Semester Prerequisite: CABS 114 Instruction in the use of WordPerfect features such as macros, tables, columns, footnotes and endnotes, indexes, lists, table of contents, outline, boxes, graphics, and fonts. Includes techniques for improving the appearance of documents produced through use of appropriate fonts and other print capabilities.	

<p>CABS 116 WordPerfect - Advanced Format 2 Term Prerequisite: CAB 114 Semester Prerequisite: CABS 114 Instructs microcomputer users on how to design, edit, and produce high-quality printed documents using WordPerfect. Hands-on activity will result in the production of letters, newsletters, brochures, flyers, and other similar documents.</p>	<p>CABS 171 Symphony 2 Term Prerequisite: None Semester Prerequisite: None An introduction to Lotus Symphony. Hands-on training for use of Symphony's spreadsheet, business graphics, database manager, and word processor. Communications is discussed.</p>
<p>CABS 119 Word for Windows 2 Term Prerequisite: Keyboard Familiarity Semester Prerequisite: Keyboard Familiarity This course is designed to provide the person new to the Word for Windows program with the ability to perform the most common word-processing functions. The course also covers less frequently used features, such as performing mail merge and creating tables.</p>	<p>CABS 180 Desktop Publishing Using Pagemaker 3 Term Prerequisite: Windows Familiarity Semester Prerequisite: Windows Familiarity This course provides experience in producing documents with text and graphics using the desktop publishing program PageMaker. Good design of documents is emphasized in addition to the mechanics of producing the document. The basics of publishing are also discussed. Documents produced include reports, flyers, and newsletters.</p>
<p>CABS 122 Lotus 123 Self Taught 2 Term Prerequisite: None Semester Prerequisite: None An introduction to using the Lotus 1-2-3 spreadsheet, graphics, and database management program. The course uses a variety of teaching techniques such as videotape and computer-assisted instruction. Provides hands-on experience in creating spreadsheets, producing graphs and reports, and searching and sorting databases.</p>	<p>CABS 195 MicroSoft Windows 2 Term Prerequisite: None Semester Prerequisite: None This course is for a novice in the use of the Microsoft Windows environment. Topics include the use of Windows features (icons, dialog boxes, etc.), functions (program manager, file manager, print manager, control panel), and applications included with Windows (Write, Paintbrush, Accessories, Recorder, Terminal).</p>
<p>CABS 123 Lotus 123 2 Term Prerequisite: None Semester Prerequisite: None Provides the student with a working knowledge of the Lotus 1-2-3 spreadsheet program and enables the student to apply Lotus to routine business problems. Topics include spreadsheet navigation, basic functions, spreadsheet formatting, formulas, special functions, move, copy, and an introduction to graphs, macros, and database.</p>	<p>CACR 100 Machine Shorthand Theory 6 Term Prerequisite: Typ speed 40 wpm, High School Diploma/Equivalent Semester Prerequisite: Typ speed 40 wpm, High School Diploma/Equivalent This course is specifically designed for basic touch shorthand computer-compatible, conflict-free theory taught on a stenograph machine to develop notewriting accuracy from 92 to 96 percent and speeds up to and including 80 wpm for 3 minutes.</p>
<p>CABS 124 Advanced Lotus Release 2 2 Term Prerequisite: CAB 123 Semester Prerequisite: CABS 122/CABS 123 Expands the students' working knowledge of Lotus 1-2-3 by providing experience in applying advanced features of the program to routine business problems. Topics include an in-depth study of macros, database management, graphs and charts, data tables, user defined menus, and custom help screens. Uses release 2 of Lotus 1-2-3.</p>	<p>CACR 110 Machine Shorthand Speedbuilding I 6 Term Prerequisite: CCR 102 Semester Prerequisite: CACR 100 This course is specifically designed for speedbuilding in machine shorthand at the rates of 80 to 100 wpm for 5 minutes at 97 percent accuracy in the areas of literary, jury charge, and 2-voice testimony dictation.</p>
<p>CABS 125 Advanced Lotus Release 3 2 Term Prerequisite: CAB 123 Semester Prerequisite: CABS 122/CABS 123 Expands the students' working knowledge of Lotus 1-2-3 by providing experience in applying advanced features of the program to routine business problems. Topics include an in-depth study of macros, database management, graphs and charts, data tables, user defined menus, and custom help screens. Uses release 3 of Lotus 1-2-3.</p>	<p>CACR 120 Machine Shorthand Speedbuilding II 6 Term Prerequisite: CCR 103 Semester Prerequisite: CACR 110 This course is specifically designed for speedbuilding in machine shorthand at the rates of 110 and 130 wpm for 5 minutes at 97 percent accuracy in the areas of literacy, jury charge, and 2-voice testimony dictation.</p>
<p>CABS 126 Excel 2 Term Prerequisite: None Semester Prerequisite: None Beginner-level training in the creating of spreadsheets and databases 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.</p>	<p>CACR 201 Q and A I 3 Term Prerequisite: CCR 104 Semester Prerequisite: CACR 120 This course includes two-voice testimony dictation and machine shorthand speedbuilding from 130 to 170 wpm.</p>
<p>CABS 130 dBASE for Non-Majors 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for the person who uses an existing dBASE program or who needs to develop a simple database. Students learn how to create database structures, enter and edit data, manipulate the data, and prepare printed reports. The programming mode is not addressed in this course.</p>	<p>CACR 202 Q and A II 3 Term Prerequisite: CCR 212 Semester Prerequisite: CACR 201 This course includes two-voice testimony dictation and machine shorthand speedbuilding from 170 to 200 wpm. It also introduces four-voice testimony.</p>
<p>CABS 136 SQL: Structured Query Language 2 Term Prerequisite: None Semester Prerequisite: None This course covers the relational database language SQL. Topics include table definition, queries, special operators, the join operation, views, security, administration, and reports. A commercial SQL product is used to provide students with hands-on experience.</p>	<p>CACR 203 Q and A III 3 Term Prerequisite: CCR 213 Semester Prerequisite: CACR 202 This course includes two-voice testimony dictation and machine shorthand speedbuilding from 200 to 240 wpm as well as four-voice testimony.</p>
<p>CABS 140 Business Graphics Using Harvard Graphics 2 Term Prerequisite: None Semester Prerequisite: None This course uses the microcomputer as a tool to create and present information in a graphic form. Students learn to determine the most appropriate type of chart or graph to communicate specific kinds of information. They use Harvard Graphics software to produce and present information.</p>	<p>CACR 210 Jury Charge I 2 Term Prerequisite: CCR 104 Semester Prerequisite: CACR 120 This course includes jury charge dictation and machine shorthand speedbuilding from 120 to 150 wpm.</p>
	<p>CACR 211 Jury Charge II 2 Term Prerequisite: CCR 222 Semester Prerequisite: CACR 210 This course includes jury charge dictation and machine shorthand speedbuilding from 150 to 180 wpm.</p>
	<p>CACR 212 Jury Charge III 2 Term Prerequisite: CCR 223 Semester Prerequisite: CACR 211 This course includes jury charge dictation and machine shorthand speedbuilding from 180 to 200 wpm. Legal opinion and argument dictation is also included.</p>
	<p>CACR 220 Literary I 3 Term Prerequisite: CCR 104 Semester Prerequisite: CACR 120 This course includes literary dictation and machine shorthand speedbuilding from 110 to 140 wpm.</p>

CACR 221 Literary II 3	CHCE 107 Community Resources for Health Professionals .75
Term Prerequisite: CCR 232 Semester Prerequisite: CACR 220 This course includes literary dictation and machine shorthand speedbuilding from 140 to 170 wpm.	Term Prerequisite: None Semester Prerequisite: None A course designed to help health care professionals identify and utilize 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.
CACR 222 Literary III 3	CHCE 108 Medical Emergencies in the Dental Office .5
Term Prerequisite: CCR 233 Semester Prerequisite: CACR 221 This course includes literary dictation and machine shorthand speedbuilding from 170 to 190 wpm.	Term Prerequisite: Dental Professional Staff Semester Prerequisite: Dental Professional Staff Covers common medical emergencies that may occur in the dental office and treatment for such emergencies. Instruction in taking a blood pressure, clearing airways, evaluating medical histories and emergency kits is given. Discussion includes caring for medically compromised dental patients and formulating an office emergency plan.
CACR 230 Medical/Technical Testimony I 2	CHCE 112 Dental Auxiliary X ray 1.5
Term Prerequisite: None Semester Prerequisite: None This course includes medical and technical dictation and machine shorthand speedbuilding from 110 to 140 wpm.	Term Prerequisite: Dental Auxiliary Semester Prerequisite: Dental Auxiliary with One Year Experience/Departmental Approval This course is designed for the dental auxiliary to update his/her skills and gain knowledge in making intraoral radiographs of diagnostic quality. Includes theory and laboratory sessions in exposing, processing, mounting, and evaluation of radiographs. Upon successful completion, the student receives a certificate of completion.
CACR 231 Medical/Technical Testimony II 2	CHCE 114 Physical Assessment Skills for Nursing Practice 2.5
Term Prerequisite: CCR 251 Semester Prerequisite: CACR 230 This course includes medical and technical dictation and machine shorthand speedbuilding from 140 to 170 wpm.	Term Prerequisite: RN/LPN/Nurse Semester Prerequisite: RN/LPN/Nurse This course is designed for nurses in any area of practice. Emphasis is on techniques of physical examination: inspection, palpation, percussion, and auscultation. History taking and interpretation of physical findings are stressed. All major body systems are studied. Live models are used in supervised practice sessions. All equipment supplied.
CACR 232 Medical/Technical Testimony III 2	CHCE 115 Physical Assessment Refresher .75
Term Prerequisite: CCR 252 Semester Prerequisite: CACR 231 This course includes medical and technical dictation and machine shorthand speedbuilding from 160 to 190 wpm.	Term Prerequisite: CHC 114/Equivalent Semester Prerequisite: CHCE 114/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 and normal physical findings. There is also ample opportunity, through supervised practice sessions, to improve specific techniques of physical examination.
CACR 240 C.A.T./Xscribe 2	CHCE 117 Physical Assessment Techniques for the Corrections Nurse 2.75
Term Prerequisite: Faculty Approval Semester Prerequisite: Faculty Approval This course is designed to give students a hands-on experience with computer-aided transcription for the court reporters.	Term Prerequisite: Corrections Nurse/EMT Semester Prerequisite: Corrections Nurse/EMT This course is designed for and restricted to Nurses/EMTs currently employed by Michigan Department of Corrections. Physical exam skills are studied and extensively practiced with special attention to modifications required in the corrections setting. Live models are used. Common pathological findings are emphasized. All equipment supplied.
CACR 250 Court Procedures and Fieldwork 3	CHCE 119 Ventilation Care for Long-Term Care Patients 1.75
Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval Students placed in this work field will spend 100 hours with official reporters, deposition reporters, and hearings reporters writing and transcribing notes in proper form in order to learn courtroom, conference, hearings, and deposition techniques and procedures.	Term Prerequisite: RN/LPN Semester Prerequisite: RN/LPN This course is designed to educate the RN or LPN in patient care skills required to safely care for patients needing long-term ventilator support. A clinical component is included.
CHCE 100 Nurse Refresher 9	CHCE 127 Physical Assessment for Community Mental Health Nurses 1.5
Term Prerequisite: Current Michigan License Semester Prerequisite: Current Michigan License For the inactive RN or LPN who would like to re-enter active practice. Includes theory and practice in nursing care, pharmacology, selected disease processes, and new concepts in delivery of health care. Clinical component is included.	Term Prerequisite: RN Community Mental Health Semester Prerequisite: Developmentally Disabled/Community Health Nurse Course content is specific for nurses working with the developmentally disabled and emotionally disturbed/elderly client in the community health setting. Physical exam techniques are learned and then modified for the problem situations encountered in community health settings. Emphasis is on detection of abnormal findings in major body systems.
CHCE 101 Suicide Seminar: Assessment and Prevention .5	CHCE 182 Acute Trauma/Emergency Nursing Seminar 2
Term Prerequisite: None Semester Prerequisite: None This seminar covers demographics, attitudes and theories regarding suicide. Assessment skills for identifying suicide potential, interventions for the prevention of suicide, videotapes, case studies, and group discussions are used to increase awareness regarding suicide, in addition to gaining insight in recognition, assessment, and prevention of suicide.	Term Prerequisite: RN/Allied Health Semester Prerequisite: RN/LPN/EMT/AEMT Nurses and pre-hospital personnel will increase their knowledge of acute trauma and medical emergencies. Lecture, demonstrations, and simulated emergency practice sessions are all used to assist students in assessing, prioritizing, and providing emergency care in a safe, organized manner. Chest, abdomen, burns, face, extremities, and neuro trauma are included.
CHCE 103 Psychiatric Technician Update 1.5	
Term Prerequisite: CHS 213/Equivalent Semester Prerequisite: CHSE 213/Equivalent A course to update current mental health practices and to provide additional information for the practicing basic psychiatric technician. Course content will include those areas of new information or those identified by the contracting agency.	
CHCE 104 Long Term Care Nurse Refresher 6	
Term Prerequisite: Nurse Current Michigan License Semester Prerequisite: Nurse Current Michigan License This course is designed for the inactive RN or LPN who would like to re-enter active practice in a geriatric setting. A variety of learning methods are included, as well as a clinical component.	
CHCE 106 Cardiac Dysrhythmia Interpretation 2.75	
Term Prerequisite: Health Professional Semester Prerequisite: Health Professional This course introduces the student to identification of common dysrhythmias seen on a monitor or telemetry unit. Content will include criteria, causes, hemodynamic effects and treatment of dysrhythmias according to ACLS guidelines. Use of monitoring equipment is integrated within the course content.	

<p>CHCE 185 Lab Tests for Nurses .5 Term Prerequisite: None Semester Prerequisite: None A seminar for nurses and other health-care personnel. Seminar content focuses on the systematic disease processes of specific lab tests, interpretation of test values, and application to practice. Mock lab reports and case study situations are used.</p>	<p>CHCE 205 Intravenous Therapy .5 Term Prerequisite: Nurse, Health Care Professional Semester Prerequisite: Nurse, Health Care Professional A specialty seminar for nurses and other health care professionals caring for clients receiving intravenous therapy in the home, acute care, or extended care settings. Content includes information on safe IV therapy, specialty solutions, infusion devices, site selection, and practice.</p>
<p>CHCE 190 Pharmacology Math 1 Term Prerequisite: Allied Health Professional Semester Prerequisite: Allied Health Professional This course is designed for the registered nurse, licensed practical nurse, student of a nursing curriculum, pharmacy technician, and medical assistant. Its primary goal is to provide the student with a review of mathematics and a simplified method of calculating drug dosages in adult and pediatric patients.</p>	<p>CHCE 208 Clinical Practicum for Professional Nurses 1 Term Prerequisite: RN/LPN/GN Semester Prerequisite: RN/LPN/GN This practicum is designed for nurses requiring supervised clinical practice as part of their advanced study. A variety of clinical settings are used, including acute care, clinics, home care, and treatment centers. This course is most appropriate in conjunction with one of the advanced nursing practice courses/seminars.</p>
<p>CHCE 193 Basic Cardiac Technician 2 Term Prerequisite: RN/LPN/Tech Semester Prerequisite: Departmental Approval This course offers an introduction to cardiac arrhythmias. The content includes interpretation of cardiac monitors, understanding basic cardiac anatomy and physiology, and an introduction to 12 lead EKG machine and Holter monitor.</p>	<p>CHCE 210 Pediatric Advanced Life Support 1 .5 Term Prerequisite: Basic Cardiac Life Support Certification/Health Professional Semester Prerequisite: Basic Cardiac Life Support Certification/Health Professional This seminar is designed for members of the health-care team who work with pediatric patients. A combination of lecture and practice in skills stations will prepare the student for success in achieving American Heart Association certification as a Pediatric Advanced Life Support Provider. Prior assigned reading mandatory.</p>
<p>CHCE 194 Mental Health Nursing Seminar 1.5 Term Prerequisite: Registered Nurse Semester Prerequisite: Registered Nurse This course is designed for registered nurses currently working with or who will work with clients with emotional problems. Students are taught the content for a mental status assessment, therapeutic communication techniques, psychotropic medications, patient teaching techniques, nursing interventions, and the evaluation of client progress.</p>	<p>CHCE 211 Pediatric Advanced Life Support(PALS) Recertification .75 Term Prerequisite: Basic Cardiac Life Support, Pediatric Advanced Life Support Certification Semester Prerequisite: Basic Cardiac Life Support, Pediatric Advanced Life Support Certification This seminar is designed to recertify, according to the American Heart Association (AHA) standards, those professionals currently possessing valid Pediatric Advanced Life Support (PALS) certification cards. Upon successful recertification, the AHA will issue each student a new PALS certification card. Prior assigned readings are mandatory.</p>
<p>CHCE 195 Effective Interaction and Problem-Solving Techniques .5 Term Prerequisite: RN/LPN/Allied Health Semester Prerequisite: RN/LPN/Allied Health This seminar stresses application of assertive communication skills. Personality and temperament styles are identified which determine conflict resolution, value clarification, and confrontational skills. Real and theoretical work situations are stressed to assist in effective problem-solving techniques.</p>	<p>CHCE 215 Pediatric Physical Assessment 2.5 Term Prerequisite: RN/LPN Semester Prerequisite: RN/LPN Course content is designed for any nurse working with children. Students learn norms for stages of physical development and typical physical findings for each body system. Nurses learn to adapt the physical exam to the age, behavior, and acuity of the child.</p>
<p>CHCE 198 Geriatric Nursing Seminar .5 Term Prerequisite: RN/LPN Semester Prerequisite: Nurse (RN/LPN/GN/SN) This focused seminar is designed specifically for the nurse working in long-term care facilities. The student investigates concepts of nursing leadership and applies them to his/her own work environment. Issues of staff morale, staff turnover, realistic changes within economic and organization limitations are discussed.</p>	<p>CHCE 218 Nursing Licensure Exam Preparation for RN-NCLEX and NLN Exams 2.25 Term Prerequisite: Graduate Nurse: Diploma/ADN/BSN Semester Prerequisite: Graduate Nurse: Diploma/ADN/BSN This review course helps the graduate nurse organize and study important nursing care topics arranged by specialty: obstetrics, medical-surgical, pediatrics and psychiatric nursing, nursing management, patient care decisions, treatment protocols, patient teaching, pharmacology, nutrition, and test-taking strategies are included. Students take mock exam and multiple practice tests.</p>
<p>CHCE 200 Managing Aggressive Behavior 1 Term Prerequisite: None Semester Prerequisite: None This course is designed for staff working where the potential for aggressive behavior exists. Michigan's mental health code is used as a basis for course content which includes cues to emotional crisis, causes for aggressive behavior, de-escalating techniques, self-protective maneuvers, and non-offensive physical controls. Practice sessions are included.</p>	<p>CHCE 222 Essentials of Emergency/Critical Care/ Specialty Care Nursing 6 Term Prerequisite: RN/LPN/GN/AEMT Semester Prerequisite: RN/LPN/GN/AEMT This course embodies intensive education and training for nurses preparing to work in the acute specialty care setting. Physical assessment, recognition, and management of trauma and critical dysfunctional conditions are emphasized. Pharmacology, patient monitoring, and critical decision-making in simulations are included. Take concurrently with CHCE 208.</p>
<p>CHCE 202 Advanced Nursing Practice Seminar: Medical-Surgical Nursing 3 Term Prerequisite: RN/LPN/GN Semester Prerequisite: RN/LPN/GN This specialty course is designed to enhance nurses' knowledge of medical-surgical practices. Content focuses on patient assessment, current treatment modalities, and pharmacology. Specialized monitoring and treatment equipment or procedures are included where applicable. Important types of pathology and dysfunctional states are included with emphasis on the nursing management.</p>	<p>CHCE 227 New Dimensions in Nursing .5 Term Prerequisite: Nurse Semester Prerequisite: Nurse (RN/LPN/GN/SN) This is a concentrated update seminar for both active/inactive nurses. Seminar topics are selected for relevance to current nursing practice with the focus on new health care trends, treatments and diagnostic measures, patient management issues, and nursing practice issues.</p>
<p>CHCE 203 Oncology Nursing Practice 3 Term Prerequisite: RN/LPN/GN Semester Prerequisite: RN/LPN/GN A specialized course for nurses pursuing a position in oncology or for those seeking professional growth. Course content includes the diagnosis and pathophysiology of cancer, principles of radiation, chemotherapy and surgical treatment, oncologic complications with related management, emotional adjustment issues, and bereavement. Strong emphasis on nursing care.</p>	<p>CHCE 228 Nursing Management Strategies 2 Term Prerequisite: Health Professional Semester Prerequisite: Health Professional This course provides an overview of the management function in a health-care setting. It's based on a conceptual understanding of the management functions of planning, organizing, leading, controlling, and dealing with change. Emphasis will be on developing practical skills needed to manage resources and set realistic goals.</p>
<p>CHCE 204 Essentials of Home Health Nursing Practice 3 Term Prerequisite: RN/LPN/GN Semester Prerequisite: RN/LPN/GN This course helps prepare nurses for work in home health care. Course content is extensive, including information about medicare/medicaid, DRGs, charting, patient assessment, personal safety, infection control, and effective communication. Cultural values affecting delivery of care, appropriate referrals, supervision, and planning effective home visits are also emphasized.</p>	

- CHCE 229 Nursing Practice Update Seminar** .75
Term Prerequisite: RN/LPN/Health Professional
Semester Prerequisite: RN/LPN/Health Professional
 Seminar topics are selected from current medical literature and/or prevailing community needs. Trends and issues in nursing, patient care advances and dilemmas, diagnostic and treatment protocols, medical-legal-ethical considerations and professional nursing concepts all form the basis for final topic selection. Specialized faculty participate in areas of their expertise.
- CHCE 230 Advanced Cardiac Life Support** 2.25
Term Prerequisite: Departmental Approval
Semester Prerequisite: Basic Cardiac Life Support Certification/Health Professional/Departmental Approval
 This seminar is designed for members of the health care team to develop knowledge and skills in Advanced Cardiac Life Support (ACLS). A combination of lecture and skills performance will prepare the student to achieve success in American Heart Association certification as an ACLS provider. Pre-preparation mandatory.
- CHCE 234 Mental Health Update** .75
Term Prerequisite: Nurse
Semester Prerequisite: Nurse
 This seminar is for health-care personnel with the need to practice and expand their skills in working with the mentally ill. Content will focus on those areas prioritized by the contracting agency. Various teaching, learning and testing techniques will be utilized: lecture, role-playing, audio-visual, case studies, and written quizzes.
- CHCE 235 Advanced Cardiac Life Support Recertification** .75
Term Prerequisite: Advanced Cardiac Life Support Certificate
Semester Prerequisite: Basic Cardiac Life Support, Advanced Cardiac Life Support Certificate
 This seminar is designed to recertify, according to the American Heart Association standards, those individuals currently possessing valid Advanced Cardiac Life Support (ACLS) cards. The American Heart Association will issue a certificate to each student upon successful completion of the program. Prior assigned readings are mandatory.
- CHCE 239 Emergency/Trauma/Update and Review** 1.5
Term Prerequisite: RN/LPN Emergency Care Nurse
Semester Prerequisite: RN/LPN Emergency Care Nurse
 This course is designed for nurses working in the specialty field of Emergency/Trauma Care. It may be used as an update in the current status of emergency/trauma nursing or as an adjunct in helping the emergency nurse prepare for the certification exam.
- CHCE 244 Hospice Administration I: Quality Assurance** 2
Term Prerequisite: Hospice Administrator
Semester Prerequisite: Hospice Administrator
 This course combines current theory on quality assurance with application of concepts to hospice programs in all stages of development. A program evaluation will also be completed.
- CHCE 245 Hospice Administration II: Leadership and Management** 3
Term Prerequisite: Hospice Administrator
Semester Prerequisite: Hospice Administrator
 This course uses the hospice management model for the planning, organization and direction of hospice services to a community. The student will develop skills for sound personnel staffing to meet hospice needs. Included is an assignment to develop a fiscal management model to be used specific to a hospice setting.
- CHCE 246 Hospice Administration III: Leadership/Public Relations** 3
Term Prerequisite: Hospice Administrator
Semester Prerequisite: Hospice Administrator
 Specifics covered in this course are planning and conducting family-patient conferences, doing a market survey of community needs for hospice services, identifying resources and support for hospice services, and working with local hospice boards.
- CHCE 247 Techniques Update Course for RDHs** .25
Term Prerequisite: Current Dental Hygiene License in Michigan/Current Dental License
Semester Prerequisite: Dentist/Dental Hygiene
 This course is designed for the Dental Hygienist/Dentist who wishes the opportunity to gain knowledge and develop the skills needed to perform advanced clinical procedures.
- CHCE 250 Patient Dental Anxieties/Pain Control** .5
Term Prerequisite: Dental Personnel
Semester Prerequisite: Dental Professionals
 This seminar will provide dental professionals with the knowledge and skills to successfully treat the difficult and anxious dental patient.
- CHCE 253 Dental Team Concepts** .75
Term Prerequisite: Dental Office Staff
Semester Prerequisite: Dental Office Staff
 This seminar is designed to update and motivate the dental team with current, practical information on "How to be a Successful, Happy Dental Office in the '90s." Topics include utilization of auxiliaries for maximum productivity, effective scheduling, and communication to break barriers.
- CHCE 256 New Dimensions in Dental Hygiene** .5
Term Prerequisite: Dental Hygienist/Dental Professional
Semester Prerequisite: Dental Hygienist/Dental Professional
 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 issues are an example of topics included.
- CHCE 258 Techniques Update Course for RDAs** .25
Term Prerequisite: Dental Team
Semester Prerequisite: Dental Assistant/Dentist
 This laboratory course is designed for Registered Dental Assistants/Dentists who wish a refresher in RDA functions. Utilization concepts, new procedures, advanced techniques, new products and instruments will be included.
- CHCE 259 RDA Update** .5
Term Prerequisite: Current RDA License/Licensed Dental Hygienist
Semester Prerequisite: RDA/RDH/Dentist
 This seminar is designed especially for the Registered Dental Assistant who wishes an update on procedures they can legally perform in Michigan, current issues in the dental field and current issues in dental assisting. Topics may include expanded functions, utilization concepts, and political issues.
- CHCE 265 Physical Assessment Skills for Geriatric Nursing** 1.75
Term Prerequisite: Nurse
Semester Prerequisite: Nurse (RN/LPN/GN/SN)
 This course is designed for nurses working with the older client in any setting. Normal age-related physical changes are contrasted with clinical signs of pathology. Students practice new skills in supervised sessions with live models. There is emphasis on interpreting important findings and clearly documenting exam data.
- CHCE 266 Focal Problems and Patient Care Issues in Geriatric Nursing** 1.5
Term Prerequisite: Nurse
Semester Prerequisite: Nurse (RN/LPN/GN/SN)
 This specialty course is designed for nurses working with the elderly client in any setting. Common, serious conditions are studied using physical assessment data to identify and document the problem. An overview of normal physical and physiologic changes in the aging client is the framework used to assess abnormal developments.
- CHCE 267 Therapeutic Communications** .75
Term Prerequisite: Health Professional
Semester Prerequisite: Health Professional
 For health professionals with emphasis on the application of communication theory to practice in health care. Communication techniques useful in daily as well as crisis and difficult situations are included. Videotape, film clips, slides, role-playing, and a written assignment are utilized to enhance the student's learning.
- CHCE 273 Registered Nurse Critical Care Core Curriculum** 3
Term Prerequisite: RN with Experience in Med-Surg Nursing, Good Assessment Skills, Basic Understanding of Anatomy, Physiology
Semester Prerequisite: RN with Med-Surg, Assessment Skills, Good Foundation in Anatomy, Physiology
 A course for registered nurses practicing in critical care, preparing to work in critical care and/or considering taking the certification exam. Emphasis placed on the CCRN core course content which includes anatomy and physiology, pathophysiology of selected common conditions, related nursing interventions, and medical management.
- CHCE 274 Critical Care Registered Nurse Special Equipment** .25
Term Prerequisite: Departmental Approval
Semester Prerequisite: CHCE 273
 This course emphasizes specific procedural guidelines for use of specialized equipment used to monitor the critically ill adult. Content includes pulmonary arterial lines, arterial lines, ventilatory management, temporary and permanent pacemakers, and intracranial pressure monitoring.
- CHCE 280 TMJ Diagnosis and Management** .5
Term Prerequisite: Dental Personnel
Semester Prerequisite: Dental Practitioner
 This course focuses on current concepts of diagnosis and management of the TMJ patient in a dental office. Topics include growth and development, functional anatomy and pathology, evaluation, treatment modalities and management. Case presentations, demonstrations, and hands-on are included.

<p>CHCE 282 Dental Auxiliary Seminar .5 Term Prerequisite: RDA/RDH/RDA/RDH Licensure Candidate Semester Prerequisite: Dental Auxiliary This course is designed for the dental auxiliary who wishes to expand his/her skills and knowledge for greater application in a dental office. A variety of topics will be offered. Examples would be intraoral photography, dental instrument sharpening, and dental insurance billing.</p>	<p>CHDV 121 Child Care Curriculum: Cognitive and Language Development 1 Term Prerequisite: None Semester Prerequisite: None This course provides an in-depth look at curriculum and activities which enhance cognitive and language development of children in early childhood programs. It focuses on designing developmentally appropriate activities which foster curiosity and exploration. Topics include math, science, language arts, and emergent literacy. CDA functional areas: cognitive and communication.</p>
<p>CHCE 285 Dental Office Infection Control .5 Term Prerequisite: Dental Personnel Semester Prerequisite: Dental Professional Updates dental professionals on effective routine barrier techniques, aseptic procedures, and methods of sterilization to decrease the possibility of transmitting disease and inducing infection. Topics include HIV, AIDS, Viral Hepatitis, HBV, Tuberculosis, Herpes Simplex, and the safe handling and disposal of infectious and hazardous waste.</p>	<p>CHDV 122 Child Care Curriculum: Creative Development 1 Term Prerequisite: None Semester Prerequisite: None This course provides an in-depth look at curriculum and activities which enhance the creative development of children in early childhood programs. Specific information on developmentally appropriate and open-ended activities in the areas of art, music, creative, and dramatic play with a variety of materials are shared. CDA functional area: creative.</p>
<p>CHCE 286 Dental Specialty, Focus .5 Term Prerequisite: Dental Auxiliary Semester Prerequisite: Dental Professional This seminar will present the most recent information on a variety of dental specialty topics. The seminar is designed for all members of the dental team. Topics include lasers in dentistry, dental contributions to the forensic sciences, and dentistry for the geriatric dental patient.</p>	<p>CHDV 130 Introduction to Child Care 1 Term Prerequisite: None Semester Prerequisite: None This course introduces factors in providing quality day care. Topics include: program planning and curriculum development; child growth and development; positive guidance and discipline skills; safety, health, and nutrition; parent communication and involvement; professionalism. CDA functional area: learning environment, program management, and professionalism.</p>
<p>CHCE 297 Dental Oral Pathology .5 Term Prerequisite: Dentist/RDH/RDA Semester Prerequisite: Dentist/RDH/RDA Case histories will be presented where 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.</p>	<p>CHDV 131 Family Day Care Management 2 Term Prerequisite: None Semester Prerequisite: None This course presents a systematic approach to managing a family day care home and creating a positive learning environment for young children in a home setting. Topics include: business aspects, program development, professionalism, managing personnel, and organizing the environment. CDA functional areas: learning environment, program management, professionalism.</p>
<p>CHCE 299 Advanced Cardiac Life Support (ACLS) Instructor Course 2.25 Term Prerequisite: Advanced Cardiac Life Support Provider Semester Prerequisite: Basic Cardiac Life Support/Advanced Cardiac Life Support Certification This course will train those health-care professionals who are currently certified in Advanced Cardiac Life Support (ACLS), according to American Heart Association standards, as ACLS instructors. All participants are expected to recertify their ACLS skills at the time of the course. Prior assigned readings are mandatory.</p>	<p>CHDV 150 Introduction to the Child Development Associate (CDA) Credential 1 Term Prerequisite: Instructor Approval Semester Prerequisite: Departmental Approval This course introduces the National Child Development Associate (CDA) Credentialing Assessment System. It examines credentialing procedures, resource file development, and the CDA competency standards. The functional area of professionalism is addressed.</p>
<p>CHDV 101 Child Growth and Development: 0-5 years 4 Term Prerequisite: None Semester Prerequisite: None This course examines the growth and development patterns of children (conception to 5 years) in physical, social, emotional, cognitive, and language development. Additional topics include nutrition, health, play, families, and the preschool experience. Students acquire skills in observing, recording, and interpreting child behavior. CDA: developmental context; functional area: healthy.</p>	<p>CHDV 151 Child Development Associate (CDA) Credentialing Preparation 2 Term Prerequisite: Departmental Approval Semester Prerequisite: CHDV 150, Departmental Approval This course is the final preparation for Child Development Associate (CDA) Credentialing Assessment. Students complete the resource file, are observed using the CDA observation instrument and prepare for the CDA situational assessment. Content of the course covers the functional areas of families, program management, safety, health, and professionalism.</p>
<p>CHDV 111 Positive Guidance and Communication Skills 4 Term Prerequisite: Departmental Approval Semester Prerequisite: CHDV 101 Recommended This course examines interaction skills and environmental structure necessary for fostering social and emotional growth in children of various ages. Topics include: positive guidance and discipline; effective communication with children and adults in child care; problem-solving; social skill development; group management; aggression prevention. CDA functional areas: self, social, guidance, communication, professionalism.</p>	<p>CHDV 184 Children and Stress 1 Term Prerequisite: None Semester Prerequisite: None This course examines stress as it relates to children. Specific topics include: symptoms and causes of stress; situations which are stressful for children; ways to help children cope with stress; techniques for reducing stress. Specific information on divorce, death, and hospitalization are discussed.</p>
<p>CHDV 112 Building Relationships with Families in Child Care 1 Term Prerequisite: Departmental Approval Semester Prerequisite: CHDV 111 Recommended This course examines ways to establish and maintain positive and productive relationships with families in child-care programs. The focus includes understanding the parent's perspective, supporting the child's relationship with his/her family, encouraging parental involvement, and communicating with parents. CDA functional area: families.</p>	<p>CHDV 185 Preventing Child Sexual Abuse: Teaching Personal Safety 1 Term Prerequisite: None Semester Prerequisite: None This course explores preventing child sexual abuse through teaching personal safety to children. Topics include: the sexually abusive situation; behavioral indicators; appropriate adult responses; legal mandates; reporting protocol. It emphasizes appropriate ways of teaching personal safety to children, selecting personal safety materials, and adult concerns when teaching it.</p>
<p>CHDV 120 Child Care Curriculum: Physical Development 1 Term Prerequisite: None Semester Prerequisite: None This course provides an in-depth look at developing curriculum and activities which enhance the development of physical and motor skills of children in early childhood programs. It includes specific information on developmentally appropriate activities for fine motor, gross motor, and sensory development for a variety of ages. CDA functional area: physical.</p>	<p>CHDV 186 Children's Self Esteem and Positive Discipline Term Prerequisite: None Semester Prerequisite: None This course looks at children's self esteem: what it is, where it comes from, how it can be fostered or changed, and how it affects child care. It focuses on practical suggestions and teaches positive discipline techniques that build self esteem. CDA functional area: self, guidance.</p>

CHDV 188 Caring for Young Children with Special Needs 1	CHEM 120 Basic General, Organic and Biological Chemistry 4
Term Prerequisite: None	Term Prerequisite: MTH 009/Placement Test
Semester Prerequisite: None	Semester Prerequisite: MATH 040/Placement Test
This course focuses on young children with special needs and their families. It addresses identification of children with disabilities or in "at-risk" categories; community services; inclusion in least restrictive environments; family-centered intervention; communication skills which enhance work with children with special needs and their families in various settings.	Introduces topics in general, organic, and biological chemistry. Included are scientific measurement, atomic structure and bonding, chemical equations and stoichiometry, solutions, acids, bases, buffers, gas behavior, nuclear radiation, organic functional groups, and the biologically important compounds: carbohydrates, lipids, proteins, enzymes, and nucleic acids.
CHDV 189 Helping Children Value Diversity 1	CHEM 125 Basic Chemistry 4
Term Prerequisite: None	Term Prerequisite: MTH 009/Placement Test
Semester Prerequisite: None	Semester Prerequisite: MATH 062/Placement Test
This course explores the various cultural groups and family structures that children encounter. It presents activities that caregivers can use to aid children in recognizing, valuing, and respecting diversity. Development of multi-cultural and anti-bias curriculum is emphasized.	Intended for students who have not had high school chemistry or who require a refresher course. Measurement, problem-solving, chemical formulas, chemical equations, stoichiometry, atomic structure, chemical bonding, gas laws, solutions, and acids and bases are emphasized.
CHDV 201 Meeting the Special/Diverse Needs of Children in Child Care 3	CHEM 151 General Chemistry Lecture I 4
Term Prerequisite: CD 121 Recommended	Term Prerequisite: High School Chemistry/CEM 110
Semester Prerequisite: CHDV 101 Recommended	Semester Prerequisite: MATH 112/Pass Placement Tests
This course focuses on the special and diverse individual needs of children in the child-care setting, including handicapping conditions and cultural diversity. It includes identifications of various categories of exceptionality and at-risk factors; mainstreaming, identification of resources; working with the community support system and the family.	The first of two semester courses designed to provide an in-depth introduction to general chemistry for students who plan careers in the health professions, physical sciences, biological sciences, or engineering. Topics discussed include measurement, aqueous reactions, stoichiometry, thermochemistry, atomic structure, bonding, and modern materials.
CHDV 220 Curriculum and Learning Environments for Preschoolers 4	CHEM 152 General Chemistry Lecture II 3
Term Prerequisite: Departmental Approval	Term Prerequisite: CEM 172
Semester Prerequisite: CHDV 101, CHDV 111/Departmental Approval	Semester Prerequisite: CHEM 151, MATH 121
This course explores developmentally appropriate preschool programming which promotes physical, cognitive, language and creative development through active involvement of children in concrete experiences. Topics include: designing safe, appropriate learning environments; selecting materials and equipment; developing children's learning objectives. CDA functional areas: safe, healthy learning environment; creative, physical, and cognitive communication.	The second of two semester courses designed to provide an in-depth introduction to general chemistry for students who plan careers in the health professions, sciences, or engineering. Topics include kinetics, ionic equilibria, thermodynamics, electrochemistry, descriptive chemistry, and nuclear chemistry.
CHDV 221 Infant-Toddler Program Development 3	CHEM 161 General Chemistry Laboratory I 1
Term Prerequisite: CD 101 Concurrently	Term Prerequisite: CEM 171
Semester Prerequisite: CHDV 101/Concurrently	Semester Prerequisite: CHEM 151/Concurrently
This course explores the components of physical and emotional environments needed for quality child care for infants and toddlers. Focus includes developing nurturing skills; developmentally appropriate activities and materials; management of schedules and routines; observation; and record keeping skills. CDA functional areas: safe, healthy learning environment; physical and cognitive communication; program management.	Laboratory course designed to complement CHEM 151. Stresses basic laboratory techniques, writing lab reports, and critical thinking exercises. Topics include density determination, synthesis, empirical formulas, crystallization, gas laws, calorimetry, and freezing point depression.
CHDV 222 School-Age Child-Care Program Development 2	CHEM 162 General Chemistry Laboratory II 1
Term Prerequisite: None	Term Prerequisite: CEM 181
Semester Prerequisite: None	Semester Prerequisite: CHEM 152/Concurrently, CHEM 161
This course examines the development of programs to meet the developmental characteristics of school-aged children (ages 5-12) outside of the elementary classroom. Content includes: growth and development patterns in the areas of physical, cognitive, social and emotional; appropriate equipment and activities; environment and program structure; individual and group management.	CHEM 162 is a laboratory course that complements CHEM 152. Includes quantitative experiments stressing accuracy, precision, and error determination.
CHDV 230 Child Care Center Administration 2	CHEM 182 Introductory Organic Chemistry 3
Term Prerequisite: Departmental Approval	Term Prerequisite: CEM 111, CEM 181
Semester Prerequisite: CHDV 220/10 Credits in CHDV/Departmental Approval	Semester Prerequisite: CHEM 151
This course examines the administrator's role in directing an early childhood center and in providing a systematic approach to program management. Topics include goal-setting, safety, licensing, health and nutrition, policy development, business techniques, and personnel management. CDA functional areas: safe program management, professionalism.	A survey of the principles of organic chemistry. Introduces the student to structure, nomenclature, chemical and physical properties, selected characteristics, preparations and reactions of the most common classes of organic compounds. Other topics include polymers, optical isomerism, and selected reaction mechanisms.
CHDV 281 Issues in Teaching in Child Care 2	CHEM 192 Introductory Organic Chemistry Laboratory 1
Term Prerequisite: Departmental Approval	Term Prerequisite: 2.0 Minimum in CEM 111, CEM 181
Semester Prerequisite: CHDV 220, Departmental Approval, CHDV 282 Concurrently	Semester Prerequisite: CHEM 182 Concurrently
This course accompanies the Child Development Practicum, CHDV 282. It explores the professional role of the teacher in implementing the children's daily program. Students gain skill in planning, goal-setting and evaluation. CDA functional areas: program management, professionalism.	Designed for students in majors such as packaging, agriculture, and forestry who require only one credit of organic lab. It gives students an introduction to common techniques, equipment, and chemicals found in an organic laboratory. Particular attention is given to compounds studied in CHEM 182.
CHDV 282 Child Development Practicum 2	CHEM 251 Organic Chemistry Lecture I 4
Term Prerequisite: Departmental Approval	Term Prerequisite: CEM 172, CEM 182
Semester Prerequisite: CHDV 220, Departmental Approval, CHDV 281 Concurrently	Semester Prerequisite: CHEM 152
A supervised field experience working directly with children in a child-care program. Students gain skill in planning and implementing the daily children's program, and in setting and assessing goals for individual children and the classroom. Students must concurrently enroll in the practicum seminar, CHDV 281.	The first lecture course of a two-semester sequence in organic chemistry for chemical engineering, chemistry, or preprofessional majors. Topics include structure and bonding, hybridization, nomenclature, stereochemistry, thermodynamics and kinetics of organic reactions, and functional groups including reactions and mechanisms.
	CHEM 252 Organic Chemistry Lecture II 4
	Term Prerequisite: CEM 251
	Semester Prerequisite: CHEM 251
	Continuation of CHEM 251. Topics include spectroscopy, organometallic compounds, aldehydes and ketones, carboxylic acids and their derivatives, amines, enolates, carbohydrates, lipids, proteins, and nucleic acids.

<p>CHEM 262 Quantitative Analysis 2 Term Prerequisite: Departmental Approval Semester Prerequisite: CHEM 162 Theory and procedures of classical analytical techniques, including gravimetric analysis and titrimetric methods. Use of instruments such as spectrophotometers, pH meters, and others is also included.</p>	<p>CHSE 126 Medical Terminology for Insurance Examiners 1.25 Term Prerequisite: Departmental Approval Semester Prerequisite: Medical Technician/Insurance Examiner Medical terminology is a technically exact vocabulary used by professionals to speak and write precisely. This medical terminology course is designed for insurance examiners and insurance medical technicians. The use of medical terms in records and specific medical areas will be stressed.</p>
<p>CHEM 272 Organic Chemistry Laboratory 2 Term Prerequisite: CEM 261 Semester Prerequisite: CHEM 251 Designed for students (in majors such as chemistry, pre-med, and pre-pharmacy) who require more than one credit of organic lab. It gives students experience with the chemicals, techniques, and equipment commonly employed in organic laboratories. Particular attention is given to compounds studied in CHEM 251 and 252.</p>	<p>CHSE 132 Health Unit Clerk/Coordinator 8 Term Prerequisite: CHS 121 Semester Prerequisite: CHSE 121 Course is designed to introduce the student to basic Health Unit Coordinator skills. Subject matter will include communication skills, computers, assertiveness, chart forms, admissions, surgicals, transfers, discharges, death and dying, pharmacology, laboratory tests, transcribing physician orders and job application skills. Clinical component is included. We offer a generic program.</p>
<p>CHIN 101 Elementary Chinese I 4 Term Prerequisite: None Semester Prerequisite: None Designed to help students build 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.</p>	<p>CHSE 134 Health Unit Clerk Certification Update .5 Term Prerequisite: Health Unit Clerk Coordinator Semester Prerequisite: Health Unit Clerk Coordinator This seminar is to assist the Health Unit Coordinator in preparation for the HUC National Certification Exam. The seminar includes an introduction to anatomical structure, medical terms, patient charts, transcription of physician orders, HUC procedures, management of human relations, prioritizing, and communication skills.</p>
<p>CHIN 115 Seminar: Conversational Chinese I 3 Term Prerequisite: None Semester Prerequisite: None Designed for people who have little background in the Chinese language and culture but wish to acquire 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.</p>	<p>CHSE 143 Phlebotomy Technician 4 Term Prerequisite: None Semester Prerequisite: None This course is designed to prepare a person to function as a phlebotomy technician. It will provide the knowledge and skill necessary to safely and skillfully obtain a blood specimen from a patient. The course includes theory, lecture, and campus practice laboratory. Students practice on each other.</p>
<p>CHSE 101 Acute Care Nurse Assistant/Orderly 6.5 Term Prerequisite: None Semester Prerequisite: None This course will prepare an individual for employment as a Nursing Assistant/Orderly in an acute-care hospital or home health care. The course will provide the knowledge and skills needed in order to provide basic patient care safely.</p>	<p>CHSE 145 Central Service Technician 4.5 Term Prerequisite: High School Graduate Semester Prerequisite: High School Graduate Prepares individuals to function competently in the Central Service Department of a health-care facility. Duties include (but are not limited to): processing of patient care equipment, supplies, and instruments for use in all departments. Includes principles and practices of decontamination, cleaning, disinfection, sterilization, and distribution of medical/surgical supplies.</p>
<p>CHSE 106 Long-Term Care Nurse Aide Update 1.5 Term Prerequisite: Departmental Approval Semester Prerequisite: Nurse Aide This course is designed to update the patient care skills and knowledge of the certified long-term care nurse aide. This educational update may be individualized to meet the needs of nurse aides within a long-term care facility.</p>	<p>CHSE 146 Central Service Update .5 Term Prerequisite: Central Service Personnel Semester Prerequisite: Central Service Personnel This course shall provide a review of current concepts and practices and update new information within the Central Service Department. It shall provide needed education for Central Service personnel to perform with competence and maintain established standards as detailed by regulatory agencies.</p>
<p>CHSE 108 Long-Term Care Nurse Aide 4 Term Prerequisite: None Semester Prerequisite: None This course will prepare women and men to be members of the long-term nursing care team. This is a state-approved certified course and will provide specific knowledge and skills required for a nurse aide to function in a long-term care nursing facility.</p>	<p>CHSE 182 Medical Hospital Billing 2 Term Prerequisite: 6 Months Medical Billing Experience/Medical Terminology Semester Prerequisite: 6 Months Hospital Medical Billing Experience/Medical Terminology This one-semester course is designed to teach the student each phase of hospital insurance billing, from receiving patient information until the payment is received. Participation in class discussions and work sessions is expected by all students. Presentation of materials will be lectures, discussions, and work sessions.</p>
<p>CHSE 111 Medical Insurance Billing I 3.25 Term Prerequisite: CHS 121/Equivalent Semester Prerequisite: CHSE 121/Equivalent First course in a two-semester sequence introduces the student to insurance billing, diagnostic and procedure coding for physician billing, and comprehensive billing directions for BCBS of Michigan. The student must have a grade of 2.5, or better, to continue with Medical Insurance Billing II.</p>	<p>CHSE 201 Dietary Manager I 6 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The first course in a two-semester sequence which will prepare students for a career as a Dietary Manager. The course will include both classroom and field experience. Topics such as the role of the supervisor, quality assurance, and nutritional principles will be included.</p>
<p>CHSE 112 Medical Insurance Billing II 3.25 Term Prerequisite: CHS 111 Semester Prerequisite: 2.5 Minimum in CHSE 111 Second course in a two-semester sequence. Comprehensive billing directions for Medicare, Medicaid, PHP, and other commercial insurance carriers for billing in the physician's office are covered. A certificate of completion is awarded for Medical Insurance Billing if a grade point of 2.5 or better is earned in CHSE 111 and CHSE 112.</p>	<p>CHSE 202 Dietary Manager II 6 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The second course in a two-semester sequence which will prepare students for a career as a Dietary Manager. This course will include both classroom and field experience. Students will be prepared to obtain both state and national credentials as a Dietary Manager.</p>
<p>CHSE 121 Medical Terminology for Allied Health I 2.5 Term Prerequisite: None Semester Prerequisite: None Medical Terminology I will provide a basic knowledge of word building, and use, pronunciation, and spelling of medical terms. The use of medical terms in periodicals, textbooks, and medical care areas will be stressed. It provides a sound basis for those students interested in health careers.</p>	<p>CHSE 205 Advanced Dietary Therapy 2 Term Prerequisite: CHS 201/Nutrition Class Semester Prerequisite: CHSE 201/Nutrition Class A one-semester course which is designed to provide advanced knowledge of diet therapy and nutritional care for Dietary Managers. The course will include knowledge of disease states, as well as laboratory data and nutritional assessment techniques as they relate to providing adequate nutritional care to patients.</p>
<p>CHSE 122 Medical Terminology for Allied Health II 2.5 Term Prerequisite: CHS 121 Semester Prerequisite: CHSE 121 Medical Terminology II will teach the student to utilize medical terminology in context by applying terms to the function and structure of body systems and specific disease conditions. Students will build on knowledge learned in Medical Terminology I.</p>	

CHSE 207 Dietary Manager Update .5	CHSE 231 Pharmacology of Substance Abuse 2
Term Prerequisite: Dietary Manager	Term Prerequisite: None
Semester Prerequisite: Dietary Manager	Semester Prerequisite: None
Seminar designed for Dietary Managers. A variety of current issues and topics specific to the role of the DM will be included. This seminar would be helpful in preparation for the DM credentialing examination.	Chemical and physiological nature of substances (alcohol, hard drugs, amphetamines) which have addiction possibilities will be discussed. Required course in the Substance Abuse Certificate Program. Emphasis on pharmacology of substance abuse, detection, and identification of physiological responses specific to various substances. Includes psychological aspects of substance use and abuse.
CHSE 210 RN State Board Update .75	CHSE 232 Overdose Crisis Intervention 1.5
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Graduate Nurse: Diploma/ADN/BSN	Semester Prerequisite: None
This course incorporates 12 hours of directed independent study in basic psychiatric nursing practice or medical-surgical, obstetrical, or pediatric nursing practice. Students work through progressive, structured activities including home study, class participation, group discussion, and practice tests to challenge critical-thinking skills in complex simulated patient scenarios.	Students will attain crisis intervention knowledge of how to recognize a drug/alcohol overdose, assess the degree and type of impairment, and learn how to provide related life-support aid. Students will learn how to use existing resources in supplementing aid and transporting patients. Designed for substance abuse counselors.
CHSE 212 Health Care Independent Study 2.25	CHSE 235 Pharmacy Technician 4.25
Term Prerequisite: Basic Cardiac Life Support Certificate, Health Professional	Term Prerequisite: MTH 009 Competency
Semester Prerequisite: Basic Cardiac Life Support Certificate, Health Professional	Semester Prerequisite: MATH 040 Competency
This independent study is designed to present updated and current concepts of Advanced Cardiac Life Support (ACLS) to a health-care professional. This is to be accomplished through the use of the Acronic computer and one-to-one tutorial. ACLS certification is possible. Prior assigned readings are mandatory.	This course is designed to introduce students to the skills necessary for a pharmacy technician position in a hospital or retail pharmacy. Students will be prepared to function with knowledge and accuracy in dispensing and control of drugs in either setting. Certificates awarded with 2.5 grade or better.
CHSE 213 Basic Psychiatric Technician 4	CHSE 240 Dietary Aide 5.5
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Interview, Departmental Approval	Semester Prerequisite: None
This course covers concepts of personality development, identification of mental illnesses, patient rights, aspects of confidentiality, therapeutic interventions, and specific means of evaluating patient care. Supervised clinical experience provides opportunities for students to apply classroom material to practical situations.	This course is designed to educate the student in the principles of dietary job responsibilities. The student will learn knowledge of diets, food preparation, sanitation and safety techniques. The course content will be subdivided into lecture, campus lab, and clinical lab.
CHSE 214 Correctional Medical Aide 3	CHSE 241 Housekeeping Aide 5.5
Term Prerequisite: Michigan Department of Corrections Officer in Training	Term Prerequisite: None
Semester Prerequisite: Michigan Department of Corrections Officer in Training	Semester Prerequisite: None
This course covers concepts of personality development, identification of mental illnesses, patient rights, aspects of confidentiality, therapeutic interventions, and documentation of care. Supervised clinical experience provides opportunities for students to apply classroom material to the work situation. Department of Correction registered nurses will be the clinical instructors.	This course is designed to educate the student in the principles of housekeeping job responsibilities. The student will learn knowledge of various cleaning techniques and their application in specialty clinical areas. The course content will be subdivided into lecture, campus, and clinical lab.
CHSE 215 Health Careers Directed Study 1.5	CHSE 245 Executive Housekeeping 1
Term Prerequisite: Departmental Approval	Term Prerequisite: Housekeeping Employee
Semester Prerequisite: Graduate Nurse: Diploma/ADN/BSN	Semester Prerequisite: Housekeeping Employee
A directed study course for international students and inactive nurses. This course focuses on nursing practice in the American health-care system, including use of nursing process, roles, dependent/independent activities, specialty equipment, etc. Observations in local hospitals, lectures, skills practice sessions, and independent study may all be used.	A series of seminars on required or elective topics defined by the NEHA. Topics include (but are not limited to): housekeeping techniques, safety, work controls, management, budgeting, and purchasing. Upon successful completion of this program, the student will be eligible for certification by NEHA.
CHSE 221 Management of Aggressive Behavior 1	CISB 100 Introduction to Computer Information Systems 3
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Special Transportation Employee	Semester Prerequisite: None
This course includes the assessment of individuals and environment, causes and exacerbators of aggressions, preventive measures to avoid or de-escalate a risk situation, and therapeutic interventions. Learned material will be reinforced with role-playing, assessment of videotaped situations, and demonstration of appropriate physical techniques.	This course provides an introduction to computers, their role in managing business information systems, their influence on society, and their use in personal productivity. It includes a hands-on introduction to three major microcomputer tools: word processors, spreadsheets, and database management systems.
CHSE 222 Special Transportation Health Care 2	CISB 101 Business Communications Technology 2
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Special Transportation Employee	Semester Prerequisite: None
Course is designed for special transportation health-care personnel/bus drivers/assistants who transport medically handicapped or mentally fragile individuals. This course covers various medical diseases and treatments, and provides practice skills pertinent for job performance.	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 databases, facsimile systems, and computer networks.
CHSE 223 Health Care Seminar - Special Transportation .5	CISB 104 Introduction to DOS 1
Term Prerequisite: Special Transportation Employee	Term Prerequisite: None
Semester Prerequisite: Special Transportation Employee	Semester Prerequisite: None
This course is for special transportation personnel and other human service personnel to teach ways of reducing exposure and transmission of various infectious diseases. The content will include etiology, sources of transmission, and symptomology of various infections: Hepatitis B, HIV and Herpes.	Students in this course develop skill in applying the most common commands of the disk operating system (DOS) used by IBM-type microcomputers. Students also learn how to work with disk directories and how to create batch files.
CHSE 226 School Bus Health Care 2	CISB 105 Advanced Microcomputer Applications 3
Term Prerequisite: Departmental Approval	Term Prerequisite: CAS 106
Semester Prerequisite: Special Transportation Employee	Semester Prerequisite: CISB 100
Course is designed for special transportation health-care personnel/bus drivers/assistants who transport medically handicapped or mentally fragile individuals. This course covers various medical diseases, treatments, and provides practice skills pertinent for job performance. This course includes dealing with aggressive behavior and steps in first aid.	Students in this course work with and expand software skills learned in CISB 100. Students learn spreadsheet skills such as linked files, macros, and database; database skills such as indexing and query criteria; and word-processing skills such as mailmerge and macros. Data communications and business graphics are also covered.

<p>CISB 110 Documentation of Computer Systems 3 Term Prerequisite: None Semester Prerequisite: None This course provides the student with an understanding of the various types of documentation used in professional computer systems. Topics include analytical documentation, system documentation, program documentation, operations documentation, standards and procedures manuals, and training manuals.</p>	<p>CISB 176 AS/400 Environment 1 Term Prerequisite: CAS 100 Semester Prerequisite: Departmental Approval This course will provide the student with a customized set of materials about the AS/400 computer environment. The student and instructor will establish the specific course content from the available AS/400 tutorials and IBM Discover/Education courses the first week of class.</p>
<p>CISB 111 Introduction to Operations 3 Term Prerequisite: CAS 100/Concurrently Semester Prerequisite: CISB 100/Concurrently This course is an introduction to the concepts and terminology used in computer operations. Topics include the classifications, functions, and operations of hardware, operating systems, and software. The responsibilities of the computer operator are discussed.</p>	<p>CISB 177 AS/400 Operations 3 Term Prerequisite: CAS 137/CAS 164 Semester Prerequisite: CISB 176 A hands-on course in AS/400 operations. The course will cover the AS/400 architecture and facilities; operational requirements, such as save and restore; hardware and software installation; configurations for local and remote communications; CL and CMD programming; system problem determination; and problem resolution.</p>
<p>CISB 120 Introduction to Programming and Logic Using BASIC 4 Term Prerequisite: MTH 012/Equivalent Semester Prerequisite: MATH 062/Equivalent A first course in computer programming and programming logic for computer information majors and others wanting an intensive introduction to problem-solving techniques using the QuickBASIC programming language.</p>	<p>CISB 180 C Programming with Business Application 3 Term Prerequisite: CAS 151, CAS 121 Semester Prerequisite: CISB 100, CISB 120 Students will use professional development tools to become familiar with the "C" programming language by designing, implementing, and testing programming projects. Topics include pointers, linked lists, data structures, and dynamic memory allocation.</p>
<p>CISB 121 Programming in BASIC Language 3 Term Prerequisite: CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 120 This course is a second in the sequence of two courses in BASIC language programming. Topics include sequential and random access files, screen formatting and editing, menu-driven systems, simulations, and program maintenance.</p>	<p>CISB 200 Information Systems Technology 3 Term Prerequisite: None Semester Prerequisite: None Fundamental changes have occurred in organizations with the application of computer technology. This course chronicles the source of that technology in science, explores the limitations of computer technology, examines the impact of the technology in business organizations and society, and develops problem-solving techniques for use in conjunction with computers.</p>
<p>CISB 125 Pascal for Business 3 Term Prerequisite: CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 120 Students will design, write, and test programs solving business related problems using structured techniques with Turbo Pascal. The syntax and style of modern Pascal programming in a business environment is introduced. Students learn the relationship between data structures and program complexity. Students explore object-oriented programming techniques and Windows interfaces.</p>	<p>CISB 201 Information Systems Auditing 3 Term Prerequisite: CAS 100 Semester Prerequisite: CISB 100 This course covers basic concepts important in the auditing of computer systems. The use of general and application controls of information systems will be discussed. Other topics include computer crimes, computer ethics, and auditing standards.</p>
<p>CISB 130 Data Communications 3 Term Prerequisite: CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 120 The course provides a comprehensive introduction to data communications systems: the major components, how they are integrated, and the differences between the various networks and network carriers. Students learn the terminology and major protocols to a depth adequate to design application programs and discuss data communication topics with other professionals.</p>	<p>CISB 210 dBASE Programming 3 Term Prerequisite: CAS 151, CAS 121, CAS 130/CAB 133 Semester Prerequisite: CISB 105, CISB 120 In this course students learn to use the dBASE language to develop applications programs. The course covers the major dBASE programming concepts and constructs and teaches how to use them in developing structured programs. Students also learn to use the Applications Generator and Template Language to simplify the programming task.</p>
<p>CISB 145 Operations Internship 1 2 Term Prerequisite: CAS 100, CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 111, CISB 120 This internship provides the student with on-the-job experience as a computer operator. The student may take the second internship concurrently with the first at a different site. 160 hours of experience are required for each internship.</p>	<p>CISB 230 Local Area Networks 3 Term Prerequisite: CAS 104, CAS 231 Semester Prerequisite: CISB 130 The student in this course learns how to install and maintain a Local Area Network (LAN). Topics start with basic network concepts and terms, then advances students to a point where they can install and maintain a particular network system such as Novell.</p>
<p>CISB 146 Operations Internship 2 2 Term Prerequisite: CAS 100, CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 111, CISB 120 This internship provides the student with on-the-job experience as a computer operator. The student may take the first internship concurrently with the second at a different site. 160 hours of experience are required for each internship.</p>	<p>CISB 235 Microcomputer Support 3 Term Prerequisite: CAS 104, CAS 231 Semester Prerequisite: CISB 100, CISB 104, CISB 120 This course provides the student with practical, hands-on experience in installing, maintaining, and trouble-shooting microcomputer hardware and software. Topics include CPU, storage devices, add-on boards, video displays, printers, communication devices, software installation, and configuration.</p>
<p>CISB 165 Forms Design and Control 2 Term Prerequisite: CAS 100 Semester Prerequisite: CISB 100 This course covers all phases in the life-cycle of a form, from the initial recognition that a form is needed through the utilization of the form. Topics include layout of items, design of margins and print spacing, grades of paper, reproduction, binding, and forms processing by users.</p>	<p>CISB 240 Operating Systems 3 Term Prerequisite: CAS 181 Semester Prerequisite: CISB 100, CISB 120 Covers what operating systems are, why they exist, what they do, and how they interface with the operators and programmers. Main memory management and processor scheduling are studied. The MS-DOS, Windows, OS/2, UNIX, MUSIC, MVS, and VM operating systems are discussed.</p>
<p>CISB 170 COBOL I 4 Term Prerequisite: CAS 121, CAS 151 Semester Prerequisite: CISB 100, CISB 120 An introductory course in COBOL programming emphasizing syntax, structured program design, and program maintenance. Coding standards and program documentation are introduced. Topics include control breaks, table processing, sub-program concepts, and multiple level tables.</p>	<p>CISB 245 Programming Internship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This internship provides the student with on-the-job experience as a computer programmer. Two hundred hours of experience at a local computer information systems site is required. The student is expected to write or maintain programs, create documentation, learn job control commands, and work on interactive systems.</p>
<p>CISB 175 Introduction to RPG II With RPGIII/400 Topics 3 Term Prerequisite: CAS 151, CAS 121 Semester Prerequisite: CISB 100, CISB 120 Develops competence in RPG/II programming (with topics from RPG III/400). The course includes problem definitions, file procedures, control level processing, and multiple record file processing. The emphasis will be on the current RPG/II language (release 5.1 of SSP). An AS/400 computer will be used in the System/36 Execution environment.</p>	

CISB 247 Microcomputer Project 2	CISB 284 Certified Data Processor Exam Specialty Area Preparation .5
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Departmental Approval	Semester Prerequisite: None
With this course students apply what they have learned about programming and systems development as a part of an internship, an independent study, or a project. Grading criteria and course objectives are determined at the first meeting. The course requires a minimum of 160 internship hours or 96 independent study hours.	Review seminar for the Certified Data Processor (CDP) exam. This seminar focuses on the portion of the exam unique to those seeking the CDP designation; concentration is on management topics. ICCP Core Exam seminars are recommended in addition to this seminar.
CISB 248 Advanced Concepts in Computer Information Systems 2	CISB 285 Certified Systems Professional Exam Specialty Preparation .5
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Departmental Approval	Semester Prerequisite: None
With this course students will learn advanced computer information systems topics as part of a class, an independent study, or a project. Grading criteria and course objectives are determined at the first meeting. The course requires a minimum for each credit earned of either 16 classroom hours or 48 independent study hours.	Review seminar for the Certified Systems Professional (CSP) exam. This seminar focuses on the portion of the exam unique to those seeking the CSP designation; concentration is on systems development topics. ICCP Core Exam seminars are recommended in addition to this seminar.
CISB 249 Advanced Concepts in Computer Information Systems 3	CISB 286 Certified Computer Programmer Exam Specialty Preparation .5
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Departmental Approval	Semester Prerequisite: None
With this course students will learn advanced computer information systems topics as part of a class, an independent study, or a project. Grading criteria and course objectives are determined at the first meeting. The course requires a minimum for each credit earned of either 16 classroom hours or 48 independent study hours.	Review seminar for the Certified Computer Programmer (CCP) exam. This seminar focuses on the portion of the exam unique to those seeking the CCP designation; concentration is on procedural programming topics. ICCP Core Exam seminars are recommended in addition to this seminar.
CISB 250 Database Concepts 3	CISB 287 ICCP Core Exam Review Session 1 .5
Term Prerequisite: CAS 164/CAS 172	Term Prerequisite: None
Semester Prerequisite: CISB 100, CISB 120	Semester Prerequisite: None
Learning the objectives of a database organization and investigating the extent to which these objectives are met by current database management software. Normalization and database design are studied. The relational and CODASYL models are used.	Review seminar for the certification exams from the Institute for Certification of Computer Professionals (ICCP). The other two core review seminars are recommended in addition to this seminar, as is the review seminar for either the CCP, CDP, or CSP. This seminar reviews (1) human and organizational framework, and (2) associated disciplines.
CISB 255 Hands-on Modern Expert System Development 3	CISB 288 ICCP Core Exam Review Session 2 .5
Term Prerequisite: CAS 121, CAS 151	Term Prerequisite: None
Semester Prerequisite: CISB 100, CISB 120	Semester Prerequisite: None
In this hands-on course, students will learn the basics of expert system development and actually develop a small, working expert system. The techniques and development of more complex systems are studied. The general development and application of Artificial Intelligence is surveyed.	Review seminar for the certification exams from the Institute for Certification of Computer Professionals (ICCP). The other two core review seminars are recommended in addition to this seminar, as is the review seminar for either the CCP, CDP, or CSP. This seminar reviews (1) systems concepts and (2) systems development.
CISB 260 Systems Analysis and Design 4	CISB 289 ICCP Core Exam Review Session 3 .5
Term Prerequisite: CAS 171/CAS 152/CAS 161	Term Prerequisite: None
Semester Prerequisite: CISB 100, CISB 120	Semester Prerequisite: None
This course presents concepts and techniques used in development of computer business application systems. The traditional approach for systems development is presented and compared to the approach used in a 4th Generation Environment. Structured techniques are utilized in the development approach as well as Computer Assisted Software Engineering (CASE) tools.	Review seminar for the certification exams from the Institute for Certification of Computer Professionals (ICCP). The other two core review seminars are recommended in addition to this seminar, as is the review seminar for either the CCP, CDP, or CSP. This seminar reviews (1) data and information and (2) technology.
CISB 261 Systems Implementation with CASE Tools 3	CIVL 101 Civil Drafting 4
Term Prerequisite: CAS 261, CAS 262	Term Prerequisite: DT 100
Semester Prerequisite: CISB 260	Semester Prerequisite: TECH 090
This course applies the concepts and techniques of systems analysis and design developed in CISB 260 into working systems. Computer Assisted Software Engineering tools will be used to develop a business computer system. Students will be formed into project teams for the course project.	Civil Drafting is a course which emphasizes traverse and topographical drawing problems. The course will equip the student with the skills and line techniques, and the ability to prepare a clear, readable, graphical presentation from rough notes furnished by the survey party.
CISB 270 COBOL II 3	CIVL 120 Surveying 4
Term Prerequisite: CAS 172	Term Prerequisite: DT 100
Semester Prerequisite: CISB 170	Semester Prerequisite: TECH 090, TECH 100
An advanced COBOL course covering sorting, file processing, sequential file updating, random file updating, and writing interactive programs. Copy libraries are used, and a system of related programs is completed as a class project.	Introduction to surveying technology and use of the latest equipment. The emphasis is on developing skills in operating, proper handling of the high tech equipment used in the surveying business. Developing good field work habits as well as office engineering is included in the course.
CISB 275 RPG/400 Programming 4	CIVL 124 Route Survey 4
Term Prerequisite: CAS 161	Term Prerequisite: CT 135, Trigonometry
Semester Prerequisite: CISB 175	Semester Prerequisite: CIVL 120
A detailed course covering fundamentals of the modern RPG/400 programming language. The course will cover RPG/400 programming techniques, modular programming, relational database manipulation and techniques, and system interaction. The course will use an AS/400 computer in the native AS/400 environment.	This course covers computations involved in basic surveying along with construction surveying applications.
CISB 280 C++ Language with OOP 4	CIVL 126 Highway Construction Survey I 5
Term Prerequisite: CAS 190	Term Prerequisite: None
Semester Prerequisite: CISB 180	Semester Prerequisite: None
Students will use the Borland Integrated Environment to become familiar with the C++ programming language and object-oriented programming and design by designing, implementing, and testing programming projects.	This course introduces basic skills and techniques used in construction surveying. Covers office computations and developing skills necessary to do field work.
	CIVL 127 Highway Construction Survey II 5
	Term Prerequisite: CT 130
	Semester Prerequisite: CIVL 126
	Students will learn how to interpret highway construction plans, then develop horizontal and vertical control data needed to construct both bridges and roads.

CIVL 131 Traffic Technology	3	CJCT 205 Basic Drug Investigation	2.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces the basic principles of traffic engineering design, signing and pavement marking, traffic signalization, and how these elements are used to improve motorists' safety. Emphasis is placed on the use of these devices in and around construction zones. Basic concepts on traffic flow and capacity analysis will be presented.		Two-week basic narcotics investigation school for police officers. Problem areas covered will range from drug traffic patterns to drug identification, the law governing their control and use, case initiation to clandestine laboratories, and raid procedures.	
CIVL 132 Construction Materials	5	CJCT 207 Fraudulent Checks	.25
Term Prerequisite: TEC 151		Term Prerequisite: None	
Semester Prerequisite: TECH 110/Placement Test		Semester Prerequisite: None	
The students will study techniques and equipment used in constructing bridges, buildings, highways, and pipelines. Deals with the determination of properties of aggregates, concrete, and other bituminous materials. Teaches methods of designing concrete mixes for different uses and methods of sampling and testing. Comparison of building codes and construction specifications will be covered.		Half-day seminar designed for cashiers and tellers who will supervise line clerks who work registers in the area of fraudulent checks, credit cards, driver's license, and other ID cards. Hands-on work with counterfeit money, credit cards, and identification will be shown.	
CIVL 135 Soils Technology	3	CJCT 208 Surveillance	1.5
Term Prerequisite: ATM 150		Term Prerequisite: None	
Semester Prerequisite: TECH 110/Placement Test		Semester Prerequisite: None	
Exploring, sampling, testing, and evaluating subsurface materials and their effect on construction are covered in this course. Introduction to methods of subsurface drainage, soil classifications, and physical properties of soils. Includes discussion, demonstration, and performance with equipment used in density testing.		Workshop on surveillance techniques for law enforcement officers. Three-day seminar. First and second days will be primarily lecture with audio visual demonstration and discussion. Third day will be hands-on field exercises. Officers will follow a "rabbit" using the techniques learned in the seminar to do a surveillance. Students and instructors will meet after the planned surveillance to do critique.	
CIVL 136 Hydrology and Highway Technology	5	CJCT 210 Recruitment/Background Investigation	1.5
Term Prerequisite: TEC 152, CT 260, PHY 201		Term Prerequisite: None	
Semester Prerequisite: TECH 110/Placement Test, CIVL 131		Semester Prerequisite: None	
This course is an introduction to highway inventory, planning, organization, rudiments of finance, geometric design, earthwork, and drainage structures. Emphasis is placed on these elements as components of final highway plans. Analysis of precipitation and the attendant runoff and recharge will be introduced.		This three-day program has been designed to examine common problems and issues in employment practices and to provide suggestions to improve these practices. Modern case law and federal guidelines regarding Equal Employment Opportunity Commission legal implications, civil service requirements, and human resource needs in law enforcement organizations will be discussed.	
CIVL 188 Concrete Paving Inspector	3	CJCT 212 Submachine Gun Instructor	1.5
Term Prerequisite: Construction Experience		Term Prerequisite: None	
Semester Prerequisite: Construction Experience		Semester Prerequisite: None	
This is an intensive course on the practical aspects of inspection and quality control of Portland Cement concrete paving projects.		Three-day workshop that provides police officers with a basic knowledge of several different types of submachine guns.	
CIVL 200 Civil Mathematics	5	CJCT 213 Hostage Survival	.25
Term Prerequisite: ATM 154		Term Prerequisite: None	
Semester Prerequisite: TECH 110		Semester Prerequisite: None	
This course covers the applications of differential calculus and integral calculus to practical technical problems. Topics include related rates, maximum and minimum problems, and areas under curves.		This half-day workshop will address techniques of hostage survival for financial institution employees. It will also address psychological issues impacting the victim(s).	
CIVL 241 Statics and Strength of Materials	5	CJCT 214 Instructor Recertification/Defensive Tactics Update	1
Term Prerequisite: TEC 150		Term Prerequisite: None	
Semester Prerequisite: TECH 110/CIVL 200 Concurrently		Semester Prerequisite: None	
This course introduces structural terminology and concepts. The general behavior of structural members in compression, stress, strain, creep, fatigue, yield, tension, shear, bending, and torsion due to different loading conditions are studied. Loads and forces, conditions of stability and equilibrium in structural frames, and free body analysis for reactions and member forces are considered in the course.		This workshop is designed to recertify criminal justice instructors in the PPCT Defensive Tactics system and provide new teaching principles, techniques, and testing procedures.	
CJCT 200 Criminal Justice Special Subjects	.5	CJCT 215 Expert Witness	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Each workshop will be structured around updated and/or advanced information to build upon the criminal justice professional's previous knowledge base.		This one-day training session is designed for prosecuting attorneys who utilize the testimony of various law enforcement and criminal justice experts in the courtroom.	
CJCT 201 Leadership Graduate Workshop	1	CJCT 218 Do Rite Instructor School	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
The leadership graduate workshop on creativity is designed to continue the fostering and developing of individual leadership skills for graduates of the Criminal Justice Leadership Academy. In addition to creative skill development, the participants will be apprised of new developments in the area of leadership.		The intent of the Do Rite Instructor School is to provide defensive tactics instructors with the specialized knowledge necessary to teach the Do Rite restraint system. Participants in the program will learn methods of application, instruction, and evaluation.	
CJCT 202 Legal Assistant Career Search	.25	CJCT 219 Evidence Technician	5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
One-day workshop for legal assistant students and graduates seeking law-related employment. Focus will be on hiring practices that are unique in this field.		Two-week school designed for the law enforcement officer who will be processing crime scenes such as homicides, fatal accidents, hit and runs, arsons, and CSCs. In addition to classroom instruction, time will be spent in the field on practical, hands-on crime scene exercises.	
CJCT 204 Pressure Point Control Tactics instructor School	1.5	CJCT 220 Firearms Range Officer Instructor School	2.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Three-day course which will certify an individual to be an instructor for the pressure point control tactics systems.		A 40-hour training program designed to give the officer the necessary knowledge and skill to safely, efficiently, and effectively supervise a firearms range. Topics include safety, diagnostic skills, legal issues, ballistics, decision shooting, weapon care and maintenance, and marksmanship.	

CJCT 221 Counseling Techniques	1	CJCT 238 Investigative Techniques/Adult Foster Care	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Two-day program designed to teach police supervisors the skills needed to effectively counsel subordinate officers. Techniques will be taught in accurate, empathetic listening; and officers will be trained in the concept of goal-oriented, self-responsibility, and problem-solving.		One-day course for adult foster care workers covering investigative techniques including gathering and evaluating evidence, types of evidence, field note-taking, rules of evidence, and other important aspects of a successful investigation.	
CJCT 222 LE Contract Negotiations	1	CJCT 242 Accident Investigation I	2.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This two-day seminar is designed for non-supervisors, supervisors, and civilians who will be negotiating contracts for their respective units. Those attending will learn what their role is as a labor negotiator and their responsibility to their bargaining units.		Five-day seminar designed to develop the patrol officer into a competent on-scene accident investigator. Materials covered include the legal aspects of accident investigation, measuring and recording, roadway evaluation, vehicle evaluation, and determination of pre-collision speed. Approximately 20% of the instruction will take place in the field in practical application exercises.	
CJCT 226 Investigative Techniques and Procedures	1.5	CJCT 243 Accident Investigation II	2.5
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: CJCT 242	
A three-day seminar for investigators and inspectors in both basic and specialized skills required for the exacting work of their jobs. Includes areas on investigative techniques, writing investigation reports, case management, evidence collection and preservation, successful interviewing, etc.		Skills used in conducting follow-up investigations of collisions where negligent homicide or manslaughter charges may ensue will be taught. Classroom instruction will be supplemented with practical exercises. Course content includes preparing after-accident situation maps, mathematical calculations in traffic accident reconstruction, stopping times and distances, analyzing accident data, and field exercises.	
CJCT 227 Investigative Techniques II	1.5	CJCT 244 Accident Investigation III	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Two-day program for investigators with the State of Michigan. Topic areas to include areas related to search and seizure laws, court structures, 5th Amendment, and the Miranda Act.		This two-day seminar is designed to develop the officer's ability to take comprehensive photographs of serious traffic accidents, resulting in photos that are useful for investigation, reconstruction, and court purposes. The ideal candidate is the officer who has an adjustable camera and related equipment available but does not know how to use it.	
CJCT 228 Crime/Accident Scene Photography	2.5	CJCT 245 Accident Investigation IV	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Comprehensive five-day (40 hours plus) workshop including night exercises for law enforcement officers covering the use of 35mm cameras, lenses, film and flash, and specific applications and techniques for crime and accident scene photography.		A one-day program designed to develop the competence and abilities of the experienced accident investigator through the use and grid mapping of evidence at the traffic scene crime. Upon completion the officer will be able to apply the process in accident investigation and accident reconstruction for courtroom purposes.	
CJCT 229 Police Radar Operator School	1.5	CJCT 246 Accident Investigation V	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Instruction is given in the proper installation, setup, and operation of radar calibration; target selection and identification; and courtroom testimony. In addition, participants are required to perform 24 hours of field exercise between the first and second day of class. (Classes are normally scheduled four weeks apart.)		A one-day program to aid the investigating officer in determining whether tire failure contributed to the accident, and if so, whether the failure took place before, during, or after the collision.	
CJCT 232 Hostage Negotiations	.25	CJCT 247 Accident Investigation VI	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
A half-day course designed to be taken with Hostage Negotiations. One-day school to give hostage negotiators a more in-depth discussion of negotiating techniques. This half-day program is limited to those officers who are designated as hostage negotiators by their departments.		A one-day program to assist the investigator in determining whether vehicle lamps were "on" or "off" at the time of impact.	
CJCT 233 Hostage Negotiations	2.5	CJCT 248 Accident Investigation VII	1.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This is a five-day program which includes two days of lecture by experts in the field of hostage negotiations. The remaining three days deal with role playing for the designated hostage negotiators. This training is conducted by faculty members of the Criminal Justice and Law Center who are experienced in hostage negotiations.		This three-day course will teach the fundamentals of investigating commercial vehicle accidents. Materials covered will include identifying vehicle components, driver qualifications, review of motor carrier safety rules, acceleration and deceleration factors in truck accidents, handling characteristics of commercial vehicles, drag factors, and speed determination.	
CJCT 235 Hostage Negotiations Review II	1	CJCT 249 Accident Investigation VIII	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Two-day mandated training in hostage negotiation skills. Pertinent material updates are provided as well as negotiating practicum.		Two-day program covering special techniques of investigating accidents involving lighter than usual vehicles such as mopeds, bicycles, and motorcycles. Course includes 50% field work.	
CJCT 236 Cultural Diversity	.5	CJCT 253 Firstline Supervisor School	2.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces concepts in race relations and human behavior management which will improve students' ability to handle racially sensitive encounters with poise and control. Issues involving race, cultural difference, inter-group conflicts, and police-citizen relations in minority communities are addressed.		This five-day training program is for the newly promoted criminal justice supervisor or those who have the potential for future promotion. Each participant will be exposed to forty hours of intensive training delivered by instructors who are highly qualified in their respective areas of expertise. The learning environment will provide practical hands-on exercises and student involvement.	
CJCT 237 Crime Prevention	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
Forty-hour school designed for law enforcement and private security personnel. Will consist of lecture, hands-on, and practical exercises. Increasing crime rates and citizen demands are dictating that we offer more pro-active service within our communities.			

<p>CJCT 256 Drug Raids 1 Term Prerequisite: None Semester Prerequisite: None Two-day practical application workshop designed to provide law enforcement personnel with techniques for safe execution of drug raids. In addition to lecture and audio visual instruction, participants will work in teams conducting tactical exercises on the firing range.</p>	<p>CJCT 271 Mobile Field Force 1.5 Term Prerequisite: None Semester Prerequisite: None This three-day training session will deal with how police agencies respond to civil disturbances, union conflicts, public demonstrations, and other events involving large or disorderly crowds. The mobile field force system will instruct the participant on how to provide rapid, organized, and disciplined response to these tactical situations.</p>
<p>CJCT 257 Law Enforcement Composite Sketching 2.5 Term Prerequisite: None Semester Prerequisite: None This five-day workshop is designed as a basic introduction to the field of composite drawing for law enforcement purposes. It is designed for those individuals who wish to become knowledgeable in the rendering and use of composites in criminal investigations. The class will emphasize hands-on instruction in the layout, set-up, and rendering of adequate composite drawing techniques and proper interviewing skills.</p>	<p>CJCT 272 Homicide Investigation 1.5 Term Prerequisite: None Semester Prerequisite: None Three-day workshop designed to enhance the crime scene investigation in all aspects of homicide, with the focus on practical tactics, procedures, and forensic techniques to be used in an efficient and professional homicide investigation.</p>
<p>CJCT 259 Emergency Telecommunications Training 5 Term Prerequisite: None Semester Prerequisite: None This 80-hour workshop has been designed utilizing the most up-to-date information regarding techniques, regulations, legal issues, equipment, and resources for emergency dispatching. This workshop is specifically developed for individuals who are employed as police/fire/medical dispatchers or who seek a career in this field. Participants successfully completing will be state certified.</p>	<p>CJCT 273 Defensive Tactics Instructor 2.5 Term Prerequisite: None Semester Prerequisite: None This workshop is designed to establish in the participant the ability to instruct and demonstrate methods of subject control involving use of force, handcuffing and searching, pressure point management, joint manipulation, active countermeasures, impact weapons, and weapon retention.</p>
<p>CJCT 260 First Responder .25 Term Prerequisite: None Semester Prerequisite: None This "first responder: recognizing and identifying hazardous materials" is designed to enable the police officer first responder, public safety officer, and specialized traffic units to develop basic skills which will reduce harm created by hazardous materials emergencies.</p>	<p>CJCT 274 Shotgun Update 1.5 Term Prerequisite: None Semester Prerequisite: None This course teaches law enforcement officers the most modern combat survival techniques available today. On the average, officers do not receive enough training with their shotgun and consequently, do not use this very powerful weapon when it is needed.</p>
<p>CJCT 263 Police Arson Investigation 1 Term Prerequisite: None Semester Prerequisite: None The overall course goal is to provide the law enforcement officer and investigator with the knowledge and basic skills needed upon arriving at a fire scene, along with investigative techniques utilized on suspected arsons.</p>	<p>CJCT 276 Sig Sauer Armorer 1 Term Prerequisite: None Semester Prerequisite: None Sig Arms Basic Armorer's Course is a two-day program, conducted primarily for departmental armorers in the mechanical functioning, servicing, maintenance and repair of Sig-Sauer pistols. This is a hands-on course, with each student working through all the armorer's procedures, following every procedure step-by-step with the instructor.</p>
<p>CJCT 264 Leadership Academy 4 Term Prerequisite: None Semester Prerequisite: None An extensive course designed for professionals in the criminal justice system to develop leadership skills. This course is designed to develop professionalism, encourage innovation and progress, and provide for future leaders in criminal justice. This is a practical application course.</p>	<p>CJCT 278 Drugs and Violence 1 Term Prerequisite: None Semester Prerequisite: None This two-day seminar is an in-depth examination of the antecedent and structure of hard-core violence. Of particular concern will be examination of the nature and scope of drug-induced violence. A historical perspective of this phenomenon, reviewing patterns of abuse resulting in violent behavior, will be presented.</p>
<p>CJCT 265 Transitional 9MM 1.5 Term Prerequisite: None Semester Prerequisite: None The course is designed to help departments with a smooth transition to 9mm semi-automatic pistols.</p>	<p>CJCT 280 Field Training Officers 2.5 Term Prerequisite: None Semester Prerequisite: None Practical, five-day seminar designed to equip law enforcement officers with the skill necessary to ensure effective "on-the-job" training and evaluation of probationary employees.</p>
<p>CJCT 267 Security/Legal Aspect .5 Term Prerequisite: None Semester Prerequisite: None This course is designed to assist security personnel in having a better understanding of legal issues and investigative techniques as related to the private security field.</p>	<p>CJCT 281 Field Training/Supervisors 2 Term Prerequisite: None Semester Prerequisite: None Four-day training specifically designed for law enforcement administrators considering the implementation or upgrading of a formalized recruit/probationary officer field training and evaluation program.</p>
<p>CJCT 268 Positive Image/Police Officer 1 Term Prerequisite: None Semester Prerequisite: None Provide an honest look at what the public views to be negative police imaging. Course will identify negative police behaviors, present steps to replace them with positive behaviors, improve occupational futures of law enforcement personnel, and understand how positive behavior can increase public appreciation for police officers.</p>	<p>CJCT 282 Security/Conflict Mediation .5 Term Prerequisite: None Semester Prerequisite: None This course is designed to provide security officers with simple techniques to employ in diffusing volatile situations before violence occurs.</p>
<p>CJCT 269 Critical Incident Debriefing II .5 Term Prerequisite: None Semester Prerequisite: None This one-day workshop is designed for those law enforcement practitioners who participated in session I. It will address the nature of post-traumatic reactions and the basic steps in organizing an actual debriefing session.</p>	<p>CJCT 283 Investigation State of Michigan .5 Term Prerequisite: None Semester Prerequisite: None One-day session for state investigators covering areas such as how to conduct an investigation, information and its courses, writing an effective investigative report and background investigations.</p>
<p>CJCT 270 School Liaison 1.5 Term Prerequisite: None Semester Prerequisite: None This course is designed to teach law enforcement personnel how to implement and present programs within their school system. There will be sharing of programs from other agencies and an outside resource demonstration. Students will also participate in workshops on techniques for developing and presenting a program.</p>	<p>CJCT 284 Advanced Interview 1 Term Prerequisite: None Semester Prerequisite: None Three-day training which will provide specific working tools and skill-building techniques for successful questioning. Format will include lecture, small group work, videotapes, and role-playing.</p>

CJCT 285 Child Abuse and Neglect	1	CJUS 131 Introduction to Corrections	3
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: CJUS 101/CJUS 130	
Officers, supervisors, and investigators may be involved in responding to child abuse and neglect in a family when they report or intervene in a case of suspected abuse or neglect. By making a report, officers begin the process of helping. By intervening, officers are acting to ensure protection for the child.		Introduction to agencies and processes within the correctional system. An examination of correctional officer behavior, corrections legislation, the courts, correctional institutions and their operation, and administration. Includes overview of history sentencing, probation, parole, and community corrections. This course is required for the corrections officer vocational certificate.	
CJCT 286 Security Interview	.5	CJUS 133 Juveniles in Corrections	2
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: CJUS 130	
This workshop is designed to provide security personnel with the skills and techniques needed to conduct effective interviews and interrogations.		Legal aspects of the juvenile court process, detention case supervision, and juvenile after-care will be examined. Both public and private agencies will be discussed in the treatment of the juvenile offender.	
CJCT 289 Waiver/Training	2.5	CJUS 134 Probation and Parole	3
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: CJUS 101/CJUS 131	
A five-day school to provide training in the areas of legal, firearms and traffic. In addition, there will be practical exercises in the firearms area. Course will provide knowledge necessary to successfully complete the Michigan Law Enforcement Officers Training Council testing for recertification as a police officer.		An introductory level course in probation and parole with strong emphasis on counseling, interviewing skills, and supervision techniques. Students will also learn the mechanics of writing violation, progress, and pre-sentence reports.	
CJCT 291 Security/Technology	.5	CJUS 135 Legal Issues in Corrections	3
Term Prerequisite: None		Term Prerequisite: CJ 130	
Semester Prerequisite: None		Semester Prerequisite: CJUS 101/CJUS 130	
One-day workshop designed for law enforcement and security officers to provide information on state-of-the-art crime and loss prevention technology. Program will cover the various aspects of alarm systems, access controls, and closed-circuit television.		Study of current constitutional, federal and state law as it pertains to penal institutions, inmates, and correctional employees. The course will provide students with insight into policy considerations behind state and federal law, legal process, court decisions, and inmate rights. This course is required for the correctional officer vocational certificate.	
CJUS 101 Introduction to Criminal Justice	3	CJUS 150 Introduction to Security	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
A survey course designed to provide students with a current, coordinated, and comprehensive overview of criminal justice as an institution and as a system. Emphasizes historical, philosophical, constitutional, and organizational perspectives.		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.	
CJUS 102 Crime Causes and Conditions	3	CJUS 151 Legal Aspects of Private Security	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Why do some individuals pursue a life of crime? This course introduces and analyzes the past, present, and future of criminology. Sociological, psychological, and biological factors are examined to determine their interaction with and impact on criminal behavior.		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.	
CJUS 103 Criminal Law	3	CJUS 152 Loss Prevention: Control/Concepts	3
Term Prerequisite: CJ 101		Term Prerequisite: CJ 150	
Semester Prerequisite: CJUS 101		Semester Prerequisite: CJUS 150	
Study of substantive criminal law. Includes classification of crimes, common law concepts, and elements of specific crimes.		Addresses the issues of loss prevention and control in business and industry. Focuses on the procedures necessary for the security of a company's assets, property, and personnel.	
CJUS 106 Juvenile Problems: Control and Prevention I	3	CJUS 160 Dispatcher/Telecommunicator I	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course emphasizes the legal foundation, as defined by Michigan law, upon which the criminal justice practitioner must rely in dealing with the juvenile offender and the juvenile victim.		This course is designed to introduce the student to the history and role of the telecommunicator, equipment systems utilized in dispatching, the correct spelling of police/fire/medical terminology, stress management, legal issues, and reference sources.	
CJUS 107 Juvenile Problems: Control and Prevention II	3	CJUS 161 Dispatcher/Telecommunicator II	3
Term Prerequisite: CJ 106		Term Prerequisite: None	
Semester Prerequisite: CJUS 106		Semester Prerequisite: None	
Focuses on police and court procedures established for dealing with juveniles with an emphasis on the Michigan juvenile justice system and the agencies connected to the system.		This course has been designed using the most up-to-date information regarding the history of police/fire/medical services, first aid and CPR techniques, hazardous material incidents, emergency plans, and dispatch techniques and regulations.	
CJUS 113 Women and Men in Criminal Justice	3	CJUS 162 Dispatcher/Telecommunicator III	3
Term Prerequisite: CJ 101, CJ 130, CJ 150		Term Prerequisite: CJ 160/CJ 161	
Semester Prerequisite: CJUS 101/CJUS 131/CJUS 150		Semester Prerequisite: CJUS 160/CJUS 161	
Explores the issues of men, women, and a culturally diverse work force working together in criminal justice. Assists the student in surveying his/her own self-awareness, career awareness, cultural awareness and appropriate decision-making process.		This course is designed to introduce the student to effective communication skills and telephone techniques. Call-intake processing and emergency medical dispatching will also be covered, including simulation exercises.	
CJUS 130 Ethics and Professionalism in Corrections	2	CJUS 201 Criminal Justice Organization and Administration	3
Term Prerequisite: None		Term Prerequisite: CJ 101	
Semester Prerequisite: None		Semester Prerequisite: CJUS 101	
This course will develop the professional skills mandatory to establish a successful career in corrections. Identifies areas needing additional development and includes improvement strategies.		Examines the primary concepts of criminal justice organization and administration emphasizing processes and theories, communications, leadership, personnel, budgeting, planning, information management, and community relations.	

<p>CJUS 202 Criminal Justice Management and Supervision 2 Term Prerequisite: None Semester Prerequisite: None Identifying and analyzing managerial and supervisory functions in a diverse criminal justice work force. Focusing on the implementation of policy and procedure and upon the roles and responsibilities of supervising employees.</p>	<p>CJUS 245 Report Writing in Criminal Justice 2 Term Prerequisite: CJ 101, CJ 130/CJ 150 Semester Prerequisite: CJUS 101/CJUS 131/CJUS 150 Designed to meet the needs of criminal justice writing. Components include grammar, punctuation, sentences, paragraphs, styles of writing, and proper documentation of work effort. Frequent writing practice.</p>
<p>CJUS 203 Criminal Procedure 3 Term Prerequisite: CJ 101 Semester Prerequisite: CJUS 101, CJUS 103 Study of criminal procedural law. Includes laws of arrest, search and seizure, and admissions and confessions; suspect identification and rules of evidence.</p>	<p>CJUS 248 Physical Fitness for Criminal Justice 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>CJUS 204 Criminal Investigation 4 Term Prerequisite: CJ 103 Semester Prerequisite: CJUS 103 Examines the fundamentals of criminal investigation such as crime scene procedures, collection and preservation of physical evidence, interviewing, interrogation, and latent investigation.</p>	<p>CJUS 250 Correctional Institutions 3 Term Prerequisite: Departmental Approval Semester Prerequisite: CJUS 101/CJUS 130 Examines the historical development of corrections institutions in the United States. The organizational structure, purpose, programs, security aspects, and prisoner due-process rights as well as the future of institutions will be examined. This course is required for the correctional officer vocational certificate.</p>
<p>CJUS 206 Interview and Interrogation 2 Term Prerequisite: None Semester Prerequisite: None Provides students with the techniques and procedures utilized in conducting lawful, admissible, and successful investigative interviews and interrogations.</p>	<p>CJUS 251 Correctional Clients 3 Term Prerequisite: Departmental Approval Semester Prerequisite: CJUS 101/CJUS 130 Emphasis is placed on the needs, identities and development of the recipient of correctional services. Students will gain insight into the behavior and motivations of the corrections client and learn intervention strategies. This course is required for the correctional officer vocational certificate.</p>
<p>CJUS 208 Organized Criminal Activity 2 Term Prerequisite: None Semester Prerequisite: None Provides a comprehensive overview of the nature, history and current status of organized crime. Analyzes the evolution of crime as an economic entity in legitimate, as well as illegitimate, areas of the business world.</p>	<p>CJUS 252 Community Based Corrections 3 Term Prerequisite: CJ 130/CJ 101 Semester Prerequisite: CJUS 101/CJUS 131 This course examines in detail the multitude of programs and services at the local level for the treatment of the offender. The impact of certain political, economic, and societal influences on corrections will also be reviewed.</p>
<p>CJUS 209 Patrol Operations 2 Term Prerequisite: None Semester Prerequisite: None Study of the basic patrol operations vital to law enforcement as a primary function. Emphasizes the concept of community policing and its impact and implications for the organization and the community.</p>	<p>CJUS 255 Human Relations in Criminal Justice 3 Term Prerequisite: CJ 130 Semester Prerequisite: CJUS 101/CJUS 130 This course focuses on understanding those aspects of interpersonal relations most directly linked to attainment of organizational and individual goals in work settings. This course is required for the correctional officer vocational certificate.</p>
<p>CJUS 211 War on Drugs 2 Term Prerequisite: None Semester Prerequisite: None This is a survey course covering the impact of drugs upon society in terms of work, law enforcement, schools, prevention treatment, prisons, and recovery programs and how it relates to the users, close family members, associates, or co-workers. Attention is given to what a criminal justice worker can do.</p>	<p>CJUS 260 Criminal Investigation and Procedures 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed for hands-on, practical instruction in the following areas: crime scene processing, on-scene preliminary investigation, witness interviewing, suspect identification, latent prints, photography, child abuse, sexual assault, narcotics, and preparation for court.</p>
<p>CJUS 215 The Criminal Mind 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>CJUS 261 Michigan Criminal Law and Procedure 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed for hands-on, practical instruction in criminal law and procedure as it pertains to law enforcement in the state of Michigan. Topics include crimes against persons and property, regulatory crimes, public order crimes, juvenile law, admissions/confessions, laws of arrest, search and seizure, and suspect identification.</p>
<p>CJUS 216 Psychology of Sex Offenders 2 Term Prerequisite: None Semester Prerequisite: None Examines the motivation of the sexual offender; background, personality characteristics, and common behaviors. Investigative techniques and procedures are also emphasized.</p>	<p>CJUS 262 Patrol Procedures and Tactics 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The course is designed to identify and utilize proper patrol techniques and procedures necessary for a police officer to function safely and effectively. Topics include preparation for patrol, types of patrol, responding to crimes in progress, roadblocks, civil process, handling abnormal persons, and officer survival.</p>
<p>CJUS 217 Psychology of Homicide 2 Term Prerequisite: None Semester Prerequisite: None An introduction to the psychodynamics of homicide that establishes the basis of behavioral analysis and the fundamentals of crime scene investigation.</p>	<p>CJUS 263 Standard First Aid 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed to identify the roles and responsibility of a law enforcement officer at the scene of a medical emergency based upon American Red Cross standard first aid and CPR training.</p>
<p>CJUS 235 Basic Firearms 3 Term Prerequisite: Program Approval Semester Prerequisite: Departmental Approval, 30 Credits Completed Provides basic marksmanship, safety rules and regulations, range procedures, nomenclature and function of the various types of weapons.</p>	<p>CJUS 264 Report Writing in Law Enforcement 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed to prepare the student to effectively and efficiently write a proper police report that will serve as a basis for the issuance of a warrant and court prosecution. Topics include obtaining information, basic English skills, criminal justice terminology, and proper formatting.</p>
<p>CJUS 236 Basic Combat Firearms 3 Term Prerequisite: Departmental Approval, CJ 235 Semester Prerequisite: Departmental Approval, CJUS 235 Intermediate instruction as a transition from bull's eye to field and combat shooting.</p>	
<p>CJUS 242 Unarmed Defense 3 Term Prerequisite: None Semester Prerequisite: None Hands-on techniques to prepare students to properly and effectively handle law enforcement related physical confrontations. Includes use of force decision-making skills, pressure points, control holds, and handcuffing.</p>	

CJUS 265 Highway Traffic Operations	3	CNCP 130 Machine Controls and Set-up	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to familiarize the student with the proper procedures for traffic control and enforcement. Emphasizes state motor vehicle laws and procedures, arrests and citations, O.U.I.L., and accident investigation.		Term Prerequisite: CNC 102, CNC 104 Semester Prerequisite: CNCP 110 Focuses on the set up and operation of a variety of CNC machines, ranging from simple 3-axis to sophisticated 5-axis conversational controls. Topics will include proper machine start up and shut down, tool data management, fixture alignment, program loading and editing.	
CJUS 266 Basic Police Science	3	CNCP 194 Computerized Numerical Control Project Lab	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The course studies are concerned with technical and physical techniques employed in the investigation of crime. The course involves traditional classroom as well as field experiences.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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.	
CJUS 267 Law Enforcement Physical Training	2	CNCP 200 CADAM NC	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed to assist law enforcement students in developing and improving their physical fitness. The course includes running, aerobics, calisthenics, and stretching.		Term Prerequisite: CG 201, CNC 104 Semester Prerequisite: CNCP 110 CADAM NC (Numerical Control) is a mainframe-based Computer Aided Manufacturing software used to graphically program CNC machine tools. Course topics will cover preparation of drawings for programming, basic APT programming, Aux word tables, 2-D surface profiling, 3-D surface contouring, Multi-axis programming, and Overlay features. Selected programs will be run on CNC machines.	
CJUS 268 Precision Driving	3	CNCP 210 SMART-CAM	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The course is designed to identify and utilize proper driving techniques and procedures using the principles of precision driving. Course involves both classroom and hands-on driving.		Term Prerequisite: CNC 120 Semester Prerequisite: CNCP 200 SMART-CAM is a powerful graphics based programming software for CNC machine tools. SMART-CAM software is designed to generate CNC programs from mechanical CAD drawings. Students will use SMART-CAM to solve CNC programming problems in both 2-D and 3-D environments and run selected programs on CNC equipment.	
CJUS 270 Computers in Security	3	CNCP 215 Solutions 3000	4
Term Prerequisite: CJ 152 Semester Prerequisite: CJUS 152 This course will explore the role of computers in security, both currently and in the future. The role of the computer will be studied from two perspectives: (1) the computer's impact on criminal behavior; (2) the computer's role as a tool in the performance of the security function.		Term Prerequisite: CNC 104 Semester Prerequisite: CNCP 110 Solutions 3000 is an advanced 3-D surface design and CNC software. This course will cover surface creation including Bezier and Nurbs, primitives such as cones and toroids, and surface filleting. Full 5-axis CNC programs will be created, run, and checked on a coordinate measuring machine.	
CJUS 271 Computer Fraud	3	CNCP 284 CNC Seminar	4
Term Prerequisite: Program Approval Semester Prerequisite: Departmental Approval This course deals with computer fraud prevention, detection, investigation, loss recovery, and risk management. Emphasizing computer-assisted or computer-related crimes such as theft of money, merchandise and inventory, negotiable securities, services, data and software, and data misrepresentations.		Term Prerequisite: None Semester Prerequisite: None This seminar may deal with a variety of subjects dealing with modern concepts of numerical control of machine tools, including the interrelationship of these new manufacturing methods in the various departments of a company.	
CJUS 281 Directed Independent Study	1	COOP 211 Cooperative Education (Automotive)	3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Sixteen hours of study and research is assigned per credit. Students are given criminal justice-related research assignments which will introduce them to research procedures and resources.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course provides technical students with professional and practical work experience in their career field. The student works for a co-op employer as a paid, temporary, part-time employee trainee in a planned, structured and supervised work experience. Students apply knowledge and skills learned in academic courses to real world situations.	
CJUS 282 Directed Independent Study	2	COOP 221 Cooperative Education (Aviation)	3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Sixteen hours of study and research is assigned per credit. Students are given criminal justice-related research assignments which will introduce them to research procedures and resources.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course provides technical students with professional and practical work experience in their career field. The student works for a co-op employer as a paid, temporary, part-time employee trainee in a planned, structured and supervised work experience. Students apply knowledge and skills learned in academic courses to real world situations.	
CJUS 283 Directed Independent Study	3	COOP 231 Cooperative Education (Manufacturing)	3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Sixteen hours of study and research is assigned per credit. Students are given criminal justice related research assignments which will introduce them to research procedures and resources.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course provides technical students with professional and practical work experience in their career field. The student works for a co-op employer as a paid, temporary, part-time employee trainee in a planned, structured and supervised work experience. Students apply knowledge and skills learned in academic courses to real world situations.	
CJUS 285 Law Enforcement Field Study	2	COOP 241 Cooperative Education (Construction and Engineering)	3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Sixteen eight-hour shifts are scheduled with an approved police department. Written reports are required.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course provides technical students with professional and practical work experience in their career field. The student works for a co-op employer as a paid, temporary, part-time employee trainee in a planned, structured and supervised work experience. Students apply knowledge and skills learned in academic courses to real world situations.	
CJUS 288 Corrections Field Study	3		
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The student will be placed in a local or state corrections facility that will allow him/her to experience many facets of correction operations. Weekly written reports are required and periodic meetings are mandatory. A minimum of 160 hours is required.			
CNCP 110 Foundations of CNC Programming	4		
Term Prerequisite: ATM 153 Semester Prerequisite: TECH 101, TECH 130, DTDS 110, MACH 105 This course lays the foundation for all other Computerized Numerical Control (CNC) courses. Methods of CNC programming including linear, circular and helical interpolation, z-axis cycles, roughing and pocketing cycles, tool diameter compensation, macros, and subroutines are examined. Students will write programs for 3-axis and 5-axis mills, 3-axis lathe, and 4-axis wire-EDM.			

<p>CPSC 120 Introduction to Computers 3 Term Prerequisite: None Semester Prerequisite: None Beginning instruction and practice are provided in word processing, spreadsheet applications, the programming language BASIC, and user networks. In addition, the student learns of the application of computers in society, considers their social and economic implications, examines questions of privacy and security, and considers recent advances in computer technology.</p>	<p>CPSC 296 Independent Study in Computer Science 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of computer science not covered by an existing course. The student works independently under the supervision of a faculty member. Student devotes six or more hours per week to this study in addition to their work with the assigned instructor.</p>
<p>CPSC 130 BASIC and Graphics 3 Term Prerequisite: Placement Test, Experience in BASIC Semester Prerequisite: MATH 061/062, 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.</p>	<p>CPSC 297 Independent Study in Computer Science 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of computer science not covered by an existing course. The student works independently under the supervision of a faculty member. Student devotes nine or more hours per week to this study in addition to their work with the assigned instructor.</p>
<p>CPSC 150 FORTRAN 3 Term Prerequisite: MTH 165 Semester Prerequisite: MATH 122/MATH 126 Structured programming techniques are applied in the design of algorithms and their implementation in FORTRAN 77. Topics included are Nassi-Schneiderman designs, stepwise refinement outlines, control structures, functions and sub-routines, input and output procedures, data types, arrays, and string processing.</p>	<p>CPSC 298 Independent Study in Computer Science 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of computer science not covered by an existing course. The student works independently under the supervision of a faculty member. Student devotes 12 or more hours per week to this study in addition to their work with the assigned instructor.</p>
<p>CPSC 230 Algorithms and Pascal 4 Term Prerequisite: MTH 213 Semester Prerequisite: MATH 151 Course will establish an understanding of computational procedures which form a basis for continuing study in computer science. Techniques of topdown design are applied in the design of algorithms. Topics include Nassi-Schneiderman designs, stepwise refinement outlines, control structures, functions, procedures, input and output operations, data types, arrays, and string processing.</p>	<p>CUAI 102 Credit Union Accounting 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course emphasizes those areas of financial accounting relevant to external reporting by credit unions.</p>
<p>CPSC 240 C Programming 2 Term Prerequisite: CPS 250/CPS 255 Semester Prerequisite: CPSC 230/Departmental Approval A course in the language C for students with programming experience. Topics include functions, strings, arrays, file access, pointers, bitwise operations, storage classes, dynamic allocation and data structures. Knowledge of data structures is helpful.</p>	<p>CUAI 202 Risk Management 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval 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.</p>
<p>CPSC 260 Discrete Structures in Computer Science 4 Term Prerequisite: CPS 250/256, MTH 213 Semester Prerequisite: MATH 151, CPSC 150/CPSC 230 Introduction to logical and algebraic structures and techniques required for further study in computer science. Topics include statement logic and proof techniques, relations, functions, directed and undirected graphs and their matrix representations, Boolean algebras and logic networks, error correcting codes, regular expressions, finite-state machines, Turing machines, and unsolvable decision problems.</p>	<p>CUMA 100 Introduction to Credit Union Operations 3 Term Prerequisite: None Semester Prerequisite: None This course provides students with an overview of the credit union movement, its position in the financial services industry, and basic credit union operating procedures. Directed toward staff, management and elected officials of credit unions who wish to increase their knowledge of both the credit union movement and operations.</p>
<p>CPSC 270 Assembly Language and Computer Organization 4 Term Prerequisite: CPS 250/255, MTH 213 Semester Prerequisite: CPSC 230 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.</p>	<p>CUMA 200 Credit and Collections 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>CPSC 280 Data Structures 4 Term Prerequisite: CPS 256 Semester Prerequisite: CPSC 230 Advanced techniques and related theory for representation and access of information. Algorithms concerning sorting, searching, hashing and graph representation are included. Program analysis and abstract data types including stacks, queues, and trees are also studied.</p>	<p>CUMA 201 Credit Union Financial Counseling 2 Term Prerequisite: None Semester Prerequisite: None This course is an overview of financial counseling techniques and skills for credit union employees. Emphasis is placed on skill-building exercises to enable students to develop a basic understanding of financial alternatives available to their customers.</p>
<p>CPSC 290 VAX System Support 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An introduction to Digital VAX Computer systems. Projects to be completed will cover VAX hardware and software systems, including DCL (Digital Command Language), LMS (Learning Management System), spreadsheets, text and word processing software, graphics software, and networking software.</p>	<p>CUMA 215 Business Law for Credit Unions 3 Term Prerequisite: None Semester Prerequisite: None 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 and real property, torts, crimes and the nature and sources of law as related to credit union operations.</p>
<p>CPSC 295 Independent Study in Computer Science 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of computer science not covered by an existing course. The student works independently under the supervision of a faculty member. Student devotes three or more hours per week to this study in addition to their work with the assigned instructor.</p>	<p>DADH 110 Oral Health Practices 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Introduction to dental operator, aseptic techniques, caries and periodontal disease processes and oral hygiene procedures to prevent diseases. Small group laboratory instruction allows the student to learn through investigation, involvement and application. Each student will become successful in maintaining his/her own good oral health.</p>

<p>DADH 112 Dental Anatomy 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Study of nomenclature, morphologic characteristics and physiologic relationships of human primary and permanent teeth. Laboratory activities develop observation and dexterity skills while studying tooth morphology and visible anatomic structures relative to DA/DH procedures.</p>	<p>DANC 121 Beginning Ballet III 3 Term Prerequisite: DNC 108 Semester Prerequisite: DANC 111 Emphasis is placed on longer combinations in preparation for performance. It includes a continuation of vocabulary, steps, and combinations.</p>
<p>DADH 124 Dental Radiography 4 Term Prerequisite: DHA 111, DHA 121 Semester Prerequisite: DHYG 111/DAST 111, DADH 112 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.</p>	<p>DANC 122 Beginning Modern III 3 Term Prerequisite: DNC 102 Semester Prerequisite: DANC 112 With a focus on dance as a symbol, this includes a continuation of alignment training, spatial relationships, dance combinations, and improvisation. Emphasis is placed on longer combinations and basic choreographic techniques in preparation for performance.</p>
<p>DANC 100 Introduction to Dance 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for the student with no dance experience. The student will explore the basic techniques of the core dance forms including ballet, modern, tap and jazz. Movement, music, and application of all disciplines will be introduced.</p>	<p>DANC 123 Choreography I 3 Term Prerequisite: DNC 192 Semester Prerequisite: DANC 124 This course is designed to acquaint the student with basic choreographic techniques. Improvisation is utilized to explore ideas. Dance elements of time, space, and energy will be explored in addition to the mechanical and gestural aspects of movement. The concept of language and symbol system is studied.</p>
<p>DANC 101 Beginning Ballet I 2 Term Prerequisite: None Semester Prerequisite: None This course includes basic alignment principles, ballet vocabulary and steps, and elementary combinations of ballet technique for the beginning dance student with no experience in dance. Basic barre and center floor combinations will be included.</p>	<p>DANC 124 Improvisation 2 Term Prerequisite: DNC 101, 107/140 Semester Prerequisite: DANC 101, 102/103 This course is designed for the major and non-major. It will provide students with opportunities for the use of creative thinking by solving movement problems. Temporal and spatial aspects will be utilized. Reasoning and use of improvisation are discussed.</p>
<p>DANC 102 Beginning Modern Dance I 2 Term Prerequisite: None Semester Prerequisite: None Basic alignment training techniques, spatial relationships, and elementary combinations for the beginning dance student. Some improvisation will be used throughout the course to assist in developing kinesthetic, spatial, cognitive, and physical awareness.</p>	<p>DANC 127 Performance Techniques 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to acquaint the level II student with the practice of performing. Emphasis is placed on projection, musicality, flow, articulation, clarity of intent, motivation, phrasing, gesture, and production process.</p>
<p>DANC 103 Beginning Jazz I 2 Term Prerequisite: None Semester Prerequisite: None This course includes basic alignment, warm up, and isolation in jazz dance technique for the beginning dance students. Spatial relationships and rhythm are emphasized.</p>	<p>DANC 131 Character Dance 2 Term Prerequisite: None Semester Prerequisite: None This course is designed to provide students with a basic knowledge of character dance as applied to classical ballet dance. Emphasis is placed on Eastern European styles such as Czardas and Mazurka in addition to Spanish.</p>
<p>DANC 104 Beginning Tap I 2 Term Prerequisite: None Semester Prerequisite: None This course includes basic tap origins, vocabulary, steps, combinations, and rhythms for the beginning dance students. Basic alignment training techniques, spatial relationships, and elementary combinations are explored.</p>	<p>DANC 132 Spanish Dance 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for the beginning level student. It is an introduction to the origins and techniques of Spanish dance as performed in Spain. Included are traditional music, footwork, body work, costumes, customs, and use of castanets.</p>
<p>DANC 111 Beginning Ballet II 2 Term Prerequisite: DNC 107 Semester Prerequisite: DANC 101 Emphasis is placed on theory of ballet movement and the increased use of ballet combinations. It includes a continuation of vocabulary, steps, and combinations.</p>	<p>DANC 133 Ethnic Dance Workshop 2 Term Prerequisite: None Semester Prerequisite: None Ethnic Dance class will provide instruction in warm-up exercises, combinations, and routines or dance indigenous to a given culture. Each term the content of this class will concentrate on the dance traditions of a different culture including African, Mexican, Oriental, European, or Slavic. Students will comprehend the specific culture through its dance form and understand its history, social customs, religion, and other cultural elements.</p>
<p>DANC 112 Beginning Modern Dance II 2 Term Prerequisite: DNC 101 Semester Prerequisite: DANC 102 Designed for the student who has successfully completed Beginning Modern I, this includes a continuation of alignment training techniques, spatial relationships, dance combinations, and an introduction to modern dance theory. Improvisation will be used to develop kinesthetic, spatial, cognitive, and physical awareness.</p>	<p>DANC 134 African Dance 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for the beginning II level student. It is an introduction to the origins and techniques of African dance as performed in various African countries. Included are traditional music, footwork, body work, costumes, and customs.</p>
<p>DANC 113 Beginning Jazz II 2 Term Prerequisite: DNC 140 Semester Prerequisite: DANC 103 Emphasis is placed on beginning to develop a personal style of movement in preparation for performance. Course includes a continuation of alignment, warm-up, and isolations in addition to rhythms and combinations.</p>	<p>DANC 135 Tai Chi 2 Term Prerequisite: None Semester Prerequisite: None Introduction to Zazen meditation and basic principles of Tai Chi. Course covers first seventeen movements in the Yang school of Tai Chi Chuan.</p>
<p>DANC 114 Beginning Tap II 2 Term Prerequisite: DNC 133 Semester Prerequisite: DANC 104 Emphasis is placed on increased complexity in rhythms and combinations. Course includes a continuation of tap vocabulary, steps, combinations, and rhythms.</p>	<p>DANC 136 Dance Exercise 1 Term Prerequisite: None Semester Prerequisite: None This course includes warm-ups and exercises from various dance genres including ballet, modern, and jazz designed to develop flexibility, strength and coordination. Emphasis is placed on toning and stretching.</p>

DANC 142 Ballroom Swing I	1	DANC 171 Master Ballet	.5
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: Departmental Approval	
Introduction to the techniques, patterns, music, and style of swing dances. Includes evaluations of the differences in movement, rhythms, and techniques of various styles.		This is a master ballet class for the level III or above ballet student. It is conducted by a professional dancer/instructor in residence. Classes are scheduled in concentrated sessions.	
DANC 143 Ballroom Western Swing	1	DANC 172 Master Modern	.5
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: Departmental Approval	
Techniques, patterns, movements, and styles of Western swing dancing. Includes evaluations of the differences in movement, rhythms, and techniques of various styles.		This is a master modern class for the level III or above modern student. It is conducted by a professional dancer/instructor in residence. Classes are scheduled in concentrated sessions.	
DANC 145 Ballroom Swing II	1	DANC 173 Master Tap/Jazz	.5
Term Prerequisite: DNC 291		Term Prerequisite: Departmental Approval	
Semester Prerequisite: DANC 142		Semester Prerequisite: Departmental Approval	
Course designed to build on the techniques introduced in Ballroom Swing I. New steps will be introduced.		This is a master tap/jazz class for the level III or above tap/jazz student. It is conducted by a professional dancer/instructor in residence. Classes are scheduled in concentrated sessions.	
DANC 151 Ballroom Bronze I Workshop	1	DANC 191 Dance History	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Study of traditional ballroom techniques in cha-cha, samba, tango and rumba. Enrollment with partner recommended.		This course is a dance history overview commencing with the origins of ballet to the present. Important developments and contributors in the field of American dance education will be interwoven with the important developments and contributors of Western dance forms.	
DANC 153 Cha Cha/Mambo Workshop	.5	DANC 192 Dance Appreciation	2
Term Prerequisite: Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: None	
Introductory course in the Latin ballroom dances cha-cha and mambo covering basic components of partnership dancing and basic patterns of movement, footwork, technique, and style.		For the major and non-major, this course is designed to increase the awareness of dance as a form of nonverbal communication between self and other throughout time and culture. Overviews of historical development and cultural concepts in dance will be explored with particular emphasis on Western concert dance traditions.	
DANC 154 Tango/Samba Workshop	.5	DANC 193 Dance Anatomy	3
Term Prerequisite: Departmental Approval		Term Prerequisite: DNC 101, 107/140	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: DANC 101, 102/103	
Introductory course in the Latin ballroom dances tango and samba, covering basic components of partnership dancing and basic patterns of movement, footwork, technique, and style.		This course is an introduction to basic anatomy as it applies to dance. Terminology, practical application, theory of movement, nutrition, and injury prevention and care will be incorporated. Emphasis will be placed on major muscles, muscle groups, and skeletal structure.	
DANC 155 Ballroom Hustle Workshop	1	DANC 201 Intermediate Ballet I	3
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: Departmental Approval	
Designed to introduce students to hustle dance steps and styling. Emphasis is on effective partnering, mastering basic patterns, and adapting dance to varieties of music. Class usually includes field trips to local dance venues.		Emphasis is placed on center floor transitional techniques and dance dynamics and development of personal style. Course includes a continuation of vocabulary, steps, and combinations.	
DANC 156 Ballroom Bronze Workshop II	1	DANC 202 Intermediate Modern I	3
Term Prerequisite: DNR 216		Term Prerequisite: DNC 139	
Semester Prerequisite: DANC 151		Semester Prerequisite: DANC 122	
Advanced workshop in traditional ballroom techniques. Emphasis will be placed on dance styles and work will include cha-cha, mambo, waltz, foxtrot, and swing.		Emphasis will be placed on development of personal dance style. Course includes a continuation of alignment training, spatial relationships, dance combinations, improvisation, and dance as symbol.	
DANC 161 Ballet Repertory	1	DANC 203 Intermediate Jazz	3
Term Prerequisite: Departmental Approval		Term Prerequisite: DNC 143/144	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: DANC 113	
This course is designed for the student who has reached a Beginning Ballet III level. The student participates in the process of auditions, rehearsals, and public performances in the ballet genre and concentrates on memorization, projection, and musicality.		Emphasis is placed on developing a personal style of movement. Course includes a continuation of alignments, warm-up and isolations in addition to more complex rhythms and combinations.	
DANC 162 Modern Dance Repertory	1	DANC 204 Intermediate Tap	3
Term Prerequisite: Departmental Approval		Term Prerequisite: DNC 134/135	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: DANC 114	
This course is designed for the student who has reached a minimum of Modern Beginning II to gain performance experience in a controlled setting. The student participates in the process of auditions, rehearsals, and public performances in the modern dance genre and concentrates on memorization, projection, and musicality.		Emphasis is placed on increased complexity of rhythms and combinations in order to develop a personal style in preparation for performance.	
DANC 163 Jazz Repertory	1	DANC 211 Intermediate Ballet II	3
Term Prerequisite: Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: Departmental Approval	
This course is designed for the student who has reached a minimum of Beginning Jazz II to gain performance experience in a controlled setting. The student participates in the process of auditions, rehearsals, and public performances in the jazz genre and concentrates on memorization, projection, and musicality.		Emphasis is placed on development of center floor transitional techniques and dance dynamics in preparation for performance. Course includes a continuation of vocabulary, steps, and combinations.	
DANC 164 Tap Repertory	1	DANC 212 Intermediate Modern Dance II	3
Term Prerequisite: Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: Departmental Approval	
This course is designed for the student who has reached a minimum of Beginning Tap II to gain performance experience in a controlled setting. The student participates in the process of auditions, rehearsals, and public performances in the tap genre and concentrates on memorization, projection, and musicality.		Emphasis will be placed on continued development of personal dance style and technique development in preparation for performance. Course includes a continuation of alignment training techniques, spatial relationships, dance combinations, improvisation, and dance as symbol.	

DANC 221-DAST 120

<p>DANC 221 Advanced Ballet I 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Emphasis is placed on learning traditional styles and choreography. Course includes a continuation of vocabulary and steps, as well as longer combinations, center floor transitional techniques, dance dynamics, and continued development of personal style.</p>	<p>DANC 282 Dance Teaching Assistantship 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed for the beginning teacher. Under the guidance of a faculty member in the student's primary discipline, the student will learn to implement the use of goals, objectives, and strategies in class preparation by co-teaching a beginning level course.</p>
<p>DANC 223 Advanced Jazz 3 Term Prerequisite: DNC 170 Semester Prerequisite: DANC 203 Emphasis is placed on learning different styles of jazz dance appropriate to different performance needs. Course includes continuation of alignment, warm-up and isolations in addition to more complex rhythms and combinations.</p>	<p>DANC 283 Dance Teaching Practicum 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to enable the student to teach a dance course at the beginning level in the student's primary discipline under the guidance of an instructor. Implementation of objectives and strategies will enable the student to prepare a fully articulated course.</p>
<p>DANC 224 Advanced Tap 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Emphasis is placed on learning a variety of tap styles suitable for different performance needs.</p>	<p>DANC 284 Studio and Recital Management 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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.</p>
<p>DANC 231 Advanced Ballet II 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Emphasis is placed on learning traditional choreography. Course includes a continuation of vocabulary, steps and combinations, center floor transitional techniques, dance dynamics and continued development of personal style.</p>	<p>DANC 285 Dance Performance Internship 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to enable the student to work in the community as a choreographer under the guidance of an instructor. Course projects may range in scope from choreographing a piece for a dance studio recital to choreographing a musical for a local community theatre.</p>
<p>DANC 244 Pointe Technique Beginning 2 Term Prerequisite: DNC 129/Higher Level Course Semester Prerequisite: DANC 121/Higher Level Course Emphasis is placed on elementary pointe technique exercises to strengthen ankles, calves, legs and lower back for pointe work. This course is designed for the intermediate level ballet student. Pointe technique continues the development of strength, coordination, flexibility, and balance.</p>	<p>DANC 295 Directed Studies I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Working under the guidance of an approved instructor, the student will pursue studies not otherwise available through scheduled course offerings.</p>
<p>DANC 245 Choreography II 3 Term Prerequisite: DNC 110 Semester Prerequisite: DANC 123 Emphasis is placed on group manipulation in addition to developing individual styles of choreography. Preparation of choreography for performance is emphasized.</p>	<p>DANC 296 Directed Studies II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Working under the guidance of an approved instructor, the student will pursue studies not otherwise available through scheduled course offerings.</p>
<p>DANC 248 Pointe Technique Intermediate 2 Term Prerequisite: DNC 110 Semester Prerequisite: DANC 244 Emphasis is placed on more difficult exercises, steps, and combinations to prepare for performance. Course includes a continuation of development in strength, coordination, flexibility, and balance.</p>	<p>DANC 297 Directed Studies III 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Working under the guidance of an approved instructor, the student will pursue studies not otherwise available through scheduled course offerings.</p>
<p>DANC 251 Independent Study I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is for dance majors who wish to devote time to research projects, choreography, assigned teaching projects, and other dance-related topics not covered in existing classes. Student will meet with instructor periodically throughout the semester.</p>	<p>DAST 111 Preclinic Technics - DA 4 Term Prerequisite: DHA 110, 111, 112 Semester Prerequisite: Admission to Program 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.</p>
<p>DANC 252 Independent Study II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is for dance majors who wish to devote time to research projects, choreography, assigned teaching projects, and other dance-related topics not covered in existing classes. Student will meet with instructor periodically throughout the semester.</p>	<p>DAST 113 Oral Anatomy 2 Term Prerequisite: DHA 111 Semester Prerequisite: Admission to Program A study of head and neck anatomy and its histologic and embryologic development. A basic review of oral pathology is also included.</p>
<p>DANC 253 Independent Study III 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is for dance majors who wish to devote time to research projects, choreography, assigned teaching projects, and other dance-related topics not covered in existing classes. Student will meet with instructor periodically throughout the semester.</p>	<p>DAST 118 Dental Assisting Seminar 1 Term Prerequisite: DA 110, 120 Semester Prerequisite: Admission to Program Various aspects of the dental profession are discussed to prepare the student dental assistant for entry to the health team. Subjects include: dental law, ethics, liability, health profession organizations, employment, and current health-care issues.</p>
<p>DANC 281 Dance Teaching Methods 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to acquaint the intermediate student with the various teaching styles. Goals, objectives, and strategies of class construction are discussed. Emphasis is placed on creativity, attitude, perception, and intuition in the classroom.</p>	<p>DAST 120 Clinical Dental Assisting 7 Term Prerequisite: DA 120 Semester Prerequisite: DADH 110, 112, DAST 111, 113 A study of the clinical practice of four-handed chairside dental assisting with emphasis on general restorative and dental specialty procedures. Sessions correlate clinical procedures and practice with private practice and field experience participation.</p>

<p>DAST 122 Dental Pharmacology-Dental Assisting 1 Term Prerequisite: Admission to Second Year of Dental Assisting Semester Prerequisite: DADH 110, DAST 111, 113 A study of the administration, use, action and effects of drugs most commonly used by patients. Correlation of this information with 1) taking a good medical history and 2) planning and implementing dental procedures, is emphasized.</p>	<p>DHYG 122 Dental Pharmacology-Dental Hygiene 2 Term Prerequisite: DHA 111, 112 Semester Prerequisite: DADH 112, DHYG 113 A study of the administration, use, action, and effects of drugs most commonly used by patients and their relationship to dental treatment and dental hygiene procedures.</p>
<p>DAST 126 Registered Dental Assistant Procedures for the Dental Assistant 3 Term Prerequisite: DA 210, 211 Semester Prerequisite: DADH 110, 112, DAST 111, 113 A study of the intra-oral functions delegated to the licensed Registered Dental Assistant in the State of Michigan. Laboratory time is provided for the student to learn the techniques and gain proficiency in those procedures that will be performed with a licensed dentist in DAST 130.</p>	<p>DHYG 126 Principles of Periodontics 2 Term Prerequisite: DH 111, DHA 111 Semester Prerequisite: DADH 110, 112, DHYG 114 Study of anatomy, physiology, and histology of the periodontal tissues as they relate to the identification, etiology, prevention and treatment of periodontal disease and occlusal disorders. Evaluation of disease status, diagnosis, patient management, and disease prevention is presented relative to the hygienist's role as co-therapist in private practice.</p>
<p>DAST 128 Dental Materials 3 Term Prerequisite: Admission to Second Year of Dental Assisting Semester Prerequisite: DADH 110, 112, DAST 111, 113 Lecture and laboratory sessions address the properties, selection, manipulation and evaluation of materials used in dentistry. Practice is provided in the preparation, manipulation, and delivery of the materials most often handled by the dental assistant.</p>	<p>DHYG 128 Dental Materials and Methods 3 Term Prerequisite: DH 210, 211 Semester Prerequisite: DADH 110, 112, DHYG 111, 113 Study of terminology, selection, manipulation, and evaluation of materials used in dentistry. Activities emphasize procedures and materials utilized by the dental hygienist and the knowledge needed to educate the patients regarding the benefit of certain restorative procedures.</p>
<p>DAST 130 Clinical Practice and Patient Relations 9 Term Prerequisite: Admission to Program Semester Prerequisite: DAST 120, 122, 126, 128, DADH 124 Lecture sessions teach basic communication, writing, and psychology skills needed for effective dental office management and chairside assisting. Students practice these skills during laboratory simulations. Field experience assignments provide on-site practice and integration of dental assisting chairside, specialty, RDA, and interpersonal skills.</p>	<p>DHYG 210 Clinical Dental Hygiene II 8 Term Prerequisite: DH 130 Semester Prerequisite: DHYG 120, 122, 124, 126 Continuation of clinic, perfecting comprehensive treatment planning and advanced prophylaxis techniques (deep scaling, root planing, nutritional counseling, ultrasonic scaling, and use of chemotherapeutic agents). Course coordinates the periodontal case study, advanced patient care and management, and review of ethical case studies.</p>
<p>DHYG 111 Preclinic Technics - DH 5 Term Prerequisite: DHA 110, 111, 112 Semester Prerequisite: Admission to Program Introduction to selection and application of prophylaxis instruments, collection and assessment of patient data, and performing oral examinations. Small group clinic instruction includes implementation of procedures on student partners.</p>	<p>DHYG 212 Advanced Dental Hygiene Procedures 3 Term Prerequisite: DHA 122, DH 130 Semester Prerequisite: DHYG 120-126 Study of advanced clinical dental hygiene procedures with emphasis on the hygienist's role as co-therapist in performing root planing, ultrasonic instrumentation, periodontal charting, nutritional counseling, and applying chemotherapeutic agents.</p>
<p>DHYG 113 Head and Neck Anatomy 2 Term Prerequisite: DHA 111 Semester Prerequisite: Admission to Program A descriptive anatomical study of the head and neck regions, including skeletal, nervous, circulatory, lymphatic, and muscular systems and their relationship to clinical procedures.</p>	<p>DHYG 214 Clinical Oral Pathology 1 Term Prerequisite: DH 130, DHA 131 Semester Prerequisite: DHYG 120, 126, DADH 124 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.</p>
<p>DHYG 114 Oral Histology, Embryology and Pathology 4 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Study of the embryology and microscopic anatomy of the oral cavity, with emphasis on the developmental growth process. Diseases affecting these tissues, including the principles of inflammation and repair, developmental disturbances, stains and accretions, diseases of the teeth and supporting structures, oral infections, injuries and neoplasms are included.</p>	<p>DHYG 215 Special Patient Care 1 Term Prerequisite: DH 130, DHA 122 Semester Prerequisite: DHYG 120, 122 Students develop a philosophy for the management and oral health care of the handicapped: people with physical, mental, social/emotional and selected medical conditions, as well as the elderly or medically compromised.</p>
<p>DHYG 116 Dental Emergency Procedures 2 Term Prerequisite: DHA 111, 112 Semester Prerequisite: Admission to Program Students study dental emergencies (recognition, prevention, and effective care). Experience is provided in monitoring vital signs and handling emergency simulations. CPR certification is earned.</p>	<p>DHYG 216 Periodontal Therapies 2 Term Prerequisite: DH 210, 212 Semester Prerequisite: DHYG 120, 126 Principles of periodontics is applied to treatment modalities. The dental hygienist co-therapist role in the prevention, identification and treatment of periodontal disease is applied. Students complete a periodontal case study to demonstrate appropriate implementation of their periodontal knowledge and therapy skills.</p>
<p>DHYG 118 Dental Hygiene Seminar 1 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program The student receives an overview of dental history, basic dental law, the dental health team, professional organizations, professionalism, and a code of ethics.</p>	<p>DHYG 218 Nutrition and Oral Health 2 Term Prerequisite: DHA 110 Semester Prerequisite: DADH 110 Discussion of the identification, function, metabolism, and sources of specific nutrients required for normal growth, development, and repair of tissues. Application of principles to the individual's nutritional needs; providing nutritional counseling and diet information to special needs patients; and the relationship of nutrition to oral health is emphasized.</p>
<p>DHYG 120 Clinical Dental Hygiene I 8 Term Prerequisite: DH 120, DH 122 Semester Prerequisite: DADH 110, 112, DHYG 111-114 Initial clinical practice of basic dental hygiene services (recognition and recording of oral conditions, medical history, oral health education, prophylaxis, fluoride treatment, sterilization, radiography, and desk procedures). Lecture and laboratory sessions further develop skills in treatment planning, patient home care, periodontal examination, caries detection, instrument sharpening, and clinical photography.</p>	<p>DHYG 219 Dental Public Health and Education 2 Term Prerequisite: DHA 110, DH 130, DH 213 Semester Prerequisite: DADH 110, DHYG 120 Students will review scientific literature, dental epidemiology, principles of public health, and health-care delivery systems. Further study will include human behavior, teaching methodologies, interpersonal relations and communication skills relating to patient education, motivation and acceptance of health care.</p>

<p>DHYG 220 Clinical Dental Hygiene III 8 Term Prerequisite: DH 210 Semester Prerequisite: DHYG 210-218 Clinical practice is continued with emphasis on performing comprehensive dental hygiene care, making decisions, solving problems, and managing time as dental hygienists do in private practice.</p>	<p>DTDS 102 Drafting II 4 Term Prerequisite: DT 101 Semester Prerequisite: DTDS 101 This course covers advanced drafting and design techniques needed to project successive auxiliary views off of various orthographic views. Layout and design concepts will also be stressed. Students will complete practical design projects in problem-solving and creativity applicable to the automotive, industrial, and/or aerospace industries.</p>
<p>DHYG 222 Dental Specialties 2 Term Prerequisite: DHA 112, DH 220 Semester Prerequisite: DHYG 210, 215 Lectures and individualized instruction include 1) dental specialists, reviewing procedures and practices, and 2) the dental hygienist's role in recognizing specialty care needed while educating the patient regarding his/her need(s). Students observe specialty procedures in dental specialty offices.</p>	<p>DTDS 103 Geometric Tolerancing 2 Term Prerequisite: DT 101 Semester Prerequisite: DTDS 101/Concurrently This course covers the principles and methods of dimensioning and tolerancing for specific design requirements on engineering drawings. Uniform practices for stating and interpreting these requirements will be stressed. Content includes use and understanding of the symbolic method of specification relating to tolerances being applied.</p>
<p>DHYG 224 Testing Styles and Inventory, Ethics and Jurisprudence 3 Term Prerequisite: Admission to Program Semester Prerequisite: DHYG 210 An introduction 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. Further, interviewing techniques, employment opportunities, insurance protection, continuing education, law, and professional ethics of dental hygiene and dentistry are discussed.</p>	<p>DTDS 104 Descriptive Geometry 4 Term Prerequisite: DT 102/Concurrently Semester Prerequisite: DTDS 102/Concurrently This course covers the solution of space problems through the practice of advanced orthographic projection. Content includes points, lines and planes, parallelism, perpendicularity, developments and intersections. Students will complete projects relating to architectural, civil and industrial engineering situations.</p>
<p>DHYG 229 Community Oral Health 2 Term Prerequisite: DH 213, 220, 223 Semester Prerequisite: DHYG 210, 219 Students implement a dental health education program utilizing assessment, planning, implementation, and evaluation processes. Each student will observe</p>	<p>DTDS 110 Industrial Blueprint Reading 3 Term Prerequisite: DT 100 Semester Prerequisite: TECH 090 This course covers basic concepts in orthographic projection, with emphasis on interpretation of engineering drawings.</p>
<p>DHYG 230 Registered Dental Assistant Procedures for the Dental Hygienist 1.5 Term Prerequisite: DH 210, 211, 212 Semester Prerequisite: DHYG 210, 212, 215 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.</p>	<p>DTDS 131 AutoCAD Basic 2D 3 Term Prerequisite: DT 101 Semester Prerequisite: DTDS 101 Introduction to AutoCAD software. Creation of 2-D multiview mechanical drawings with dimensions and notes will be the main focus. Use of AutoCAD's layer, block, plot commands, and isometric views will also be covered in this course.</p>
<p>DNTS 001 Dentistry and Dental Health 3 Term Prerequisite: Admission to Program Semester 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.</p>	<p>DTDS 132 AutoCAD Advanced 4 Term Prerequisite: CG 131 Semester Prerequisite: DTDS 131 This course builds on the material covered in DTDS 131. More complex drawings will be assigned, in addition to learning how to use attributes, create slide presentations, new line types, and write new menus and macros to customize AutoCAD to the user's needs.</p>
<p>DNTS 002 General Dental Procedures 2 Term Prerequisite: DSC 001 Semester Prerequisite: DNTS 001 The study and laboratory practice of identifying basic dental instruments; sterilizing and disinfecting procedures; processing dental films and mounting radiographs; and mixing basic dental materials.</p>	<p>DTDS 141 CADAM: Beginning 4 Term Prerequisite: DT 100, DT 101 Semester Prerequisite: TECH 090/Placement Test This course is an introduction to the CADAM drafting software system. Students will learn to create multiview drawings with dimensions and notes. Emphasis will be placed on producing working/detailed drawings.</p>
<p>DNTS 010 Dental Business Assistant Office Methods 3 Term Prerequisite: DSC 001, Typing Semester Prerequisite: DNTS 001, 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). Each student completes 32 hours of on-site experience in a dental office.</p>	<p>DTDS 142 CADAM: 2D Advanced Concepts 4 Term Prerequisite: DT 101, CG 201 Semester Prerequisite: DTDS 141, DTDS 101 In this course students will continue to gain proficiency with the CADAM system. The student will learn to create detail and assembly drawings of complex parts with oblique planes as used in automotive, industrial, and aerospace applications.</p>
<p>DNTS 020 Dental Claims Assistant Office Methods 2 Term Prerequisite: DSC 001, Typing Semester Prerequisite: DNTS 001, 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).</p>	<p>DTDS 150 Introduction to IBM CAD Basic Concepts 3 Term Prerequisite: DT 100/Equivalent Semester Prerequisite: TECH 090/Equivalent This course is an introduction to the basics of IBM CAD'S command structure and features. Included are creating 2-D and 3-D geometry, modifying geometry, images and raster conversion, calculator operation, macro creation, and data exchange.</p>
<p>DTDS 101 Drafting I 4 Term Prerequisite: DT 101/Placement Semester Prerequisite: TECH 090/Placement This is an introductory course in drafting concepts. Instruction includes orthographic projection, auxiliary views, sections, dimensioning techniques, gears and cams, and welding of fabrication type drawings. Students will complete a series of drawings to demonstrate understanding of the concepts presented.</p>	<p>DTDS 160 Automotive Body Design and Drafting I 4 Term Prerequisite: DT 103 Semester Prerequisite: DTDS 104 Concurrently This course will expose students to drafting techniques and design procedures as they apply to automotive plastic and sheetmetal components. Emphasis will be placed on applications of descriptive geometry by exposing students to the opportunity to develop grids, work lines, and section views.</p>
<p>DTDS 161 Automotive Body Design and Drafting II 4 Term Prerequisite: DT 160 Semester Prerequisite: DTDS 160 This course will expose students to more automotive body drafting and design. Students will learn to create smooth lines, proportion curves, and develop the various types of surfaces used in automotive sheetmetal and injection molded plastic designs.</p>	<p>DTDS 161 Automotive Body Design and Drafting II 4 Term Prerequisite: DT 160 Semester Prerequisite: DTDS 160 This course will expose students to more automotive body drafting and design. Students will learn to create smooth lines, proportion curves, and develop the various types of surfaces used in automotive sheetmetal and injection molded plastic designs.</p>

DTDS 162 Automotive Body Design and Drafting III	4	DTDS 233 AutoCAD 3D and Solids	4
Term Prerequisite: DT 161		Term Prerequisite: CG 131	
Semester Prerequisite: DTDS 161		Semester Prerequisite: DTDS 131	
The basic theory of surfaces applied to all types of shapes will be covered in this course. The course will include practice and problems in applying theory of planes, cylindrical, conical, dragged, and doubled curved surfaces of all types, also including intersection of surfaces, and secondary surfaces.		Students will learn how to use the 3-D features of AutoCAD. Product design drawings will be used to develop skills. Students will learn how to construct a 3-D library of parts.	
DTDS 164 Chassis Design I	4	DTDS 234 AutoCAD Solids	4
Term Prerequisite: DT 101		Term Prerequisite: CG 133	
Semester Prerequisite: DTDS 103, DTDS 104		Semester Prerequisite: DTDS 233	
This is the first of a three-semester course sequence that covers the fundamental concepts of chassis design. Emphasis will be placed on terminology and design characteristics of chassis components. Students will complete detail drawings of various automotive chassis components.		Students will learn how to use the solid modeling features of AutoCAD software. Creating industrial parts will be the main focus of the course. Students will develop a solids library of common parts.	
DTDS 165 Chassis Design II	4	DTDS 243 CADAM: 3-D	4
Term Prerequisite: Departmental Approval		Term Prerequisite: DT 102, CG 242	
Semester Prerequisite: DTDS 164		Semester Prerequisite: DTDS 142	
This is the second of a three-semester course sequence that covers intermediate concepts of chassis design. Emphasis will be placed on the various systems of chassis components in an automobile. Students will complete assembly and detail drawings of automotive chassis systems.		This course is designed to allow experienced CADAM students to apply three-dimensional concepts on the CADAM system. Students will work with wire frame construction and surfaces. Drawings will include actual part designs.	
DTDS 166 Chassis Design III	4	DTDS 244 CADAM: Solids	4
Term Prerequisite: Departmental Approval		Term Prerequisite: CG 272	
Semester Prerequisite: DTDS 165		Semester Prerequisite: DTDS 243	
This is the third of a three-semester course sequence that covers the advanced concepts of chassis design. Emphasis will be placed on linkages, joints, and clearances. Kinematics will be introduced and used extensively. Students will perform chassis system clearance studies.		The student will use CADAM's interactive solids design module to generate solid model assemblies. These models will be used to calculate mass properties, create photo-realistic images, and to generate 2-D product assembly drawings.	
DTDS 171 CADKEY: Industrial	3	DTDS 251 CGS: Line and Surface 1 - Data Management and Data Organization	4
Term Prerequisite: DT 100		Term Prerequisite: DT 160	
Semester Prerequisite: TECH 090		Semester Prerequisite: DTDS 160	
A computer graphics course designed to teach the software package called CADKEY. The student will draw a mechanical drawing complete with dimensions and notes. Emphasis will be placed on creating and editing mechanical drawings.		This course will introduce students to the line and surface application of General Motors Corporate Graphics system. Students will use the data management, data organization, and drawing view management operators to create a block structure, detail drawing with views, and both bulk and selective files.	
DTDS 180 Unigraphics I	4	DTDS 252 CGS: Line and Surface 2 - Inner Body Surface Development	4
Term Prerequisite: DT 101 Concurrently/Equivalent Drafting Experience		Term Prerequisite: CG 245	
Semester Prerequisite: DTDS 101 Concurrently/Equivalent Drafting Experience		Semester Prerequisite: DTDS 251	
This is the first of a three-semester course sequence that covers the fundamentals of the Unigraphics System of interactive design. This class covers basic concepts of 2-D and 3-D construction as well as the concepts of drafting and design.		This course will expose students to operators within the line and surface application of General Motors Corporate Graphics System which are used to create wireframe and surface geometry. Emphasis will be placed on inner body "black metal" and injection molded plastic components.	
DTDS 181 Unigraphics II	4	DTDS 253 CGS: Line and Surface 3: Outer Body Surface Development	4
Term Prerequisite: CG 180		Term Prerequisite: CG 246	
Semester Prerequisite: DTDS 180		Semester Prerequisite: DTDS 252	
This is the second course of a three-semester course sequence that covers the advanced concepts of the Unigraphics System of interactive design. This course covers design concepts in 3-D basic surface construction as well as the concepts of advanced surfaces.		This course will introduce students to operators within the line and surface application of General Motors Corporate Graphics System which are used to analyze and modify wireframe and surface geometry. Emphasis will be placed on the development of aesthetic automotive body panel surface geometry.	
DTDS 182 Unigraphics III	4	DTDS 280 Drafting Project Lab	4
Term Prerequisite: Departmental Approval		Term Prerequisite: DT 103, 210/DT 106 Concurrently	
Semester Prerequisite: DTDS 181		Semester Prerequisite: DTDS 102, 103, 104	
This is the third of a three-semester course sequence that covers modeling and organization concepts of the Unigraphics system of interactive design. This course covers solid modeling and assemblies and components.		This course is intended to give the advanced drafting and design student an opportunity for more experience through mutual agreement between student and instructor. Students will complete advanced projects and research in a variety of design application situations.	
DTDS 202 Die Design and Construction	3	DTDS 285 CADD Project Lab	2
Term Prerequisite: DT 101		Term Prerequisite: CG 271	
Semester Prerequisite: DTDS 101		Semester Prerequisite: Program Approval	
This course will emphasize the proper steps to designing a die. Also covered will be the names of various die components and understanding how they work.		This course is intended to give advanced drafting and design students an opportunity, through mutual agreement between student and instructor, to complete project(s) on one of several available CAD systems.	
DTDS 204 Jigs and Fixture Design	3	DTDS 288 CADAM: Project NC	2
Term Prerequisite: DT 101		Term Prerequisite: CNC 200	
Semester Prerequisite: DTDS 101		Semester Prerequisite: DTDS 142, Instructor Approval	
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.		This course is intended for the student who wishes to work with an instructor on an actual project using CADAM numerical control software to produce a machined part.	
DTDS 209 Industrial Drafting Lab	2	ECNM 099 Seminar: Elder College Economics	.5
Term Prerequisite: Instructor Approval		Term Prerequisite: None	
Semester Prerequisite: Instructor Approval		Semester Prerequisite: None	
Gives additional lab time to industrial drafting students to fulfill extra requirements. This lab must be taken in conjunction with a drafting class.		The course focuses upon selected aspects of the economic conditions in various locations in the world. Specific topics vary with each seminar.	
		ECNM 120 Economics of Society and Polity	4
		Term Prerequisite: None	
		Semester Prerequisite: None	
		A comparative study of primitive social economies and modern political systems. An emphasis will be placed on the evolution of economic organization in human society.	

ECNM 130 Honors: Economics of Society and Polity 4
Term Prerequisite: Departmental Approval
Semester Prerequisite: Departmental Approval
 A comparative study of primitive social economies and modern political systems. An emphasis will be placed on the evolution of economic organization in human society. This course is the same as ECNM 120 except that it is taught as a seminar for honors students only.

ECON 101 Current Economic Issues 3
Term Prerequisite: None
Semester Prerequisite: None
 An introductory course focusing on economic problems and issues within the American economy. It provides an overview of economic analysis. Topic areas 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.

ECON 201 Principles of Economics - Micro 3
Term Prerequisite: None
Semester Prerequisite: None
 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.

ECON 202 Principles of Economics - Macro 3
Term Prerequisite: EC 201/Departmental Approval
Semester Prerequisite: ECON 201/Departmental Approval
 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.

ECON 211 Economic/Business History 3
Term Prerequisite: None
Semester Prerequisite: None
 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.

ECON 218 Money and Banking 3
Term Prerequisite: EC 202
Semester Prerequisite: ECON 202
 This course covers the nature of money and the role of the federal reserve, commercial banks and other financial institutions in determining money supply. The course includes information about the money market, capital markets, determination of interest rates, and the relationship between monetary policy and economic activity.

ECON 221 International Economics 3
Term Prerequisite: EC 202/Instructor Approval
Semester Prerequisite: ECON 202/Instructor Approval
 Examines the interrelationship between the U.S. Economy and the rest of the world. It covers balance of payments, exchange rate systems, effects of international economics on domestic, monetary and fiscal policies, gains from trade, restrictions on trade, and the development of international trade organizations.

ECON 224 Intermediate Microeconomic Theory 3
Term Prerequisite: EC 201
Semester Prerequisite: ECON 201
 This course covers consumers behavior theory production and cost relationships of individual firms, actions of firms in different market structures, the theory of resource firms, and general equilibrium theory. Discussion in each of these areas begins with a review of the principles covered in ECON 201.

EDUC 120 Introduction to Education 3
Term Prerequisite: None
Semester Prerequisite: None
 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.

EDUC 201 Education Practicum I 2
Term Prerequisite: Departmental Approval
Semester Prerequisite: Departmental Approval
 Beginning practical experience and training in the field for individual students. The student is placed with an educational institution.

ELCT 101 Analog Problems 4
Term Prerequisite: High School Algebra
Semester Prerequisite: High School Algebra
 This course provides circuit analysis problem practice for both DC and AC circuits. Topics include: algebraic manipulation and solution of electronic formulas and basic trigonometric solutions of AC circuits using complex notation. A scientific calculator is required for polar to rectangular conversion and binary, octal, and hexadecimal calculations.

ELCT 111 DC and AC Circuits 6
Term Prerequisite: ET 101
Semester Prerequisite: ELCT 101 Concurrently
 A beginning circuit analysis course using resistors, capacitors, inductors and transformers. Lecture and laboratory topics include: resistor color code, series, parallel and series-parallel resistive circuits, R-C time constants, Kirchoff network laws, superposition and Thevenin theorems, series and parallel RCL circuits, and series and parallel resonance.

ELCT 112 Transistors 6
Term Prerequisite: ET 112, ET 101/Approval
Semester Prerequisite: ELCT 111, ELCT 101/Approval
 A lecture and laboratory course dealing with diodes in power supply and regulator circuits, bipolar and field effect transistor biasing, and single and multi-stage amplifier circuits. Circuits are covered from the analysis, design, and troubleshooting standpoints.

ELCT 120 Programming Preparation 2
Term Prerequisite: None
Semester Prerequisite: None
 The student will learn software that provides preparation for machine or high level language programming. Software used is DOS, a text editor, and a flow-charting program. Emphasis is placed on developing flowcharts for electronics-related problems that can be programmed on a computer.

ELCT 121 BASIC for Electronics 3
Term Prerequisite: CIM 250, ET 111/ET 160
Semester Prerequisite: ELCT 120, ELCT 111
 The student will write and execute programs in the BASIC language for electronic circuit analysis. Program problems will range from simple series circuits to transistor amplifiers. A student-designed programming project is used as part of the lab evaluation.

ELCT 130 Machine Language Programming 3
Term Prerequisite: ET 102, ET 120
Semester Prerequisite: ELCT 111, ELCT 120
 Covers the fundamentals of machine and assembly language programming for the MC6802MPU: computer math, instruction set, addressing modes, branching, stack operations, subroutines, interrupts, and programming of PIA. Laboratory work includes writing programs in machine and assembly language and using a simulator to debug programs.

ELCT 131 Digital Basics 3
Term Prerequisite: ET 102, ET 112
Semester Prerequisite: ELCT 111, ELCT 120
 Introduces digital electronics; basic gates, combinational logic, Boolean algebra, K-maps and functions of combination logic such as multiplexers, demultiplexers, encoders, decoders and code converters. It also introduces sequential logic: latches, flip-flops, timers, counters and shift registers. Laboratory work includes the analysis, construction, and troubleshooting of digital circuits using TTLICs.

ELCT 151 Computer Troubleshooting I 3
Term Prerequisite: ET 172
Semester Prerequisite: ELCT 171 Concurrently
 This is a troubleshooting and repair course intended for students in the Computer Repair Certificate program. Course topics include basic troubleshooting techniques, unit and board swap computer troubleshooting, disk drive maintenance and adjustment, and computer preventive maintenance.

ELCT 160 Logic Problems Analysis I 3
Term Prerequisite: None
Semester Prerequisite: None
 A fundamental analysis course intended for students in the computer repair certificate program. Course topics include manipulation of formulas used in electronics, basic gate operation and truth tables, Boolean algebra, binary, octal and hexadecimal base number systems.

ELCT 161 Soldering/Desoldering	1	ELCT 231 Advanced Digital Electronics	5
Term Prerequisite: None		Term Prerequisite: ET 113, ET 121, ET 131	
Semester Prerequisite: None		Semester Prerequisite: ELCT 112, ELCT 121, ELCT 130, ELCT 131	
A basic soldering course. Course topics include soldering electronic components to printed circuit boards, cable construction, surface mount soldering. Desoldering components using solder wick, vacuum desoldering tools, and equipment and printed circuit board repair.		Course covers advanced topics in digital electronics: adders, comparators, code converters, ALUs, non-sequential and shift register counters, display systems, and solid-state memories. It also covers SIPO, PISO, SIGNATURE, D/A and A/D circuits. Laboratory work includes the analysis, design, construction and troubleshooting of digital circuits using SSI, MSI and LSI ICs.	
ELCT 170 Computer Repair Electronics I	6	ELCT 232 Digital Project	3
Term Prerequisite: Departmental Approval		Term Prerequisite: ET 232	
Semester Prerequisite: ELCT 180 Concurrently		Semester Prerequisite: ELCT 230, ELCT 231	
A basic electronics course intended for students in the computer repair program. This course begins with basic electricity concepts and continues with topics through transistor circuits and basic digital electronics.		This course deals with the design of a microcomputer-based programmable monitoring and control system designed around the MC68HC11 and the use of an emulator to verify the design. Laboratory work includes a microcomputer-based design project, preferably using the MC68HC11 with a keyboard, LED/LCD display, and sensors.	
ELCT 171 Computer Repair Electronics II	6	ELCT 241 Test Equipment Applications	1
Term Prerequisite: ET 171		Term Prerequisite: ET 113	
Semester Prerequisite: ELCT 170		Semester Prerequisite: ELCT 112	
A digital electronics and computer systems course intended for students in the Computer Repair Certificate program. Course topics include semiconductor and magnetic memory, computer system memory, microprocessors, peripheral adapters, and microcomputer systems.		The practical application of test equipment in troubleshooting and alignment is emphasized in this course. The student will learn the capabilities and limitations of meters, oscilloscopes, generators, spectrum analyzers, and distortion analyzers.	
ELCT 180 Computer Test Equipment I	3	ELCT 242 Computer Interfacing and Peripherals	5
Term Prerequisite: Departmental Approval		Term Prerequisite: ET 232, ET 242	
Semester Prerequisite: ELCT 170 Concurrently		Semester Prerequisite: ELCT 230, ELCT 231	
A basic test equipment course intended for students in the Computer Repair Certificate program. This course introduces the student to the operation of electronics test equipment including VOM, DMM, oscilloscopes, storage oscilloscopes and basic digital test equipment.		Covers 8086MPU pins functions, address decoding, interfacing of static memory, dynamic memory, and IO adapters. Principle of operation and interfacing of keyboard, display, printer, floppy disk, modem, LAN, and motor control hardware. Lab work involves constructing hardware and writing software for most of the peripherals discussed in the course.	
ELCT 181 Computer Test Equipment II	2	ELCT 251 Digital Troubleshooting I	1
Term Prerequisite: ET 171, ET 180		Term Prerequisite: ET 131, ET 113	
Semester Prerequisite: ELCT 171, ELCT 180 Concurrently		Semester Prerequisite: ELCT 112, ELCT 131	
An advanced test-equipment course intended for students in the Computer Repair Certificate program. Course topics include software diagnostic routines, signature and data analysis, and computer troubleshooting equipment.		This is a half-semester lab course designed to give the student hands-on experience in troubleshooting digital circuits involving combinational logic, multiplexers, decoders, display and display drivers, flip-flops, counters, timing circuits, shift registers, and other digital circuitry. Class demonstrations and videotapes are used for instruction.	
ELCT 200 CET Exam Preparation	2	ELCT 252 Digital Troubleshooting II	3
Term Prerequisite: ET 113		Term Prerequisite: ET 232, ET 251	
Semester Prerequisite: ELCT 112		Semester Prerequisite: ELCT 230, ELCT 231, ELCT 251	
This course is designed to prepare the student to take the Certified Electronic Technician, associate level, examination.		This course is a systematic approach to troubleshooting microprocessor based systems and using test equipment. The student gains hands-on experience by drawing timing diagrams, troubleshooting flowcharts, writing or using diagnostic programs, and using test equipment to locate faults on MPU, memory, video, I/O, and floppy disk controller boards.	
ELCT 206 Project Lab	1	ELCT 261 Consumer Product Systems	3
Term Prerequisite: ET 113, Approval		Term Prerequisite: ET 212	
Semester Prerequisite: ELCT 112, Approval		Semester Prerequisite: ELCT 112	
A guided independent study of a topic of interest within the area of electronics. The student will write a research paper or construct an electronic device that has the prior approval of a faculty member.		Common electronic consumer product operation is explained through block diagrams and schematic diagrams. Systems include AM and FM stereo radio, black-and-white and color television, audio and videotape recorders, and audio and videodisc players. Lab work will involve measurements and alignments of normally operating systems.	
ELCT 207 Project Lab	2	ELCT 271 Communications I	4
Term Prerequisite: ET 113, Approval		Term Prerequisite: ET 113/Approval	
Semester Prerequisite: ELCT 112, Approval		Semester Prerequisite: ELCT 112/Approval	
A guided independent study of a topic of interest within the area of electronics. The student will write a research paper or construct an electronic device that has the prior approval of a faculty member.		This course covers a review of resonant circuits, LC filter networks, radio frequency amplifiers, oscillators, amplitude modulation transmitting and receiving circuits and systems.	
ELCT 208 Project Lab	3	ELCT 272 Communications II	4
Term Prerequisite: ET 113, Approval		Term Prerequisite: ET 271, ET 272/Approval	
Semester Prerequisite: ELCT 112, Approval		Semester Prerequisite: ELCT 271/Approval	
A guided independent study of a topic of interest within the area of electronics. The student will write a research paper or construct an electronic device that has the prior approval of a faculty member.		The student will learn frequency modulation transmitting and receiving circuits and systems, transmission lines, antennas, and microwave devices.	
ELCT 211 Linear Circuits I	4	ELCT 281 Biomedical Instrumentation	4
Term Prerequisite: ET 113		Term Prerequisite: ET 211	
Semester Prerequisite: ELCT 112		Semester Prerequisite: ELCT 112	
Solid state devices such as the JFET, MOSFET, thyristors, and op-amps are studied. A unit on a printed circuit board design is included. The student will design a printed circuit layout and construct a bipolar power supply.		Preparation for the certified biomedical electronics technician examination begins here. The student will be introduced to biomedical safety standards and regulatory agencies as well as measurement of physiological signals with biomedical equipment. Lab exercises include safety testing and performance testing of biomedical equipment.	
ELCT 212 Linear Circuits II	4		
Term Prerequisite: ET 211, ET 212			
Semester Prerequisite: ELCT 211			
This course covers applications of op-amps as used in active filters, waveform generators, and voltage regulators. Other linear devices studied include PLL, VCO, and three terminal regulators.			
ELCT 230 Advanced Microprocessor	5		
Term Prerequisite: ET 231			
Semester Prerequisite: ELCT 112, ELCT 121, ELCT 130, ELCT 131			
Covers advanced topics in microprocessor: 8086MPU instruction set, addressing modes, PC interrupts assignments, BIOS, MSDOS functions, parallel and serial data transfer principles. Lab work involves writing programs and constructing hardware to configure and use 8255, 8279, 8254, 8251 interface adapters and A/D, D/A converters.			

ELCT 283-EMSA 100

<p>ELCT 283 MET Exam Preparation 1 Term Prerequisite: Departmental Approval Semester Prerequisite: ELCT 281 A review of material covered on the American Association of Medical Instrumentation (AAMI) certification exam. This includes safety, anatomy, physiology, electronics, and biomedical instrumentation.</p>	<p>ELTE 143 National Electrical Code III 4 Term Prerequisite: BT 252/Departmental Approval Semester Prerequisite: ELTE 142/Departmental Approval For individuals with a journey electrician's license who need to review for the State Master's exam. Students will cover the Code using the index method, discuss interpretation of the Code, study State of Michigan electrical and construction code rules, and discuss topics appropriate to the Electrical Contractors exam.</p>
<p>ELCT 290 Biomedical Internship 4 Term Prerequisite: Program Approval Semester Prerequisite: ELCT 281 This course will allow students to be placed in hospital biomed repair shops and earn credit for satisfactory work performance. The students' occupational interests are considered along with their background or related courses to determine placement.</p>	<p>ELTE 145 Electrical Prints for Buildings 4 Term Prerequisite: EM 104/EM 121 Semester Prerequisite: ELTE 110 Covers construction prints emphasizing standard and non-standard symbols and interpretation of prints. Uses the National Electrical Code to calculate branch circuit, feeder, motor circuit, and service sizes. Other topics include grounding, high voltage systems, uninterruptible power supplies, signalling, and safety systems.</p>
<p>ELTE 100 Electrical Safety Practices 1 Term Prerequisite: None Semester Prerequisite: None This course covers basic electrical safety practices in the home, in the electrical laboratory, and in construction and industry. Included are state and federal standards and practices. This course is a prerequisite or co-requisite for all ELTE courses that have a lab.</p>	<p>ELTE 150 Electric Motor Maintenance 2 Term Prerequisite: EM 104 Semester Prerequisite: ELTE 110 Students learn to diagnose and test electric motors. Students will learn to identify and repair common problems in motors using meters, test equipment, and appropriate tools. An introduction to rewinding and metal working procedures is also included.</p>
<p>ELTE 110 Practical Electricity 3 Term Prerequisite: EM 100 Semester Prerequisite: ELTE 100/Concurrently 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 electrical wiring, and investigate the behavior of motors and transformers. Reviews electrical codes and standards.</p>	<p>ELTE 232 Industrial Control Design 3 Term Prerequisite: EM 131 Semester Prerequisite: ELTE 131 This course is a continuation of ELTE 131, covering more components and larger more complex machine control diagrams, including automation interlocking and automatic continuous cycling of machinery. Students will be taught to design the control circuits for more complex machines in conformance with industry standards.</p>
<p>ELTE 112 Basic Wiring Installation 2 Term Prerequisite: EM 100, EM 104 Semester Prerequisite: ELTE 110 This course covers installation of a variety of wiring systems in wood frame and masonry construction. Students will practice installing non-metallic sheathed cable, flexible metal conduit, electrical metallic tubing, and rigid conduit.</p>	<p>ELTE 240 Electrical Estimating 3 Term Prerequisite: EM 102, EM 135 Semester Prerequisite: ELTE 112, ELTE 145 Basics of preparing accurate, competitive electrical estimates for the building trades. Topics include take-off procedure using electrical, mechanical and architectural prints, lighting design, labor and materials cost, evaluation techniques and specifications. Students should have wiring experience, practice in the use of NEC rules, and electrical prints before enrolling.</p>
<p>ELTE 121 Analyzing Electric Circuits 5 Term Prerequisite: EM 104, MTH 012/Equivalent Semester Prerequisite: TECH 100/Math Placement Test, ELTE 110 Concurrently This course utilizes concepts in basic algebra, vector algebra, and trigonometry to solve DC and AC electric circuit problems. Topics will include units, Ohm's law, network analysis, series, parallel and combination DC and AC circuits, inductance and capacitance.</p>	<p>ELTE 260 Introduction to Programmable Logic Controllers 4 Term Prerequisite: EM 131 Semester Prerequisite: ELTE 131 This course covers programmable logic controllers with focus on common operating principles. Topics include: the capabilities, similarities and differences among controllers, programming (examine on/off, timers, counters), and connecting external devices on Allen Bradley, Modicon and Texas Instruments programmable controllers. Prepares students for any of the advanced PLC courses (ELTE 261, 262, 263).</p>
<p>ELTE 122 Industrial Control Electronics 5 Term Prerequisite: ET 112/EM 122 Semester Prerequisite: ELTE 110, ELTE 121 This course introduces the student to solid-state circuitry used in industry. Students will study diodes, transistors, SCRs, triacs, optical isolators, transducers, power circuits, etc. Laboratory will include oscilloscope usage. The course also includes an introduction to Boolean algebra and digital circuits.</p>	<p>ELTE 261 Allen-Bradley PLC-5 Advanced 6 Term Prerequisite: PLC-5 Seminar/EM 161 Semester Prerequisite: ELTE 260 This course covers programming and connections for Allen-Bradley PLC-5 controllers. Focus on math, subroutine, file, block transfer, sequencers, logic and bit manipulation instructions. Students will learn logic for machine control, programming and utilizing intelligent cards, ASCII, analog input/output, and system documentation. Stage programming concepts and methods will be addressed.</p>
<p>ELTE 123 Motors and Transformers 4 Term Prerequisite: ET 112/EM 122 Semester Prerequisite: ELTE 121 This course begins with three-phase circuits, including three-phase power measurement. Contains practical introduction to single- and three-phase transformers, motors, and alternators. Brief coverage of DC machines.</p>	<p>ELTE 262 Modicon 984 Advanced 6 Term Prerequisite: EM 161 Semester Prerequisite: ELTE 260 This course covers programming and connections for Modicon 984 programmable controllers. Focus on math, skip, subroutine, bit manipulation, data transfer move, and logic instructions. Students will learn logic for machine control, programming and utilizing intelligent cards, ASCII, analog input/output, and system documentation. Stage programming concepts and methods will be addressed.</p>
<p>ELTE 131 Introduction to Machine Control 4 Term Prerequisite: EM 100, EM 104 Semester Prerequisite: ELTE 110 A course in relay controls using industrial standards. The student will construct and understand the operation of three-phase motor control circuits; learn symbols and understand operation of machine control components including limit and proximity switches, pneumatic timers, latch relays, etc.; and use wiring and ladder diagrams to connect and troubleshoot simple control circuits.</p>	<p>ELTE 263 Texas Instruments 405 Advanced 6 Term Prerequisite: Instructor Approval Semester Prerequisite: ELTE 260 Covers programming and connections for Texas Instruments 405 programmable controllers. Focus on math, Boolean, subroutine, BCD, bit manipulation, data table and logic instructions. Students will learn logic for machine control, programming and utilizing intelligent cards, ASCII, analog input/output, and system documentation. Stage programming concepts and methods will be addressed.</p>
<p>ELTE 141 National Electrical Code I 4 Term Prerequisite: EM 104/Equivalent Semester Prerequisite: ELTE 110/Equivalent An introductory course designed for individuals with little or no knowledge of the electrical code. Students will study the structure and scope of the National Electrical Code; learn how to locate often used code sections: Ohm's law, voltage drop, wire and conduit sizing, and installation methods.</p>	<p>EMSA 100 First Aid and CPR 2 Term Prerequisite: None Semester Prerequisite: None Designed to provide the knowledge and skills necessary to respond to and treat emergency situations until professional medical help is obtained. First Aid and CPR certificates issued upon successful completion.</p>
<p>ELTE 142 National Electrical Code II 4 Term Prerequisite: BT 251/EM 135/Departmental Approval Semester Prerequisite: ELTE 141/ELTE 145/Approval This course is for individuals with field experience and basic electrical training who need a review for the State Journey examination. Students will review the Code with focus on locating and interpreting the National Electrical Code. In addition to the N.E.C., State of Michigan electrical rules will be reviewed.</p>	

EMSA 110 EMT Refresher	3	EMSB 106 CPR/Special Situations	.25
Term Prerequisite: Basic EMT		Term Prerequisite: None	
Semester Prerequisite: Basic EMT		Semester Prerequisite: None	
This course will provide the EMT the opportunity to meet State of Michigan refresher requirements. Content includes CPR, oxygen therapy, airway management, patient assessment, medical and environmental emergencies, backboarding, bandaging, shock management, emergency childbirth, and pediatrics. Successful completion of this course requires passing written and practical exams.		This seminar provides instruction of CPR for special situations or groups. Infant and child CPR and foreign body airway obstruction for babysitters and parents would fall under this curriculum.	
EMSA 221 CISD-Critical Incident Stress Debriefing	1	EMSB 110 Red Cross First Aid and CPR	.5
Term Prerequisite: EMS/Fire/Police/Clergy/Counselors		Term Prerequisite: None	
Semester Prerequisite: EMS/Fire/Police/Clergy/Counselors		Semester Prerequisite: None	
This seminar provides the knowledge and skills required to function as a member of a CISD team which assist peers with preventing, recognizing, mitigating, and recovering from stressful emergencies. It is required for emergency related personnel, mental health workers, and clergy interested in becoming a team member.		This seminar offers adult CPR including airway obstruction and four hours of Basic First Aid. Red Cross certification is given to those successfully completing both components.	
EMSA 222 EMS Instructor Coordinator	6	EMSB 111 First Aid When Seconds Count	.75
Term Prerequisite: Admission to Program		Term Prerequisite: None	
Semester Prerequisite: Admission to Program		Semester Prerequisite: None	
A Michigan Department of Public Health approved course for EMS personnel interested in becoming an Instructor Coordinator. Includes teaching and testing methods, lesson plan development, writing performance objectives, course administration, MDPH application for course approval, and meeting state requirements. Student teaching required.		A seminar designed to instruct and prepare individuals to administer immediate first aid when sudden illness or injury occurs until professional help arrives. This seminar provides the necessary information needed to save lives and prevent further injury within the first few minutes.	
EMSA 223 Pre-Hospital Care of the Injured Child	1	EMSB 121 EMS Continuing Education A	.25
Term Prerequisite: EMS Personnel		Term Prerequisite: EMS Personnel	
Semester Prerequisite: EMS Personnel		Semester Prerequisite: EMS Personnel	
A course based on the educational program developed by the Children's Hospital National Medical Center, Washington, D.C. The course focuses on the pre-hospital management of the acutely ill or injured child or infant. Proper pre-course preparation is essential to successful completion.		A series of continuing education seminars for the basic EMT, EMT Specialist or paramedic designed to meet three or four continuing education credits for relicensure requirements of the State of Michigan. Students may elect to take as many seminars as needed to fulfill their relicensure requirements.	
EMSA 224 BTLs-Basic Trauma Life Support	1	EMSB 122 EMS Continuing Education B	.5
Term Prerequisite: EMS Personnel		Term Prerequisite: EMS Personnel	
Semester Prerequisite: EMS Personnel		Semester Prerequisite: EMS Personnel	
A course which provides instruction and intense evaluation of current theory and skills used in the pre-hospital management of the trauma victim. Proper preparation is required to successfully complete the course. Follows national BTLs curriculum.		A series of continuing education seminars for the basic EMT, EMT Specialist or paramedic designed to meet five or six continuing education credits for relicensure requirements of the State of Michigan. Students may elect to take as many seminars as needed to fulfill their relicensure requirements.	
EMSA 225 Paramedic Continuing Education	3	EMSB 123 EMS Continuing Education C	.75
Term Prerequisite: EMS Personnel		Term Prerequisite: EMS Personnel	
Semester Prerequisite: EMS Personnel		Semester Prerequisite: EMS Personnel	
This course is a series of continuing education topics designed to meet all of the CE points required by the State of Michigan for relicensure of a paramedic. Basic EMTs and EMT Specialist may attend designated sessions.		A series of continuing education seminars for the basic EMT, EMT specialist or paramedic designed to meet 10-12 continuing education credits for relicensure requirements of the State of Michigan. Students may elect to take as many seminars as needed to fulfill their relicensure requirements.	
EMSB 101 CPR/Heartsaver	.25	EMTA 100 Medical First Responder	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This seminar is designed for CPR instruction of the general public and adheres to American Heart Association guidelines. Content includes adult one-person CPR and foreign body airway obstruction. Also includes information about heart disease, risk factors, prudent heart living, and heart and lungs physiology.		A course to provide the student with the knowledge and skills necessary to manage ill or injured victims at the scene of an emergency until the arrival of ambulance personnel. Successful completion enables the student to apply for state licensure as a Medical First Responder.	
EMSB 102 CPR for Health Care Professionals	.5	EMTA 101 Basic EMT I	3
Term Prerequisite: Health Professional		Term Prerequisite: None	
Semester Prerequisite: Health Professional		Semester Prerequisite: None	
This seminar is designed for CPR instruction of health-care providers and adheres to American Heart Association guidelines. Content includes one- and two-rescuer CPR, child and pediatric CPR, adult, child, pediatric foreign body airway obstruction, information about heart disease, risk factors, and physiology of the heart and lungs.		First in a sequence of four courses to prepare the student as a basic EMT. Emphasis is placed on didactic material including airway management, patient assessment, CPR soft tissue injuries, head, chest, and abdominal injuries, and proper use of equipment in the delivery of basic emergency care.	
EMSB 103 CPR Recertification	.25	EMTA 102 Basic EMT II	2
Term Prerequisite: Current Provider "C" Card		Term Prerequisite: Enrolled in EMT 141	
Semester Prerequisite: Current Provider "C" Card		Semester Prerequisite: Enrolled in EMTA 101	
This seminar is designed for CPR instruction for individuals who have previously obtained instruction in the basics of cardiopulmonary resuscitation and foreign body airway obstruction. The participants must have a current provider card for CPR. The curriculum and testing consists of recertification techniques for CPR.		Second in a sequence of four courses to prepare the student as a basic EMT. Emphasis is placed on practical skills including patient assessment, bandaging, splinting, backboarding, oxygen delivery equipment, CPR, and airway management in the delivery of basic emergency care.	
EMSB 104 CPR Instructor	.75	EMTA 103 Basic EMT III	3
Term Prerequisite: Basic Cardiac Life Support, Admission to Program		Term Prerequisite: EMT 141, EMT 142	
Semester Prerequisite: Basic Cardiac Life Support, Admission to Program		Semester Prerequisite: EMTA 101, EMTA 102	
The CPR Instructor's seminar is to provide the opportunity and forum to acquire knowledge and skills to accurately instruct and test the Basic Life Support Provider's courses according to American Heart Association guidelines.		The third in a sequence of four courses to prepare the student as a basic EMT. Emphasis is placed on didactic material including the recognition and management of environmental and medical emergencies; verbal, written and radio communications, triage, emergency childbirth, and pediatric emergencies.	

<p>EMTA 105 Ambulance Driving 2 Term Prerequisite: EMT/EMT Student Semester Prerequisite: EMT/EMT Student A course to provide the EMT with the knowledge and practical experience in the operation of an ambulance. The course will focus on safety, defensive driving techniques, and specialized driving maneuvers.</p>	<p>ENGL 122 Writing About Literature and Ideas 4 Term Prerequisite: ENG 122 Semester Prerequisite: WRIT 121 An alternative to WRIT 122. ENGL 122 is an introduction to various literary forms, in addition to the development of analytical reading and writing skills and research techniques leading to a literary research paper.</p>
<p>EMTA 106 EMS Communications 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program A course to provide the EMT with knowledge and skill in written and verbal communication, the operation of dispatching, and ambulance-to-hospital radio operation specific to prehospital emergency care.</p>	<p>ENGL 132 Honors Writing About Literature and Ideas 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An alternative to WRIT 122. ENGL 132 is an introduction to various literary forms, in addition to the development of analytical reading and writing skills and research techniques leading to a literary research paper. (Same as ENGL 122 but taught on an advanced level.)</p>
<p>EMTA 107 Psychiatric Emergencies 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program A course to provide the EMT with skill in the management and approach to psychological emergencies and crisis situations in the prehospital setting. Emphasis is placed on psychological theory and communications techniques.</p>	<p>ENGL 201 Introduction to Poetry 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) An introduction to the content, form, style, and technique of poetry; its structural types, metrical, blank, and free verse; its thematic types, lyric, narrative, and dramatic; and its effects or purposes. The course emphasizes poetry written in English but includes English translations of representative poetry from other languages and cultures.</p>
<p>EMTA 108 Legal Issues in Emergency Medical Services 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program A course to assist the EMT in understanding the legal system and legal principles as they apply to emergency prehospital care. Emphasis is placed on the evaluation of legally sound report writing skills, deposition delivery and legal testimony.</p>	<p>ENGL 202 Introduction to Drama 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 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.</p>
<p>EMTA 109 EMS Dangerous Situations 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program A course to provide the EMT with enhanced awareness of specialized and dangerous situations faced in the prehospital setting. Emphasis is placed on confrontations, self protection, patient and scene management.</p>	<p>ENGL 203 Introduction to Prose 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) This course traces the development of prose fiction by introducing the students to the epic in prose translation, the romance, the novel, and the satire. It requires the student to use critical thinking in analyzing various examples of prose fiction and provides historical and cultural context for the works studied.</p>
<p>EMTA 110 Basic EMT Pharmacology 2 Term Prerequisite: EMT/Admission to Program Semester Prerequisite: EMT/Admission to Program This course is designed to familiarize the student with common medications encountered in the field. Special attention will be placed on emergency drugs used in emergency situations and medications frequently used by emergency</p>	<p>ENGL 211 World Literature I 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A selective survey of the literatures of major cultures in Africa, the Americas, Asia, and Europe to approximately the seventeenth century. Explores the ethnic, aesthetic, and thematic elements of their respective cultures through narrative prose fiction, poetry, and drama.</p>
<p>EMTA 111 EMT Physical Assessment 2 Term Prerequisite: EMT/Admission to Program Semester Prerequisite: EMT/Admission to Program This course is designed to give the EMT and EMT-S tools to go beyond basic IPS (initial patient survey) in patient evaluation. It will enhance their history taking and interpretations of vital signs. It includes analysis by body system and interpretation of physical findings. Useful for field or hospital practice.</p>	<p>ENGL 212 World Literature II 4 Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A selective survey of the literatures of major cultures in Africa, the Americas, Asia, and Europe from approximately the seventeenth century through the present. Explores the ethnic, aesthetic, and thematic elements of their respective cultures through narrative prose fiction, poetry, drama, and cinema.</p>
<p>EMTA 112 Basic EMT Clinical 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This is the clinical/simulation component in the three term basic EMT program. Student will be assigned to hospital clinical sites with an instructor, in simulation on campus and EMS agencies with a licensed EMT or paramedic.</p>	<p>ENGL 220 Science Fiction 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) This course acquaints students with popular, modern literature of science fiction. History and definitions of science fiction are given, but the emphasis is on short stories, novels, and films—their questions and criticisms of society, the world, and human existence.</p>
<p>EMTA 113 EMT Field Practicum 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course offers the EMT student an opportunity to obtain field experience by doing an "internship" at a cooperating agency that provides pre-hospital emergency care. The agency will evaluate the student on attendance, punctuality, appearance, patient care and communication.</p>	<p>ENGL 240 The Film as Art 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) This course will introduce film as an art form capable of making perceptive comments on our civilization. Thematic analysis of twelve to fifteen motion pictures of recognized merit will emphasize the filmmaker's visual and aural techniques as well as conventions more commonly associated with literature.</p>
<p>EMTA 114 Rescue and Extrication 2 Term Prerequisite: EMT/Rescue Personnel Semester Prerequisite: EMT/Rescue Personnel A course to provide EMS or rescue personnel with skills in light and heavy vehicle extrication, water rescue techniques, extrication from farm machinery, and other specialized rescue techniques. Emphasis is placed on patient and rescuer safety.</p>	<p>ENGL 245 Popular Culture and Mass Media 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) A study of the popular culture distributed by mass media (newspapers, radio, film, television, magazines, and music videos) and how the media and popular culture reflect and shape our cultural beliefs. Extensive use of multi-media.</p>
<p>EMTA 200 EMT Specialist 5 Term Prerequisite: Basic EMT Semester Prerequisite: Basic EMT A course to provide the basic EMT with knowledge and skills necessary for licensure as an EMT Specialist. Emphasis is placed on IV therapy, advanced airway skills, and patient assessment skills. Successful completion requires passing written and practical exams and the supervised clinical component.</p>	<p>ENGL 250 Survey of American Literature 4 Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) Provides a perspective on the evolution of traditional American literature from the 18th through the 20th centuries, emphasizing selected works of the leading essayists, novelists, poets, and dramatists together with selected examples of works by women and ethnic minorities which have contributed profound changes to American thought.</p>

ENGL 260 African American Literature	4	ENRI 102 Individualized English II	2
Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) This course is an introduction to the African American literary tradition, which explores how black men and women have portrayed American life and their experiences in autobiography, essay, fiction, poetry, and drama. Students will read and discuss slave narratives, literature from the Harlem Renaissance, and several modern texts.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individualized instruction in one of several language areas: writing; editing; vocabulary development, including pronunciation; and reading. Editing instruction may include spelling, standard English grammar, organizational strategies, or punctuation. Students and instructors select instructional materials and design an individualized study program. (May repeat for credit three times.)	
ENGL 265 Japanese Literature	4	ENRI 103 Individualized English III	3
Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) Arranged chronologically, this course draws heavily on many different genres of Japanese literature. The basis for selection of works to be read rests on the insight that each work gives to the Japanese society which produced it, and upon its universal characteristics.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individualized instruction in one or several language areas: writing; editing; vocabulary development, including pronunciation; and reading. Editing instruction may include spelling, standard English grammar, organizational strategies, or punctuation. Students and instructors select instructional materials and design an individualized study program. (May repeat for credit three times.)	
ENGL 266 British Literature I	4	ENRI 109 Academic Preparation I	6
Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) British Literature I surveys the poetry, prose, and drama of the major British writers from Chaucer (14th Century) to Milton (17th Century). The works are selected to reflect the attitude and values of British culture and the perception of the world from a British point of view.		Term Prerequisite: RDG/WRI Placement Test Semester Prerequisite: READ/WRIT Placement Test Offers a unified and collaborative approach to learning basic language skills. Emphasizes reading, writing, speaking, listening, and thinking skills. Students assist one another in exploring topics of their choice from various academic disciplines. First of two academic preparation courses. Requires enrollment in ENRI 005.	
ENGL 270 Literature by Women	4	ENRI 110 Academic Preparation II: College Assignments	6
Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) A study of selected works by English and North American women writers. Designed to increase understanding of the themes, images, issues, and modes of expression of women writers.		Term Prerequisite: ENR 101/RDG/WRI Placement Test Semester Prerequisite: ENRI 109/READ/WRIT Placement Test Designed to introduce students to college assignments and resources in various academic disciplines. Promotes awareness of learning skills and strategies. Encourages the positive attitude and self-directed learning behavior characteristic of successful college students. Includes reading, writing, speaking, and listening activities in a workshop environment. Requires enrollment in ENRI 005.	
ENGL 290 Shakespeare	4	ENRI 152 Orientation Workshop: College Reading Survival Skills	1
Term Prerequisite: WRI 121 (ENG 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL 122 Recommended) Introductory course in the dramatic works of William Shakespeare. Students will read nine to twelve plays representative of the author's comedies, histories, and tragedies.		Term Prerequisite: None Semester Prerequisite: None Designed for beginning college students, whether recent high school graduates or returning adults. Develops college reading survival skills. Concentrates on reading speed and flexibility, study techniques, concentration and memory, note-taking, test-taking, and vocabulary expansion.	
ENGL 295 Independent Study	1	ENRI 162 Orientation Workshop: College Writing Skills	1
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in English. Students will invest no less than 32 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.		Term Prerequisite: None Semester Prerequisite: None This course is designed for new and returning students, as well as others from the community. It helps students to develop their writing skills, including the study of writing for various disciplines, the writing process, and the basics of grammar, sentence style, and punctuation.	
ENGL 296 Independent Study	2	ESLA 106 English as a Second Language: Beginning	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in English. Students will invest no less than 32 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.		Term Prerequisite: Placement Test Semester Prerequisite: Placement Test For advanced beginning ESL students 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.	
ENRI 005 Academic Preparation Laboratory	0	ESLA 108 English as a Second Language: Intermediate	4
Term Prerequisite: None Semester Prerequisite: None Arranges the days and times when students will attend enrichment lab. Students must register for both an enrichment lab course, such as ENRI 109, and a section of ENRI 005.		Term Prerequisite: ESL 116/Placement Test Semester Prerequisite: ESLA 106/Placement Test For intermediate ESL students. Reinforces the instruction of ESLA 106 and introduces more advanced grammatical structures. Increased attention to reading and to writing.	
ENRI 098 Success Seminar	.5	ESLA 110 English as a Second Language: Advanced	4
Term Prerequisite: None Semester Prerequisite: None Mini-workshop intended to introduce and/or review reading-related techniques essential for academic survival and success. Sessions cover 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.		Term Prerequisite: ESL 118/Placement Test Semester Prerequisite: ESLA 108/Placement Test For advanced ESL students. Reinforces the instruction of ESLA 106 and 108 and emphasizes writing, reading, and oral communication for college-level work. Students write and revise essays, participate in a variety of speaking and listening activities, and practice college reading skills.	
ENRI 101 Individualized English I	1	ESLT 011 Grammar/Writing I	4
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individualized instruction in one of several language areas: writing; editing; vocabulary development, including pronunciation; and reading. Editing instruction may include spelling, standard English grammar, organizational strategies, or punctuation. Students and instructors select instructional materials and design an individualized study program. (May repeat for credit three times.)		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is one in a series for the Limited English Proficient students. Students are introduced to the basics of English grammar and writing, and practice simple sentences, commands, and requests related to vocational and technical training. Students practice filling out forms and writing short reports.	

<p>ESLT 012 Grammar/Writing II 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide the Limited English Proficient student with practice in the basics of English grammar and a variety of writing assignments. Students will practice a wide range of grammatical forms. Writing assignments will focus on everyday and vocational/technical work-related skills.</p>	<p>FIRE 101 Mich F.F.T.C. Basic Fire Training Level I A and B 6 Term Prerequisite: Departmental Approval Semester Prerequisite: See Program Coordinator Level I is basic training required for all firefighters in the State of Michigan. Training is certified by the Michigan Fire Fighters Training Council and includes the basics of fire suppression, apparatus operation, and life safety.</p>
<p>ESLT 013 Grammar/Writing III 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide the Limited English Proficient student with a review of basic English grammar and practice with complex grammatical structures. Students will apply their knowledge of English grammar in a variety of written assignments on work-related topics and vocational course work.</p>	<p>FIRE 102 Michigan F.F.T.C. Basic Fire Training Level II C and D 6 Term Prerequisite: FST 166, 176 Semester Prerequisite: FIRE 101 Level II is basic training required for all career fire fighters in the State of Michigan. Training is certified by the Michigan Fire Fighter's Training Council and includes advanced fire suppression, aerial operation, and life safety.</p>
<p>ESLT 014 Grammar/Writing IV 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide Limited English Proficient students with the opportunity to practice the writing and revising of technical reports. Assignments will include descriptions, summary of cause and effect relationships, comparison and contrast, instructions, and classification. Students will identify their grammatical problems and develop a study plan for correcting them.</p>	<p>FIRE 110 Fire Prevention and Law 4 Term Prerequisite: None Semester Prerequisite: None This course identifies applicable statutes of Michigan Law as they relate to the Fire Service. Covers selected portions of NFPA 101, the Life Safety Code, and appropriate portions of BOCA, and other building codes. Focuses on the importance of an aggressive fire prevention plan in communities.</p>
<p>ESLT 021 Speaking/Listening I 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to teach American English pronunciation and conversational patterns to students with limited English proficiency. Materials relate to everyday life, technical related work, and vocational courses. Students will practice interviewing and listening comprehension skills.</p>	<p>FIRE 115 Building Construction for the Fire Service 4 Term Prerequisite: None Semester Prerequisite: None This course involves the essentials of building design and construction for the fire service with emphasis on life safety, evacuation, fire extension, and collapse.</p>
<p>ESLT 022 Speaking/Listening II 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide intensive practice in pronunciation and conversational English, as used in everyday life, the technical work place, and vocational courses. Lessons are designed to reinforce English grammatical structures, increase students' intelligibility and listening comprehension, and develop fluency in spoken English.</p>	<p>FIRE 120 Chemistry of Hazardous Materials 4 Term Prerequisite: None Semester Prerequisite: None A college level chemistry course focusing on hazardous materials encountered by firefighters. Contains specific elements of NFPA 741, 742 and OSHA CFR 1041.120. Topics include atomic and molecular theory, bonding property of elements, oxidation and reduction reactions, kinetic-molecular theory, solutions and electrochemistry. Includes Michigan Haz-Mat First Responder Certification.</p>
<p>ESLT 023 Speaking/Listening III 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to give Limited English Proficient students intensive practice in conversation skills and listening comprehension. Students will review American English pronunciation, stress, and intonation patterns, and practice a variety of oral communication skills, including interviewing, rehearsed oral presentations, and extemporaneous speech. Topics are vocationally related.</p>	<p>FIRE 125 Fire Protection Systems and Equipment 4 Term Prerequisite: None Semester Prerequisite: None Identifies fixed systems typically encountered by firefighters responding to industrial complexes or specialized environments. Emphasizes selected portions of detection and alarm (NFPA 72-85) sprinklers and standpipes (NFPA 13 and 1964), and special systems and design.</p>
<p>ESLT 024 Speaking/Listening IV 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide advanced Limited English Proficient students with practice in spontaneous and formal conversation skills. Students will practice listening skills, interviewing, problem-solving, and oral presentations. Topics will be vocationally related.</p>	<p>FIRE 130 Hydraulics and Pump Operations 4 Term Prerequisite: ATM 151 Semester Prerequisite: TECH 100 Describes the fundamentals of hydraulics, including water supply problems, standards and pump requirements, and practical application of knowledge to fire-fighting problems. Includes selected portions of NFPA 1901 and 1002.</p>
<p>ESLT 031 Reading I 4 Term Prerequisite: Limited English Proficiency Semester Prerequisite: Limited English Proficiency This course is designed to teach basic reading skills to students with limited English proficiency. Classroom exercises focus on vocational readings, vocabulary development, and the ability to discuss and report on the assigned readings. Readings concern everyday life and technical work related jobs.</p>	<p>FIRE 150 Fire Command and Operations 4 Term Prerequisite: None Semester Prerequisite: None This course centers on the initial fireground attack from a company officer's perspective. Deals separately with Engine and Truck Company Operations including initial assignments, use of resources, rescue, streams, and salvage. Covers selected portions of NFPA 1002, 1410, 1904 and 1961. Covers the National Fire Academy Incident Command System.</p>
<p>ESLT 032 Reading II 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to help Limited English Proficient students develop their general reading skills and increase their vocabulary level. Students will learn to identify main ideas, understand English idioms, and increase their reading speed while maintaining comprehension. Materials relate to vocational courses, everyday life and technical topics.</p>	<p>FIRE 210 Fire Investigation 4 Term Prerequisite: Fireman/Sworn Police Officer Semester Prerequisite: FIRE 101/Sworn Police Officer This course investigates fire behavior, importance of determining cause and origin, accidental, incendiary or arson type fires. Describes methods of recognizing and identifying motivation for arson and covers applicable laws and court procedures.</p>
<p>ESLT 033 Reading III 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to give Limited English Proficient students practice in reading scientific and technical texts. Assignments will focus on the development of technical vocabulary, identification of main ideas and important details, and summarizing information from textbooks.</p>	<p>FIRE 220 Hazardous Materials in the Fire Service 4 Term Prerequisite: TEC 202 Semester Prerequisite: FIRE 120 Explores the concepts and methods of detection, control, and mitigation of hazardous materials incidents. Contains specific elements of NFPA 741, 742, and OSHA CFR 1041.120. Includes Michigan Haz-Mat Operations Level Certification.</p>
<p>ESLT 033 Reading III 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to give Limited English Proficient students practice in reading scientific and technical texts. Assignments will focus on the development of technical vocabulary, identification of main ideas and important details, and summarizing information from textbooks.</p>	<p>FIRE 250 Fire Administration 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Fire Command This course provides the student with a better understanding of motivation and the proper reaction from management. Covers labor relations and collective bargaining, fiscal management, and political interaction. Presents modern approaches to the challenges which face today's fire executives.</p>

<p>FREN 101 Elementary French I 4 Term Prerequisite: None Semester Prerequisite: None Introductory course open to students with little or no knowledge of French. Students are introduced to basic patterns and structures of French, enabling them to develop listening, speaking, reading, and writing skills. Emphasis is placed on contemporary vocabulary, essentials of grammar and pronunciation.</p>	<p>GEOG 295 One Credit Independent Study in Geography 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving reading and research in geography. The project, chosen by the student, must be approved in advance by the Department Chair and be supervised by a faculty member. It must also meet specific academic goals.</p>
<p>FREN 102 Elementary French II 4 Term Prerequisite: FRN 102/Equivalent/3.0 Minimum in FRN 101 Semester Prerequisite: FREN 101/Equivalent Second course of a two-semester sequence. Introduction to more complex structures and patterns, and more active use of spoken and written French.</p>	<p>GEOG 296 Two Credit Independent Study in Geography 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving reading and research in geography. The project, chosen by the student, must be approved in advance by the Department Chair and be supervised by a faculty member. It must also meet specific academic goals.</p>
<p>FREN 115 Seminar: Conversational French I 3 Term Prerequisite: None Semester Prerequisite: None Students learn how to communicate orally in everyday life situations and in travel abroad. Emphasis is on the development of ability to communicate in French. French culture is explored.</p>	<p>GEOG 297 Three Credit Independent Study in Geography 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving reading and research in geography. The project, chosen by the student, must be approved in advance by the Department Chair and be supervised by a faculty member. It must also meet specific academic goals.</p>
<p>FREN 116 Seminar: Conversational French II 3 Term Prerequisite: FRN 185/Equivalent Semester Prerequisite: FREN 115/Equivalent Continuation of FREN 115. 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.</p>	<p>GEOL 110 Seminar: Geology of Western National Parks 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Science Inventory Passed This seminar course is a survey of the geological features, surface processes and history of the western national parks and monuments. The geology of these sites is presented within the context of geologically defined regions and their sequence of origin. Emphasis is placed on video and slide presentations accompanying lecture.</p>
<p>FREN 201 Intermediate French I 4 Term Prerequisite: FRN 103/Equivalent/3.0 Minimum in FRN 102 Semester Prerequisite: FREN 102/Equivalent This course provides grammar review, vocabulary building, group discussions, composition writing, and lectures on cultural and literary topics. Homework involves reading and writing assignments, as well as oral presentations.</p>	<p>GEOL 112 Seminar: Dinosaurs 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Science Inventory Passed This seminar course presents timely inquiries into all aspects of dinosaurs, their discoveries and discoverers, and the Mesozoic world. Emphasis is given to theoretical controversies concerning their ecology, origin and evolution, physiology, behavior, and extinction.</p>
<p>FREN 202 Intermediate French II 4 Term Prerequisite: FRN 202/Equivalent/3.0 Minimum in FRN 201 Semester Prerequisite: FREN 201/Equivalent Continued review of more complex grammar topics. Reading of cultural and literary texts for a better understanding of the francophone world. Students will improve fluency through writing and discussions in the target language.</p>	<p>GEOL 114 Seminar: Global Warming and Ice Ages 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Science Inventory Passed Timely investigations of causes and consequences of global warming, theories of Ice Ages, past climates and the geological evidence thereof, and coevolution of physical and biological spheres. Laboratory includes standard geological and computer-based reconstructions of past climates and physical consequences of global warming. Glacial geology field trip.</p>
<p>GEOG 099 Seminar: Elder College Geography .5 Term Prerequisite: None Semester Prerequisite: None The course focuses upon selected aspects of the geography and current events of various locations in the world. Specific topics vary with each seminar.</p>	<p>GEOL 116 Seminar: The Meaning of Evolution 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Science Inventory Passed An inquiry into evolutionary theory and its development, philosophy of science, and evolutionary mechanisms in discussion format. The theory's importance to human, animal and environmental ethics is included. Laboratory includes exercises, essays on conceptual topics, a formal class debate, and a required field trip.</p>
<p>GEOG 120 Introduction to Geography 3 Term Prerequisite: None Semester Prerequisite: None An introductory course designed to provide contemporary geographic ideas and techniques to study the interaction between people and their physical environment.</p>	<p>GEOL 200 Michigan Geology 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Science Inventory Passed Evidence from the rock and fossil record is used to reconstruct the sequence of events and changing environmental conditions of Michigan's past. Michigan's geologic resources (e.g., petroleum, natural gas, coal, iron, copper, salt, gypsum, surface groundwater, sand/gravel) and environmental issues (e.g., waste disposal, water pollution) are investigated.</p>
<p>GEOG 121 Physical Geography 3 Term Prerequisite: None Semester Prerequisite: None Emphasizes landforms, natural vegetation, weather and climatic elements, and soils. 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.</p>	<p>GEOL 210 Geology Field Studies 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Opportunities to gain geology field experience through application of skills learned in the classroom. One-day and extended overnight excursions are offered. (Destination examples: Michigan gypsum mines, Michigan Upper Peninsula iron and copper country, Cincinnati fossil beds, Grand Ledge quarries, Western U.S. regional geology, etc.)</p>
<p>GEOG 200 World Regional Geography 4 Term Prerequisite: None Semester Prerequisite: None This course describes and analyzes human relationships with the natural and cultural environment and examines the physical and cultural aspects of the major regions of the world. International interdependency is examined to promote global awareness.</p>	<p>GEOL 212 Geology Field Studies 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Opportunities to gain geology field experience through application of skills learned in the classroom. One-day and extended overnight excursions are offered. (Destination examples: Michigan gypsum mines, Michigan Upper Peninsula iron and copper country, Cincinnati fossil beds, Grand Ledge quarries, Western U.S. regional geology, etc.)</p>
<p>GEOG 202 Geography of North America 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	
<p>GEOG 203 Economic Geography 3 Term Prerequisite: None Semester Prerequisite: None The study of the distribution of economic activities throughout the world. Emphasizes agriculture, resources, population, industry, urbanization, and trade.</p>	

<p>GEOL 214 Geology Field Studies 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Opportunities to gain geology field experience through application of skills learned in the classroom. One-day and extended overnight excursions are offered. (Destination examples: Michigan gypsum mines, Michigan Upper Peninsula iron and copper country, Cincinnati fossil beds, Grand Ledge quarries, Western U.S. regional geology, etc.)</p>	<p>GERO 114 Estate Planning for Retirement .25 Term Prerequisite: None Semester Prerequisite: None This course provides practical information on estate planning and the alternatives available for a variety of family situations as people approach retirement. It 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.</p>
<p>GEOL 216 Michigan Field Geology 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Field investigations explore the geologic agents and human-related activities that have shaped the surface of the central southern peninsula of Michigan. Examples: glacial landforms, stream valleys, shorelines, dunes, quarries, road-cuts. Each class period will consist of a visit to an area of geologic interest.</p>	<p>GERO 115 Memory Improvement Techniques for Older Adults .25 Term Prerequisite: None Semester Prerequisite: None This course is designed for older adults who seek to improve their ability to remember. It examines myths and facts about memory and aging, reviews factors which influence memory, and introduces specific techniques for improving recall.</p>
<p>GEOL 221 Earth Materials and Processes: Physical Geology 4 Term Prerequisite: Science Inventory Passed, MTH 012 Semester Prerequisite: Science Inventory Passed, MATH 062 Investigates the dynamic physical earth using a cause-effect theme. Emphasizes relationships of geologic cycles (tectonic/hydrologic) to modifications of earth's crust (e.g., volcanism, mountain building, rivers, glaciers) with introduction to environmental topics and earth resources. Laboratory includes mineral and rock identification, topographic and geologic map interpretation, plate tectonics exercises.</p>	<p>GERO 119 The Aging Process: Facts, Myths, Changes, and Resources .25 Term Prerequisite: None Semester Prerequisite: None This course includes an overview of facts and myths associated with older adults, including normal physical changes and their implications; social/emotional aspects of aging, including communication issues; and federal, state, and local resources for the older adult.</p>
<p>GEOL 222 Earth and Life Through Time: Historical Geology 4 Term Prerequisite: Science Inventory Passed, MTH 012 Semester Prerequisite: Science Inventory Passed, MATH 062 Plate tectonics is used to integrate crustal and organic evolution in the dynamic global system. Includes methods of geologic inquiry and critical evaluation of evidence. Laboratory stresses interpretation of the rock and fossil records, reconstruction of past ecosystems, geologic maps, and plate tectonics' influence on the environment.</p>	<p>GERO 120 Identifying Community Programs for Older Adults .25 Term Prerequisite: None Semester Prerequisite: None This course presents an overview of federal, state, and local health and human services programs for older adults, including information and referral, legal services, mental health services, geriatric assessment, and nursing home advocacy.</p>
<p>GEOL 230 Environmental Geology 3 Term Prerequisite: GE 221/Equivalent Semester Prerequisite: GEOL 221/Equivalent Applies concepts of physical geology to human interaction with the environment. Geologic resources (e.g., minerals, energy, water) and hazards (e.g., earthquakes, landslides, flooding) are explored. Laboratory includes resource mineral identification, geologic map interpretation, evaluation of land use alternatives, and problem-solving activities related to environmental issues.</p>	<p>GERO 121 Senior Group Program Planning .25 Term Prerequisite: None Semester Prerequisite: None This course provides an overview for 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.</p>
<p>GERO 100 Introduction to Human Aging 3 Term Prerequisite: None Semester Prerequisite: None This course provides 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.</p>	<p>GERO 125 Volunteers: Recruiting, Retaining, Rewarding .25 Term Prerequisite: None Semester Prerequisite: None This course describes the basic processes of volunteer management: techniques for assessing current and future volunteer utilization; and innovative methods for recruitment, retention and recognition of volunteers. It provides an applied focus to assist supervisors and managers as they recruit and work with volunteers.</p>
<p>GERO 101 Programs and Services for the Aging 3 Term Prerequisite: GER 100 Recommended Semester Prerequisite: GERO 100 Recommended This course provides a description of the organization and functions of the aging services network, 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.</p>	<p>GERO 126 Volunteers: Interviewing and Placement .25 Term Prerequisite: None Semester Prerequisite: None This course focuses on volunteer management processes of interviewing and placement, including conducting an effective interview, legal restrictions to the interview process, appropriate placement of volunteers, and termination or reassignment.</p>
<p>GERO 110 Self-Renewal in Later Years .5 Term Prerequisite: None Semester Prerequisite: None In this course, 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. Content is designed for persons in middle and later years.</p>	<p>GERO 128 Functional Assessment of the Older Adult .5 Term Prerequisite: None Semester Prerequisite: None This course provides an overview of the multidimensional assessment of health status that is necessary to determine interrelationships between the physical and psychosocial well-being of the older adult.</p>
<p>GERO 112 Planning for Retirement 1.5 Term Prerequisite: None Semester Prerequisite: None This course covers financial matters, legal affairs, physical and mental health, being alone, housing choices, employment and volunteer opportunities, community resources, and meaningful use of time. It includes discussion of planning and decision-making skills and development of a personalized plan for retirement.</p>	<p>GERO 129 Maintaining Client/Volunteer Records .25 Term Prerequisite: None Semester Prerequisite: None This course presents an overview of guidelines that can be used in maintaining client/volunteer records, including decisions regarding appropriate information to record, confidentiality, clients' rights of access, and applications to human services settings. It addresses needs of persons working in agencies in which they need to devise their own record-keeping forms.</p>
<p>GERO 113 Investments and Financial Management in Retirement .25 Term Prerequisite: None Semester Prerequisite: None This course provides 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.</p>	<p>GERO 131 Planning for Older Adults with Developmental Disabilities .5 Term Prerequisite: None Semester Prerequisite: None This course presents an overview of the older adult with developmental disabilities including characteristics, demographics, public policy issues, and functional assessment. Michigan program initiatives are discussed; case studies are presented.</p>
	<p>GERO 132 Activities: Older Adults with Developmental Disabilities .5 Term Prerequisite: None Semester Prerequisite: None This course provides an overview of planning principles and processes effective in designing meaningful activities for older adults with developmental disabilities. Practice opportunities are included.</p>

<p>GERO 141 Gerontological Practices: Case Assessment and Intervention .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course presents an overview of the case management pathway in providing direct services to individual older adult clients, from intake through service termination. It includes a focus on issues that have added impact on the older person and techniques that are effective in case management for that population.</p>	<p>GERO 170 Depression: Recognition and Treatment .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides 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.</p>
<p>GERO 145 Working with Older Adults: Nutrition .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course focuses upon factors affecting older adults' nutritional status, including normal physical/physiological/psychosocial changes that occur with aging, caloric intake, and the effects of activity/exercise, and medications. Suggestions are for communicating dietary information to older adult clients and assisting those persons in identifying alternative food sources.</p>	<p>GERO 171 Techniques for Caring for Persons with Dementia .75</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides 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.</p>
<p>GERO 150 Information Sources for Gerontology .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course 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, government agencies, newsletters in aging, search terms, and designing an effective database search.</p>	<p>GERO 173 Activities: Older Adults with Alzheimer's/Related Disorders .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides an overview of planning principles and processes effective in designing meaningful activities for older adults with Alzheimer's disease and related disorders. Practice opportunities are included.</p>
<p>GERO 151 Accessing the 1990 Census for Older Adult Program/Services .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides an overview of 1990 census data, with emphasis on trends and projections that will affect programs and services for older adults.</p>	<p>GERO 174 Working With Older Adults: Minority Aging .75</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course focuses on the special needs of Asian/Pacific American, African American, Native American, and Hispanic American elderly, including demographic aspects of minority aging, special conditions of physical health, psychological aspects, social problems, and federal policies.</p>
<p>GERO 158 Long Term Care Options .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course 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.</p>	<p>GERO 176 Hearing Loss and Aging: Maintaining Communication .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course focuses on causes, effects, and practical methods of compensating for hearing loss in older adults, including the makeup and function of the ear, the effects of normal/abnormal changes on hearing ability, and implications for communicating with the hearing-impaired older adult.</p>
<p>GERO 161 Issues of Aging: Sexuality .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course presents an overview of issues relating to sexuality and older persons: societal attitudes, sexual behavior patterns, physiological changes, psychological responses, and special situations, such as institutional settings.</p>	<p>GERO 177 Vision Adaptation in Middle/Later Years .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides an overview of vision changes in middle/late 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.</p>
<p>GERO 164 Medication and Alcohol Use Among Older Adults .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course examines medication and alcohol use among older adults including prescription and non-prescription medicines, side effects, drug interactions, and strategies for using medicines wisely. Students learn to identify a substance-abuse situation and how to make appropriate referrals.</p>	<p>GERO 178 Adapting Your Surroundings: Easier Living in Later Life .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course presents an 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. It includes special emphasis on room and cupboard arrangement, hearing and visual aids, building access through entrance/exit, and available community resources.</p>
<p>GERO 165 Dementia: Concepts and Causes .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course is an introduction to current concepts of dementia (Alzheimer's disease and related disorders) in older persons. It provides an overview of social, physical, psychological, and environmental factors resulting in dementia. Relationships to depression, techniques for communicating with older persons with dementia, family dynamics, and community resources are discussed.</p>	<p>GERO 179 Healthcare Insurance Programs and Supplemental Policies: Aged .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides overview of Medicare and Medicaid programs, including recent and proposed changes at the federal and state levels. Information on supplemental health and long-term care insurance coverage is included.</p>
<p>GERO 166 Housing Options and Issues for Older Adults .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course presents an overview of housing issues and options for the older adult, including financial and legal implications.</p>	<p>GERO 184 Ethical Issues in Working with Older Adults .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course considers major ethical issues faced by caregivers of older adults, including determination of incompetency, use of advance directives and proxy decision makers, withdrawal of care from the debilitated and demented, claim of older adults to life-extending resources, responsibility of families to care for elderly members, and assisted suicide.</p>
<p>GERO 167 Nursing Home Issues: Choices, Realities, Alternatives .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides an overview of current nursing home issues, including 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.</p>	<p>GERO 193 Elder Abuse .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course focuses upon recognition of causes and categories of elder abuse, with available resources for intervention.</p>
<p>GERO 169 Legal Rights of Older Adults: Disability and Consent .5</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course focuses upon issues such as guardianship, conservatorship, power of attorney, the living will, joint tenancy, nursing home residency, and civil commitment, including actual and perceived choices a person has as aging and illness occur.</p>	<p>GERO 194 Psychological Aspects of Pain Management in the Elderly .25</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course examines the relationship between pain and quality of life. It introduces psychological techniques for pain management and the hospice concept of a "therapeutic window" in relation to pain management in long-term care.</p>

<p>GERO 197 Grief and Loss in Later Life .25 Term Prerequisite: None Semester Prerequisite: None This course provides an overview of grief and loss and its impact on the later lives of older persons. Topics include attitudes toward death and dying; stages and symptoms of grief, abnormal grief reactions, multiple losses of older persons, and community resources.</p>	<p>GERO 198 Advanced Grief/Loss Counseling: Strategies for Practitioners .25 Term Prerequisite: None Semester Prerequisite: None This course provides an overview of specific counseling techniques used by practitioners in working with older adults, including 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.</p>	<p>GERO 199 Working with Older Adults: Dying and Death .5 Term Prerequisite: None Semester Prerequisite: None This course focuses on issues and skills critical to caregivers working with terminally ill older adults, including examining one's attitudes and feelings toward dying, death, and older adults; understanding the behavior of the dying person; techniques for communicating with the terminally ill; working through personal grief; and exploring alternatives to institutionalized death.</p>	<p>GERO 202 Mental Health and Aging 2 Term Prerequisite: GER 100 Semester Prerequisite: GERO 100 This course presents skills and adaptations for maintaining good mental health in late life. It explores family and social factors; personality; stress and loss; assessment, treatment, and care of older persons with mental disorders; and response of the mental health system and aging services network. It includes communication skills for interacting with older adults.</p>	<p>GERO 204 Aging and Health 2 Term Prerequisite: GER 100 Semester Prerequisite: GERO 100 This course examines aging and health from an applied perspective for the human services provider, including implications of normal/pathological changes in body systems and strategies used in working with health systems on behalf of older adults. Emphasis is on the assessment and maintenance of function, and benefits of lifelong health promotion.</p>	<p>GERO 282 Gerontology Field Placement I 4 Term Prerequisite: Admission to Field Placement, Departmental Approval Semester Prerequisite: Admission to Field Placement, Departmental Approval This course combines classroom training with field placement (eight hours per week) at a community agency or institution serving older persons. Students apply learning about structure, funding, and organization of aging services; explore community resources; demonstrate appropriate work habits; assess their attitudes and career skills in gerontology, and relate current aging research to practice.</p>	<p>GERO 284 Gerontology Field Placement II 4 Term Prerequisite: GER 201, GER 202 Semester Prerequisite: GERO 282, 12 Program Credits, Departmental Approval This course provides advanced field placement experience at a community agency or institution serving older persons (eight hours per week), combined with classroom training in practice concepts related to service delivery to older persons. Students learn resources and systems, develop networking skills, mobilize resources on behalf of older individuals or groups, and demonstrate their suitability for a career in gerontology.</p>	<p>GRET 203 Introduction to Microstation 3 Term Prerequisite: LAT 200/LAT 282 Semester Prerequisite: LAND 282/Equivalent This computer course is an introduction to Microstation CAD. Applications are for Microstation 32, PC or the Informix-Sqld Base II plus database platforms. The course is designed for Intergraph Workstation PC lab use.</p>	<p>GRET 204 Microstation Graphic Environment 3 Term Prerequisite: LAT 203 Semester Prerequisite: GRET 203 This course explores the microstation graphic environment using the Intergraph Workstation. The analysis package, MGA, will be utilized as well. The development of a prototype Geographic Information System will be a highlight of this course.</p>	<p>GRET 205 Introduction to Geographic Information Systems 3 Term Prerequisite: None Semester Prerequisite: None This course describes the components of a basic GIS and how they are assembled. Requisition of data, maps and other information used to build a database will be highlighted. A basic pilot project will be demonstrated step-by-step through various applications in GIS.</p>	<p>GRET 208 Advanced Techniques in GIS 3 Term Prerequisite: LAT 204 Semester Prerequisite: GRET 204 This course expands upon the techniques, methods, and processes involved in developing a full GIS program. Different GIS software packages will be explored, as well as related databases and completed projects.</p>	<p>GRET 209 Applications in Geographic Information Systems 3 Term Prerequisite: LAT 205, LAT 208/Equivalent Semester Prerequisite: GRET 205, GRET 208/Equivalent This course specifically deals with all of the possible application areas for GIS, both present and future. Applications such as toxic materials, traffic flow, mining, forestry, natural resource, energy, and communication will be highlighted. A semester-long application project of your choice will be developed on the computer.</p>	<p>GRET 211 Workstation Basic 3 Term Prerequisite: None Semester Prerequisite: None 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 GIS and landscape planning purposes.</p>	<p>GRET 213 Advanced Microstation 3-D 3 Term Prerequisite: LAT 203 Semester Prerequisite: GRET 203 This course is a continuation of the basic microstation course and deals with advanced user commands, programming language and 3-D aspects of this computer-aided drafting and design package.</p>	<p>GRET 220 Hydrological Systems 3 Term Prerequisite: None Semester Prerequisite: None This course will cover the various aspects of water resources as they pertain to the geographic information system environments. Water systems, natural and man-made, will be emphasized. The evaluation, analysis, and environmental impacts of various water features as they pertain to environmental research and development will be highlighted.</p>	<p>GRET 221 Landforms and Soil Systems in GIS 3 Term Prerequisite: None Semester Prerequisite: None This course will discuss the important classifications of landform and soil systems. The relevance of these systems in the GIS environment will be highlighted. The importance of these systems in the information processing, land use, land planning, site design, and landscape form arenas will be emphasized.</p>	<p>GRET 223 Environmental Resource Management 3 Term Prerequisite: None Semester Prerequisite: None This course will cover the broad spectrum of environmental resources such as forestry, agriculture, mining, soils, vegetation, and their impact and management in current computer information systems. Resources in the land planning disciplines will be highlighted as to their function in the present environmental processes, both public and private.</p>	<p>GRET 240 Basic Map Orientation and Construction 3 Term Prerequisite: None Semester Prerequisite: None The basic principles, functions, and origins of maps will be discussed. The student will construct various types of maps. Computer-offered map planning and design along with how to read, print, and design maps will also be covered.</p>	<p>GRET 241 Air Photo Interpretation 3 Term Prerequisite: Departmental Approval Semester Prerequisite: GRET 240 This course will include the development of skills necessary for basic interpretation of aerial photography data, how it is collected, and the ability to analyze maps created from the data collected in this method. The current technology and GIS relationship will be highlighted.</p>	<p>GRET 243 ORACLE Beginning 3 Term Prerequisite: None Semester Prerequisite: None This course will explore the database software package ORACLE. The introduction to databases for the beginner followed by a step-by-step approach to ORACLE. This is a hands-on computer course.</p>	<p>GRET 244 Beginning UNIX: GIS Environment 3 Term Prerequisite: None Semester Prerequisite: None This is a beginning course which acts as an introduction to the UNIX operating system. UNIX System V, the AT & T offered release, will be the version covered in this course. UNIX as it relates to operating systems in the GIS environment will be highlighted. This is a hands-on computer exercise course.</p>
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GRET 245 MDL Programming: Beginning	3	GRMN 201 Intermediate German I	4
Term Prerequisite: LAT 213 Semester Prerequisite: GRET 213 This course will begin with an introduction to the Microstation Development Language (MDL). The student will learn to work with and implement a project using MDL. The structure and importance of using MDL on various projects will be highlighted.		Term Prerequisite: GRM 103/Equivalent/3.0 Minimum in GRM 102 Semester Prerequisite: GRMN 102/Equivalent First course of a two-semester sequence in intermediate German. Students receive intensive practice in the basic skills: speaking, listening comprehension, reading, and writing. Course includes a thorough review of German grammar, 20th century short-story readings, composition writing, and German culture. Class is taught mainly in German.	
GRET 246 MDL Programming: Advanced	3	GRMN 202 Intermediate German II	4
Term Prerequisite: Departmental Approval Semester Prerequisite: GRET 245 This course will expand upon the techniques used in the beginning course using the MDL programming language. A class project will explain possible uses for this language.		Term Prerequisite: GRM 202/Equivalent/3.0 Minimum in GRM 201 Semester Prerequisite: GRMN 201/Equivalent Second course of a two-semester sequence in intermediate German. Students receive advanced practice in the basic skills: speaking, listening comprehension, reading, and writing. Course includes a thorough review of advanced structures, short-story readings, a short novel, composition writing, and German culture. Class is taught mainly in German.	
GRET 248 Microstation Graphic Analyst	3	HFCE 150 Cardiac Education	.5
Term Prerequisite: LAT 204 Semester Prerequisite: GRET 204 Microstation Analyst (MGA) is an advanced software package dealing with GIS MGA, which generates topologically-structured files from design files for use in performing spatial analysis. It will also cover system query sets and answers to questions posed to topological files.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to information about the cardiac disease process, rehabilitation, and prevention techniques. The student will learn the role exercise, diet and stress plays in heart disease.	
GRET 295 GRET Independent Study	3	HFCE 151 Cardiac Rehabilitation Exercise	3
Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval The independent study is designed for students who wish to pursue a specialty area in GIS beyond that which is offered in our curriculum. Inquiry through research and design of landscapes is required.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This continuing course includes medically monitored exercise and education, which emphasizes reducing the risk factors known to contribute to heart disease. Methods and level of exercise are determined by the participant's physician and the program medical director. Monitored by professional staff.	
GRET 296 GRET Project Lab	4	HFWE 100 Health and Wellness Seminar	.5
Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This project lab is designed for students who wish to pursue a specialty area in GIS beyond that which is offered in our curriculum. Inquiry through research and design of landscapes is required.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to eight hours of various topics related to health awareness, wellness and/or prevention. This is presented in a seminar format.	
GRET 297 GRET Project Lab	2	HFWE 101 Health and Wellness Seminar	1
Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This project lab is designed for students who wish to pursue a specialty area in GIS beyond that which is offered in our curriculum. Inquiry through research and design is required.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to health and wellness issues. This information encompasses areas of awareness for changing attitudes/lifestyles, issues of prevention, techniques for management of health, and more. Presented in a seminar format.	
GRMN 101 Elementary German I	4	HFWE 131 Osteoporosis Prevention I	2
Term Prerequisite: None Semester Prerequisite: None First course of a two-semester sequence in elementary German. This course offers systematic practice in the four basic language skills: listening comprehension, speaking, reading, and writing. Communicative approach is combined with a solid grammar foundation, as well as familiarization with contemporary life and culture in Germany, Austria, and Switzerland.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to principles that can aid in the prevention of osteoporosis. The student will learn risk factors, nutritional information, and progressive strength and flexibility exercises related to osteoporosis prevention.	
GRMN 102 Elementary German II	4	HFWE 132 Osteoporosis Prevention II	1
Term Prerequisite: GRM 102/Equivalent/3.0 Minimum in GRM 101 Semester Prerequisite: GRMN 101/Equivalent Second course of a two-semester sequence in elementary German. This course offers more advanced practice in the four basic language skills: listening comprehension, speaking, reading, and writing. Communicative approach is combined with more complex structure as well as familiarization with contemporary life and culture in Germany, Austria, and Switzerland.		Term Prerequisite: HF 130, HF 131 Semester Prerequisite: HFWE 131 This course continues the focus on osteoporosis prevention. The student will continue progressive strength and flexibility exercises, current research, and nutrition information.	
GRMN 115 Seminar: Conversational German I	3	HFWE 145 Nutrition: Critical Issues	2
Term Prerequisite: None Semester Prerequisite: None The first course in a two-semester sequence for persons with little or no knowledge of German. Emphasizes listening and speaking skills. Students learn correct pronunciation, essential language structures, and a practical vocabulary applied in conversational exchanges. Aspects of German culture are introduced through multi-media presentations.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to nutrition and its role in promoting better health. The student will learn concepts and controversies in nutrition including vitamin supplements, natural foods, and other related topics.	
GRMN 116 Seminar: Conversational German II	3	HFWE 146 Choice for Change Weight Control Program	2
Term Prerequisite: GRM 185/Equivalent Semester Prerequisite: GRMN 115/Equivalent The second course in a two-semester sequence for persons with little or no knowledge of German. Emphasizes listening and speaking skills. Students learn correct pronunciation, essential language structures, and a practical vocabulary applied in conversational exchanges. Aspects of German culture are introduced through multi-media presentations.		Term Prerequisite: None Semester Prerequisite: None This course introduces the student to a weight management program that follows the American Dietetic guidelines. The student will learn the principles of nutritionally sound low-fat eating and the necessity of regular exercise for permanent weight loss.	
		HFWE 148 Staying on Track - Lifelong Weight Management	1
		Term Prerequisite: None Semester Prerequisite: None A continuation of the principles of Choice for Change Weight Control Program. The student will focus on the behavioral aspects of eating, better techniques for weight management, and changing behavior through awareness.	

HFWE 149-HIST 214

<p>HFWE 149 Cholesterol Management 5 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to a dietary program that can assist in lowering cholesterol levels. The student will learn ways to identify high cholesterol and saturated fat foods substituting them with a practical, nutritionally sound food plan.</p>	<p>HFWE 271 Massage Therapy - Intermediate 2 Term Prerequisite: HF 270 Semester Prerequisite: HFWE 270 Following a review of HFWE 270 the student is introduced to specialized massage techniques. The student will learn contraindicated techniques, business aspects, and exploration of Swedish acupressure.</p>
<p>HFWE 161 Self Awareness: Key to Wellness 2 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to aspects of self-awareness that can lead to greater vitality in all aspects of life. The student will learn ways in which he/she is influenced by family and cultural beliefs. Tools for changing behavior will be presented.</p>	<p>HFWE 272 Independent Study Massage Practicum 2 Term Prerequisite: HF 271 Semester Prerequisite: HFWE 271 This course introduces the student to an individualized study of massage techniques. The student will perfect basic body massage technique during a prescribed 100 hours.</p>
<p>HFWE 163 Healthy Lifestyles 2 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to lifestyle skills that lead to better health. The student will learn healthy nutritional habits, basic fitness concepts, positive stress reduction, and development of a personalized healthy lifestyle plan. Assessment skills and wellness concepts will be put into practice.</p>	<p>HFWE 273 Human Structural Dynamics for Massage Therapy 1 Term Prerequisite: None Semester Prerequisite: None This course will provide the massage therapy student with an in-depth view of the areas of anatomy which are particular to massage, primarily within the musculoskeletal and nervous systems.</p>
<p>HFWE 167 The Consumer and Health Issues 2 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to the study of health from a holistic perspective—seeing life as a total system. The student will learn awareness and tools for the "Triangle of Health" including the physical, mental, and spiritual. Alternatives in health care will be examined.</p>	<p>HFWE 275 Touch for Health I 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to the combination of ancient Oriental disciplines with the modern practice of applied kinesiology. The student will learn basic muscle techniques to improve postural balance, which can affect the mental, emotional and physical state.</p>
<p>HFWE 168 Un-smoking for Life 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to the habit, patterns, and health effects of smoking. The student will learn ways to permanently stop smoking and will gain information to make healthy lifestyle choices.</p>	<p>HFWE 276 Touch for Health II 1 Term Prerequisite: HF 280 Semester Prerequisite: HFWE 275 This course introduces the student to additional techniques and applications of applied kinesiology. The student will learn additional and reactive muscles and balancing techniques.</p>
<p>HFWE 169 Fit for Life Exercise 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the older student to the benefits and importance of a regular exercise program to combat the debilitating effects which inactivity has upon aging. The student will learn the benefits of cardiovascular exercise as well as flexibility, mobility, and range of motion.</p>	<p>HFWE 277 Polarity Therapy I 2 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to polarity therapy as a form of massage that balances the life energy of the physical body. Hands-on application of balancing techniques, basic theory and philosophy are taught to enhance relaxation and awareness of energy flow in the body.</p>
<p>HFWE 180 Positive Approaches to Stress 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to the role stress has in our lives: physically, emotionally, and mentally. The student will learn to identify his/her own stress styles and become aware of options with coping techniques.</p>	<p>HFWE 278 Polarity Therapy II 2 Term Prerequisite: HF 277 Semester Prerequisite: HFWE 277 This course will deepen the student's understanding of polarity therapy. Advanced hands-on techniques and sequences will be taught to balance the various energy patterns of the physical body. Lectures will be on the philosophical, energetic, and spiritual principles that sustain and vitalize the physical form.</p>
<p>HFWE 181 Stress Management 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to the nature of stress, how it affects us, and techniques to handle it. The student will learn to develop individualized strategies to deal with his/her stress and increase overall health.</p>	<p>HIST 150 African American History 4 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HFWE 182 Stress Management for Parents 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to effects of stress in child-rearing, for child-care providers and parents. The student will gain an understanding of how stress influences family relationships and learn techniques to apply to daily life.</p>	<p>HIST 210 Studies in American History 4 Term Prerequisite: HST 111/HST 112, Instructor Approval Semester Prerequisite: HIST 211/HIST 212, Instructor Approval Covers problems of research, writing, and philosophy and interpretation of history, involving a detailed examination of a particular area of American history.</p>
<p>HFWE 261 Aerobic Groups 2 Term Prerequisite: Fitness Evaluation, Departmental Approval Semester Prerequisite: Fitness Evaluation, Departmental Approval An opportunity for students to maintain and/or improve their fitness level through supervised aerobic exercise sessions and health education. Emphasis is on regular, safe exercise and healthy lifestyles.</p>	<p>HIST 211 U.S. History to 1877 4 Term Prerequisite: WRI 121 (ENGL/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A history of the United States from colonial beginnings through reconstruction.</p>
<p>HFWE 270 Massage Therapy - Beginning 2 Term Prerequisite: None Semester Prerequisite: None This course introduces the student to Swedish massage. The student will learn the history, theory, terminology, physiology and techniques of Swedish massage.</p>	<p>HIST 212 U.S. History: 1877 to the Present 4 Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENGL/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A history of the United States from the end of reconstruction to the present.</p>
	<p>HIST 214 African History and the Third World 4 Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENGL/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) Surveys African history with emphasis on precolonial and colonial Africa; nationalism and the struggle for independence; colonialism and economic development/underdevelopment; and cultures and traditions as factors in development. Covers some of these topics in three other countries of the third world, e.g., Brazil, Pakistan, and Indonesia.</p>

<p>HIST 220 Michigan History 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A survey of the political, economic, and social development of Michigan from precolonial times to the present.</p>	<p>HMFS 131 Food Production I 3 Term Prerequisite: None Semester Prerequisite: None 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 emphasizing food preparation, equipment operations, and managerial procedures.</p>
<p>HIST 230 British History 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) A survey of the political, economic, legal, constitutional, and social forces which shaped British history and society from earliest times to the present with special emphasis on the interactions of British and American institutions, values, and ideas.</p>	<p>HMFS 132 Food Production II 4 Term Prerequisite: HMF 131 Semester Prerequisite: HMFS 131 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 in addition to practical laboratory experience emphasizing food preparation.</p>
<p>HIST 260 Conflict and Revolution in Southern Africa 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) Study of historical-cultural origins and contexts of conflicts in Zimbabwe and Southern Africa with emphasis on socioeconomic causes of conflicts; cultural differences and conflicts; problems of development as sources of conflicts; inter-African conflicts; settler-African conflicts; international dimensions of conflicts; and solutions to conflicts.</p>	<p>HMFS 133 Food Production III 4 Term Prerequisite: HMF 132 Semester Prerequisite: HMFS 132 As a continuation of Food Production II, this course will provide continued practical laboratory experiences emphasizing food preparation, equipment operation, and managerial procedures.</p>
<p>HIST 263 Seminar: Soviet Union and CIS 3 Term Prerequisite: None Semester Prerequisite: None A survey of the Soviet Union and its people from the Russian Revolution of 1917 to the present. Also examined will be the multinational character of the USSR and the forces that have shaped Soviet history, society, and politics, including U.S.-Soviet relations.</p>	<p>HMFS 134 Nutrition 2 Term Prerequisite: None Semester Prerequisite: None Discusses basic nutrition, RDAs, energy balance, weight control, variety of diets and dietary guidelines, food processing, natural and organic foods, and fat and fast foods.</p>
<p>HIST 264 Seminar: A Television History of the Vietnam War 3 Term Prerequisite: None Semester Prerequisite: None Vietnam: A Television History will examine, through the medium of television, the war in Vietnam from August 1945 to the fall of Saigon in April 1975. It will also assess the long-term effects of the war on both U.S. domestic and foreign policy.</p>	<p>HMFS 135 Quantity Food Purchasing 4 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HIST 265 Seminar: The American Legal Tradition 3 Term Prerequisite: None Semester Prerequisite: None An historical survey of the origins, growth, and development of the American legal-constitutional process. The legal system is studied in the context of American culture by examining the leading cases, philosophies, scholars and institutions, and approaches to the study of law.</p>	<p>HMFS 137 Food Service Catering 4 Term Prerequisite: None Semester Prerequisite: None This course is designed to acquaint the student with social catering. The student will learn how to begin a catering business. He/she will learn how to buy, prepare menus, costing and pricing, equipment requirements, equipment maintenance, on/off premise functions, sanitation, and contractual agreements. The student will also be required to do a field project.</p>
<p>HIST 295 Independent Study 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in history. Students will invest no less than 32 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.</p>	<p>HMFS 142 Meat Cutting I 4 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HIST 296 Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in history. Students will invest no less than 32 hours for each credit earned. Enrollment is usually restricted to honors students who have grade-point averages of at least 3.0 in</p>	<p>HMFS 143 Meat Cutting II 4 Term Prerequisite: None Semester Prerequisite: None Identifying the cutting of 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.</p>
<p>HMFS 101 Introduction to Hospitality and Food Service Operations 3 Term Prerequisite: None Semester Prerequisite: None Introduction to the hotel-motel-food service industry explaining the individual roles of the various departments in food service and lodging operations.</p>	<p>HMFS 144 Meat Cutting III 4 Term Prerequisite: None Semester Prerequisite: None The student will cut wholesale cuts of meat, identify them, and process and prepare them for freezing. The student will learn the preparation of various types of sausage, as well as how to clean, fillet, and prepare fresh fish for cooking and storage.</p>
<p>HMFS 103 Training and Coaching Techniques 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HMFS 190 Internship and Seminar 3 Term Prerequisite: None Semester Prerequisite: None An internship available to Hotel-Restaurant students who have completed or are approaching 400 hours of work experience in the hospitality industry. A term project is required.</p>
<p>HMFS 105 Hotel and Restaurant Human Resource Management 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HMFS 191 Independent Study 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Explore a topic or problem of interest through readings, research, etc.; at least 16 hours work per credit.</p>

HMFS 192-HMFS 251

<p>HMFS 192 Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Explore a topic or problem of interest through readings, research, etc.; at least 16 hours per credit.</p>	<p>HMFS 213 Energy Management and Control 3 Term Prerequisite: None Semester Prerequisite: None Although some course material is geared toward types of energy sources and technical terms, it is presented as a management-oriented class.</p>
<p>HMFS 193 Independent Study 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Explore a topic or problem of interest through readings, research, etc.; at least 16 hours work per credit.</p>	<p>HMFS 214 Supervisory Housekeeping 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 194 Independent Study 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Explore a topic or problem of interest through readings, research, etc.; at least 16 hours of work per credit.</p>	<p>HMFS 215 Hotel-Restaurant Marketing 3 Term Prerequisite: None Semester Prerequisite: None As the hospitality industry competition becomes keener, today's guests come to expect a greater value and specific services. The hospitality industry is 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.</p>
<p>HMFS 200 HMFS Management Externship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Prerequisite: Second-year students and Departmental 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</p>	<p>HMFS 216 Maintenance and Engineering 3 Term Prerequisite: None Semester Prerequisite: None To provide essential technical information in electronics, air conditioning, plumbing, heating, electricity, and acoustics; to establish preventative maintenance routine; to make necessary decisions.</p>
<p>HMFS 201 Hotel-Restaurant Merchandising 3 Term Prerequisite: None Semester Prerequisite: None 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 the hospitality operation. Emphasis is on producing business at a profit.</p>	<p>HMFS 223 Club Management and Service 3 Term Prerequisite: None Semester Prerequisite: None This course is an application of decision-making techniques utilizing concepts of finance, marketing, labor relations, management, and law in management of</p>
<p>HMFS 203 Hotel-Restaurant Law 3 Term Prerequisite: None Semester Prerequisite: None To create an awareness of the responsibilities and rights which the law imposes upon and grants to the innkeeper; recognition of potential legal problems so as to minimize legal action against the property.</p>	<p>HMFS 229 Convention Management and Service 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 204 Human Relations/Supervisory Development 3 Term Prerequisite: None Semester Prerequisite: None A course covering the role of management in the hospitality industry; specific emphasis on the supervisor's role as a leader, recruiter, trainer, and personnel manager.</p>	<p>HMFS 230 Math for Food Service Management 3 Term Prerequisite: None Semester Prerequisite: None A course designed to reinforce the student's 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.</p>
<p>HMFS 205 Hotel-Restaurant Management 3 Term Prerequisite: None Semester Prerequisite: None Subjects and problems of hospitality management; general concepts, personnel, guests, and technical problems of operations. For management in the hospitality industry or second-year HMFS student.</p>	<p>HMFS 231 Resort Management 3 Term Prerequisite: None Semester Prerequisite: None This course offers various approaches to the operation of resort properties. Details are presented in planning, development, financial investment management, and marketing. 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.</p>
<p>HMFS 206 Front Office Procedures 3 Term Prerequisite: None Semester Prerequisite: None Organization, control, and operation of the front office in the reservation and sale of rooms, and service. Keeping of accurate accounts and presenting bills and receipts of payment.</p>	<p>HMFS 232 Food and Labor Cost Control 2 Term Prerequisite: None Semester Prerequisite: None This course covers the essential principles and procedures to control food, beverage, and labor cost. Sales, income, and resources within the food service industry are also analyzed.</p>
<p>HMFS 207 Financial Control and Management I 3 Term Prerequisite: None Semester Prerequisite: None A systematic, integrated study of hotel-motel and food institutional activities. Principles, problems, and practices related to financial management will be presented. Financial statements, front office procedures, and the interpretation of accounts and statements unique to the hospitality industry will be included.</p>	<p>HMFS 233 Food Service Sanitation 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 208 Financial Control and Management II 3 Term Prerequisite: HMF 207 Semester Prerequisite: HMFS 207 Expands the student's 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.</p>	<p>HMFS 251 Wine Appreciation 2 Term Prerequisite: None Semester Prerequisite: None The student will be familiarized with the five basic types of wine; 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.</p>
<p>HMFS 212 Hotel/Restaurant Liability and Loss Prevention 2 Term Prerequisite: None Semester Prerequisite: None This course includes organization for a security program, protection of the physical facilities, guest protection, emergencies, and internal and departmental security measures.</p>	

<p>HMFS 252 Wines of America 2 Term Prerequisite: None Semester Prerequisite: None A survey of 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 tasting, and field trips are used to acquaint the student with the wine industry in America.</p>	<p>HMFS 272 Canning and Preserving 2 Term Prerequisite: None Semester Prerequisite: None This course includes the basics in water bath methods and steam kettle canning, smoking meats, dehydrating fruits and vegetables and jelly making. Student preparation.</p>
<p>HMFS 253 Wines of France 2 Term Prerequisite: HMF 251/HMF 252 Semester Prerequisite: HMFS 251/HMFS 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.</p>	<p>HMFS 273 Gourmet Cajun Cookery 2 Term Prerequisite: None Semester Prerequisite: None Identification of various regional influences and cuisines, 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.</p>
<p>HMFS 254 Mixology 4 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HMFS 274 Lean Gourmet Cookery 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 260 Gourmet Basic Cookery 2 Term Prerequisite: None Semester Prerequisite: None The 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.</p>	<p>HMFS 275 Bakery Products 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 261 Gourmet Italian Cookery 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HMFS 280 Food Specialties I 3 Term Prerequisite: None Semester Prerequisite: None 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 Manager is the showcase for the artistic presentation of foods. Student preparation.</p>
<p>HMFS 262 Gourmet Foreign Cookery 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HMFS 281 Food Specialties II 3 Term Prerequisite: None Semester Prerequisite: None This course will help the student develop the necessary skills in the preparation of soups and sauces from scratch, as well as in the utilization of convenience food items such as food bases and commercial mixes. The student will learn through hands-on preparation of these items. Student preparation.</p>
<p>HMFS 263 Gourmet American Cookery 2 Term Prerequisite: None Semester Prerequisite: None 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 gourmet meals. Special attention will be provided for budgeted low-cost preparation of restaurant gourmet entrees. Student preparation.</p>	<p>HMFS 282 Food Specialties III 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>HMFS 264 Gourmet Barbecue Cookery 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>HONR 151 Honors Colloquy I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An interdisciplinary forum for students and faculty of the Arts and Sciences Honors Program. Consists of presentations by recognized experts in such fields as science, humanities, mathematics and computer science, communication, education, and the social sciences, followed by discussion and interchange of ideas. Requires followup written reports.</p>
<p>HMFS 266 Gourmet Chinese Cookery 2 Term Prerequisite: None Semester Prerequisite: None Chinese cooking is noted for its diversity of taste, texture and aroma. Chinese dishes to be prepared include: sweet and sour pork, chicken almond ding, and egg rolls, which will accentuate these characteristics through the use of sauteing and "red" cooking techniques. Student preparation.</p>	<p>HONR 152 Honors Colloquy II 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An interdisciplinary forum for students and faculty of the Arts and Sciences Honors Program. Consists of presentations by recognized experts in such fields as science, humanities, mathematics and computer science, communication, education, and the social sciences. Requires research writing using methodologies of the Arts and Sciences disciplines.</p>
<p>HMFS 269 Gourmet Mexican Cookery 2 Term Prerequisite: None Semester Prerequisite: None Introduction to basic and exotic Mexican and Spanish Cookery, including proper pronunciation of Mexican dishes and corresponding symbols. Student preparation.</p>	<p>HORT 102 Introduction to Ornamental Horticulture 2 Term Prerequisite: None Semester Prerequisite: None An introductory course involving botanical and horticultural principles and practices. Basic plant structures and their functions as well as soil and plant nutrition are discussed. Job opportunities and the role of horticulture will also be covered. Field trips and laboratory experiments will highlight the course.</p>
<p>HMFS 270 Microwave Cookery 2 Term Prerequisite: None Semester Prerequisite: None A presentation in production of various types of food geared toward introducing the student to the microwave oven and its capabilities. Student preparation.</p>	

HORT 105-HUMS 214

<p>HORT 105 Pests and Problems of Ornamental Plants 2 Term Prerequisite: None Semester Prerequisite: None This course is for the professional or homeowner interested in a knowledge of basic environmental and specific pest problems of trees, shrubs, perennials, and turf. Problems related to soil, light, water, planting, and fertilizer, as well as insects, diseases, vertebrates, integrated pest management, and total plant health concepts will be thoroughly discussed.</p>	<p>HORT 295 Landscape Independent Study 3 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This independent study is designed for students who wish to pursue a specialty area in horticulture beyond that which is offered in our curriculum. Inquiry through research is required.</p>
<p>HORT 107 Beginning Floral Design 2 Term Prerequisite: None Semester Prerequisite: None This is an introductory course for students interested in learning the principles of floral design. Tools and techniques as well as basic arrangement shapes are learned through "hands-on" experiences. Students will use fresh, silk, and dried flowers to create traditional and contemporary designs.</p>	<p>HORT 296 Horticulture Project Lab 2 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This independent study is designed for students who wish to pursue a specialty area in horticulture beyond that which is offered in our curriculum. Inquiry through research is required.</p>
<p>HORT 109 Contemporary Floral Design 2 Term Prerequisite: LAT 107 Semester Prerequisite: HORT 107 Contemporary floral designs are taught as well as theme arrangements, tools, and techniques. The basic principles of design are reviewed with the student transferring techniques to stylized arrangements. This is a "hands-on" course with participants working with floral materials each week.</p>	<p>HORT 297 Horticulture Project Lab 4 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This independent study is designed for students who wish to pursue a specialty area in horticulture beyond that which is offered in our curriculum. Inquiry through research is required.</p>
<p>HORT 110 Special Occasion Floral Design 3 Term Prerequisite: LAT 107 Semester Prerequisite: HORT 107 This course is designed for the advanced floral designer who has demonstrated the ability to apply the principles of design. Wedding designs covered include colonial, cascade, crescent, and arm bouquets, in addition to basic funeral designs. This is a "hands-on" class with students working with floral materials each week.</p>	<p>HUMS 110 Seminar: Stratford Theater Trip .5 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval A "cultural practicum" providing students the opportunity to experience exemplary theatrical productions. Cultural breadth and historical perspective are achieved by attending performances, lectures, and interacting with professionals. Skills of critical analysis are also exercised through exposure to fine classical writing and assessment of both oral interpretation and text.</p>
<p>HORT 143 Cut Flower, Foliage and Potted Plant Identification 3 Term Prerequisite: None Semester Prerequisite: None The functional aspects of plant material commonly found in the floriculture industry will be covered. The identification of cut flowers, cut foliage, potted and foliage plants will be required. A course that would benefit the floral designer, greenhouse grower, or landscape designer.</p>	<p>HUMS 120 Western Art and Music History 4 Term Prerequisite: None Semester Prerequisite: None An introduction to the masterpieces of art and music from Preliterary times to the twentieth century. Audio and visual material will be used to illustrate artistic and musical contributions of Europe and America to the development of Western culture.</p>
<p>HORT 230 Plant Propagation and Nursery Operations 3 Term Prerequisite: Departmental Approval Semester Prerequisite: HORT 102 This course will cover the basics of plant propagation and nursery operations. It will focus on the process of set-up, planting, and follow-up maintenance. The tools and techniques of seed propagation, as well as cuttings, grafting, budding, and layering will be emphasized. Knowledge of plant selection, soils, pruning, harvesting, and marketing nursery products will be included.</p>	<p>HUMS 160 Mythology 4 Term Prerequisite: None Semester Prerequisite: None Classical Greek and Roman myths constitute the first half of the course with the remainder chosen from at least two of the following areas: African, American, Far Eastern, Medieval European, Near Eastern, or Norse. Reading and analysis of primary sources in translation and their cross-cultural comparison are emphasized.</p>
<p>HORT 235 Greenhouse Structures and Environment 3 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to the construction and operation of a commercial greenhouse. Types of greenhouses, including construction materials, are discussed. Environmental control such as heating, cooling, and irrigation practices and procedures are presented. In addition, methods of planting, fertilizing, and insect and disease control are also included to provide a basis of knowledge for greenhouse crop production.</p>	<p>HUMS 211 History of Art I 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) First of a two-course sequence introducing students to the history of painting, sculpture, and architecture in world civilizations. Course emphasizes European, Asian, Islamic, and American contributions to the development of art from Preliterary times to the sixteenth century. Visual materials will illustrate and compare historical styles and artistic concepts.</p>
<p>HORT 236 Greenhouse Ornamentals 3 Term Prerequisite: None Semester Prerequisite: None This is an advanced course for the greenhouse grower. The course will cover the production techniques for cut flowers, holiday crops, and other greenhouse ornamentals. Topics of discussion will include scheduling and timing crops, spacing, production costs, and cultural practices.</p>	<p>HUMS 212 History of Art II 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) Second of a two-course sequence introducing students to the history of painting, sculpture, and architecture in world civilizations. Course emphasizes European, Asian, African, and American contributions to the development of art from the seventeenth to the twentieth century. Visual materials will illustrate and compare historical styles and artistic concepts.</p>
<p>HORT 237 Bedding Plant Production 3 Term Prerequisite: LAT 102 Semester Prerequisite: HORT 102 An advanced course for the greenhouse grower to produce healthy bedding plants at a profit. Topics will include scheduling, spacing, and production costs as well as cultural practices. New varieties will also be presented.</p>	<p>HUMS 213 World Civilizations I 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) Surveys the cultural foundations of major civilizations in Africa, Asia, Europe, and the Americas to approximately the seventeenth century. Emphasizes the contributions of early civilizations to the creativity, richness, and diversity of the human condition.</p>
<p>HORT 238 Garden Center and Nursery Sales Management 3 Term Prerequisite: None Semester Prerequisite: None This course provides business principles for retail sales managers. A thorough discussion of management topics is presented. Emphasis is placed on planning and organizing a garden center, nursery, greenhouse, or florist operation. Effective pricing and merchandising strategies as well as advertising and display techniques are discussed.</p>	<p>HUMS 214 World Civilizations II 4 Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) Surveys the cultural traditions of major civilizations in Africa, Asia, Europe, and the Americas from approximately the seventeenth century to the present. Emphasizes the contributions of modern civilizations to the creativity, richness, and diversity of the human condition.</p>

HUMS 215 American Civilization 4	HUSE 111 Introduction to Mental Health: Prevention and Interventions 3
Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course will explore the cultural foundations of the United States from the period of exploration to the present. This is an interdisciplinary course which examines central themes of American culture and their representation in history, literature, art, philosophy, and religion.	Term Prerequisite: None Semester Prerequisite: None This course presents an overview of the field of mental health with an emphasis on an 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.
HUMS 220 Japanese Civilization 4	HUSE 112 Introduction to Substance Abuse 3
Term Prerequisite: None Semester Prerequisite: None This course traces the development of Japan's cultural tradition with strong emphasis on history, religion, art, and literature. Further, this course demonstrates that modern Japan can best be understood in light of its distinctive cultural traditions.	Term Prerequisite: None Semester Prerequisite: None This course reviews substance abuse and use from a historical, sociological, and psychological perspective. It includes drug classifications, street terminology, causes of abuse, and also examines present and past legislation regarding substance abuse and use.
HUMS 230 Seminar: Culture and History of Mexico/Guadalajara 2	HUSE 182 Understanding AIDS .5
Term Prerequisite: None Semester Prerequisite: None Seminar designed for those who wish to learn fundamentals of Mexico's culture, history, geography, and society, emphasizing current developments in the city of Guadalajara and various characteristics of Hispanic cultures. Students will learn through readings, informal lectures, audio-visuals, and research/presentations developed by students. Class will be taught in English.	Term Prerequisite: None Semester Prerequisite: None This course describes the important issues surrounding Acquired Immune Deficiency Syndrome (AIDS). It presents opposing viewpoints and factual information, including an overview of the legal, medical, social, and moral aspects of the disease.
HUMS 260 Seminar: Ancient Egypt 4	HUSE 183 Advocacy Skills: Processes and Applications .5
Term Prerequisite: None Semester Prerequisite: None This course explores the achievements of one of the earliest and most successful of world civilizations. Developments in Egyptian art, architecture, and literature will be emphasized and the roles of religion, kingship, and geography will be studied. Great discoveries and discoverers of Egyptian archaeology will also be featured.	Term Prerequisite: None Semester Prerequisite: None This course describes the advocacy process, focusing upon working with individuals and groups of clients across the age continuum. Participants learn techniques they, as change agents in human services, can use in assessing client needs and in presenting those needs to appropriate agencies at the local, state, and federal levels.
HUMS 265 Seminar: Ethical Issues in Medicine 3	HUSE 211 Family Treatment of Child Abuse, Neglect, Domestic Violence 3
Term Prerequisite: None Semester Prerequisite: None This course will present some of the ethical dilemmas which arise in relation to health care and develop a framework for ethical decision-making with which to deal with these and other related problems. It is designed for both health care professionals and others who are interested in these issues.	Term Prerequisite: HUS 110 Semester Prerequisite: HUSE 110 This course addresses the special problems encountered working with abusive and neglective families, using individual groups and family intervention methods. Domestic violence and legal aspects are considered. A secondary focus is worker attrition in the field, its causes, and resolution strategies.
HUMS 295 Independent Study 1	HUSE 240 Substance Abuse: Special Populations and Adolescent Addiction 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in Humanities. Students will invest no less than 32 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.	Term Prerequisite: HUS 229 Semester Prerequisite: HUSE 112 This course surveys substance abuse in various populations including the elderly, women, the hearing impaired, and various ethnic groups. Reasons for abuse and treatment considerations are explored within each special population. The course focuses on issues related to understanding, evaluating, and treating the adolescent substance abuser.
HUMS 296 Independent Study 2	HUSE 241 Substance Abuse Prevention and Intervention 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in Humanities. Students will invest no less than 32 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.	Term Prerequisite: HUS 229 Semester Prerequisite: HUSE 112 This course provides a developmental framework for a better understanding of the factors contributing to substance-abuse prevention. It facilitates 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.
HUSE 100 Introduction to Human Services: Resources and Interventions 4	HUSE 242 The Chemically Dependent Family 3
Term Prerequisite: None Semester Prerequisite: None This course presents an overview of the basic programs and social institutions which provide human services. It provides the student with methods and prob	Term Prerequisite: HUS 229 Semester Prerequisite: HUSE 112 This course provides a conceptual framework within which to understand, assess, and effectively intervene/interact in a counseling fashion with the chemically dependent family. Specific sub-groups and issues within or resulting from the chemically dependent family are explored.
HUSE 101 Personal Dimensions of Human Services 4	HUSE 244 Substance Abuse Agencies, Treatment, Addiction Patterns 3
Term Prerequisite: None Semester Prerequisite: None This course explores the nature and development of personal dimensions of human services, including knowledge, values, and skills needed by people who are preparing for careers in the helping professions.	Term Prerequisite: HUS 229 Semester Prerequisite: HUSE 112 This course covers the addiction cycle of alcoholics and drug abusers, personality and interactional patterns of addiction, and casework and group work techniques. It provides an analysis of current models of treatment within programs, including review of inpatient, outpatient, halfway houses, and occupational programs.
HUSE 110 Introduction to Child Abuse, Neglect and Domestic Violence 3	
Term Prerequisite: None Semester Prerequisite: None This course reviews the history and scope of child abuse, including socio-economic and psychological factors related to domestic violence. It explores the world of abnormal rearing; roles of community agencies and disciplines; approaches to treatment and coordination of cases and services; and legal aspects and the law.	

HUSE 270-HVAC 211

<p>HUSE 270 Native American Leadership I: History and Tradition 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course provides an overview of leadership and community development issues in the Great Lakes Native American (Anishinaabe) community from 1600 to present day. It includes cross-cultural leadership theory, community development case studies, problem-solving and decision-making skills development, and utilizes historic Native American leaders as role models.</p>	<p>HVAC 100 Fundamentals of Heating, Ventilating and Air Conditioning 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course is an introduction to the mechanical refrigeration cycle and its individual components. Compressors, evaporators, condensers, and metering devices as well as their functions are covered in detail. Also covered are exercises in psychrometrics and an introduction to system design.</p>
<p>HUSE 271 Native American Leadership: Skills Development 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course presents community development issues facing Native American leaders, especially in Michigan. Focus is on developing analytical, decision-making, and leadership skills for community development. Approach utilizes theoretical and practical case study models and presentations by community leaders.</p>	<p>HVAC 105 Sheet Metal Fabrication and Installation 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>
<p>HUSE 272 Native American Leadership III: Community Service Internship 2</p> <p>Term Prerequisite: HUS 270/HUS 271, Departmental Approval Semester Prerequisite: HUSE 270/HUSE 271, Departmental Approval</p> <p>This course combines classroom study and field work (four hours per week) to explore community development issues facing today's Native American leaders. Focus is on developing analytical, decision-making, and leadership skills in an applied setting. Each student has direct interaction with an assigned mentor in a field placement setting.</p>	<p>HVAC 110 Applied Electricity I 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>An introduction to basic electricity (AC and DC) using both theory and applied study methods. Topics will include electrical components, symbols, basic schematic diagrams, Ohm's Law applied to series and parallel circuits, and motor types and usages. In conjunction with lab exercises, meters and their proper usage will be covered.</p>
<p>HUSE 281 Organizational Systems in the Human Services 2</p> <p>Term Prerequisite: HUS 214 Concurrently Semester Prerequisite: HUSE 282 Concurrently</p> <p>This course provides the student with knowledge of the community power structure, funding bases, and the internal workings of human services organizations. It explores opportunities in the labor force, certification requirements, and approaches to networking.</p>	<p>HVAC 111 Applied Electricity II 2</p> <p>Term Prerequisite: HAC 100 Semester Prerequisite: HVAC 130 Concurrently</p> <p>The study of motors with emphasis on theory, troubleshooting, and servicing. Motor controls, control circuits, protection devices, and discussion of energy conservation as related to motors will be covered in detail.</p>
<p>HUSE 282 Human Services Practicum I: Field Placement 2</p> <p>Term Prerequisite: Departmental Approval Semester Prerequisite: Admission to Field Placement, Approval</p> <p>This course provides beginning practical experience and training in the field for individual students. The student is placed with a community-based agency. A concurrent seminar, HUSE 281, integrates field experience with theoretical concepts and principles of human services organizational systems.</p>	<p>HVAC 120 Heating I 4</p> <p>Term Prerequisite: HAC 100, HAC 101 Semester Prerequisite: HVAC 100, HVAC 110</p> <p>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 will include humidifiers, air cleaners, and vent dampers.</p>
<p>HUSE 283 Service Delivery Skills 2</p> <p>Term Prerequisite: HUS 215 Concurrently Semester Prerequisite: HUSE 284 Concurrently</p> <p>This course helps the human services student identify systems and resources to link the systems with the people and how to mobilize the systems and the people.</p>	<p>HVAC 130 Air Conditioning I 4</p> <p>Term Prerequisite: HAC 100, HAC 101 Semester Prerequisite: HVAC 100, HVAC 110</p> <p>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.</p>
<p>HUSE 284 Human Services Practicum II: Field Placement 2</p> <p>Term Prerequisite: HUS 214 Semester Prerequisite: HUSE 282</p> <p>This course provides additional practical experience and training in the field of human services. The student works in a community-based agency. A concurrent seminar, HUSE 283, integrates field experience with theoretical principles of human services delivery.</p>	<p>HVAC 181 Heating, Ventilating and Air Conditioning Seminar 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Seminar may cover any or all of the following topics: cooling, heating, humidifying, filtering, servicing, and/or ventilating, etc. For individuals already in the Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) field or anyone interested in these areas.</p>
<p>HUSE 297 Human Services Independent Study Project: 1 Credit 1</p> <p>Term Prerequisite: Instructor, Departmental Approval Semester Prerequisite: Learning Contract, Departmental Approval</p> <p>This course includes special research, directed study, or service-learning projects in human services areas, such as child development, gerontology, social work, substance abuse, or related areas. It requires at least 32 hours of laboratory work or 64 hours of field work for each credit. A learning contract is required.</p>	<p>HVAC 182 Heating, Ventilating and Air Conditioning Seminar 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Seminar may cover any or all of the following topics: cooling, heating, humidifying, filtering, servicing, and/or ventilating, etc. For individuals already in the Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) field or anyone interested in these areas.</p>
<p>HUSE 298 Human Services Independent Study Project: 2 Credit 2</p> <p>Term Prerequisite: Instructor, Departmental Approval Semester Prerequisite: Learning Contract, Departmental Approval</p> <p>This course includes special research, directed study, or service-learning projects in human service areas, such as child development, gerontology, social work, substance abuse, or related areas. It requires at least 32 hours of laboratory work or 64 hours of field work for each credit. A learning contract is required.</p>	<p>HVAC 201 Mechanical Code 4</p> <p>Term Prerequisite: HAC 225 Semester Prerequisite: HVAC 120, HVAC 130/Approval</p> <p>A fundamental course designed to acquaint the student with the methods and techniques used in field inspection of mechanical systems. Both the Uniform Mechanical Code and the Building Officials and Code Administrators (BOCA) Code will be discussed.</p>
<p>HUSE 299 Human Services Independent Study Project: 3 Credit 3</p> <p>Term Prerequisite: Instructor, Departmental Approval Semester Prerequisite: Learning Contract, Departmental Approval</p> <p>This course includes special research, directed study, or service-learning projects in human service areas, such as child development, gerontology, social work, substance abuse, or related areas. It requires at least 32 hours of laboratory work or 64 hours of field work for each credit. A learning contract is required.</p>	<p>HVAC 211 Schematics 3</p> <p>Term Prerequisite: HAC 225, HAC 231 Semester Prerequisite: HVAC 120, HVAC 130</p> <p>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.</p>

HVAC 220 Heating II	4	IDMS 245 Sonographic Instrumentation	2
Term Prerequisite: HAC 225		Term Prerequisite: DMS 234	
Semester Prerequisite: HVAC 120		Semester Prerequisite: IDMS 234	
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.		The student will be introduced to the mechanics of A-Mode, M-Mode, Doppler, and Real-time equipment. Accessory equipment such as the camera, transducer, and cathode ray tube will be presented. Methods of quality assurance will also be presented.	
HVAC 221 Introduction to Hydronics	3	IDMS 265 Sonographic Interpretation I	3
Term Prerequisite: HAC 225		Term Prerequisite: Allied Health	
Semester Prerequisite: HVAC 220		Semester Prerequisite: Allied Health	
Covers 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.		The student will be presented with the identification of and interpretation of anatomy and pathology on sonographic exams as it relates to the abdomen, vascular system, and small parts.	
HVAC 230 Air Conditioning II	4	IDMS 266 Sonographic Interpretation II	2
Term Prerequisite: HAC 231		Term Prerequisite: Allied Health	
Semester Prerequisite: HVAC 130		Semester Prerequisite: Allied Health	
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.		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.	
HVAC 231 Heat Pump	4	IDMS 280 Introduction to Clinical Experience I	6
Term Prerequisite: HAC 232		Term Prerequisite: Admission to Program	
Semester Prerequisite: HVAC 230		Semester Prerequisite: Admission to Program	
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.		First course in a three-semester sequence of clinical application in diagnostic medical sonography. The course is programmed with specific performance activities. Credit is arranged for each individual semester with a ratio of one credit hour to three clinical clock hours.	
HVAC 240 Refrigeration I	4	IDMS 281 Clinical Experience II	9
Term Prerequisite: HAC 231		Term Prerequisite: DMS 280	
Semester Prerequisite: HVAC 130		Semester Prerequisite: IDMS 280	
The student will study domestic and light commercial refrigeration systems with an emphasis on controls operation and adjustment.		Building on material presented in IDMS 280, this is the second course in a three-semester sequence in diagnostic medical sonography. The course is programmed with specific performance objectives. Credit is arranged for each individual semester with a ratio of one credit to three clinical clock hours.	
HVAC 241 Refrigeration II	4	IDMS 282 Clinical Experience III	14
Term Prerequisite: HAC 210		Term Prerequisite: DMS 281	
Semester Prerequisite: HVAC 240		Semester Prerequisite: IDMS 281	
The student will learn servicing of commercial units, heat load calculations for component selections, special valve applications, and piping procedures.		Based on material presented in IDMS 281, this is the third course in a three-semester sequence of clinical application in diagnostic medical sonography. Course is programmed with specific performance objectives. Credit is arranged for each individual semester with a ratio of one credit hour to three clinical clock hours.	
HVAC 250 Pneumatic Control	2	IMAG 101 Basic Photography for Non-Majors	2
Term Prerequisite: HAC 225, HAC 231		Term Prerequisite: None	
Semester Prerequisite: HVAC 230/Approval		Semester Prerequisite: None	
Basic concepts of pneumatic controls for HVAC equipment in commercial structures; adjustment and calibration of pneumatic equipment.		Students will learn to use camera controls, exposure controls, photographic composition, and lighting to make better photographs. Color film and commercial processing will be used. Designed for students with little or no previous still photography experience who do not plan to major in Imaging Technology.	
IDMS 200 Sonographic Introduction	1	IMAG 102 Advanced Photo for Non-Majors	2
Term Prerequisite: Admission to Program		Term Prerequisite: PHO 110/Equivalent	
Semester Prerequisite: Admission to Program		Semester Prerequisite: IMAG 101/Equivalent	
Introduction to sonography including equipment history, criteria, limitations of ultrasound, and sonographer ethics. General information provided regarding patient preparation, history/clinical correlation, and basic nursing care specific to ultrasound. Strong emphasis on terminology and abbreviations most commonly used with ultrasound.		A continuation of IMAG 101. Students will learn to apply advanced design concepts, techniques, and accessories for problem-solving and creative image making. Color film and commercial processing will be used. For students who do not plan to major in Imaging Technology.	
IDMS 201 Sonographic Anatomy I	5	IMAG 103 Basic Film Production for Non-Majors	2
Term Prerequisite: Allied Health		Term Prerequisite: None	
Semester Prerequisite: Allied Health		Semester Prerequisite: None	
Provides the student with cross-sectional anatomy and pathology as it relates to sonographic scanning of the abdomen, vascular system, thyroid, prostate, scrotum, breast, and neurology of the neonate.		Introduces storytelling using sound and picture. Students plan and produce short programs, developing basic skills in plot structure, staging scenes, camera, sound, and editing. For students with little or no previous film experience and who do not plan to major in Imaging Technology.	
IDMS 202 Sonographic Anatomy II	5	IMAG 105 Color Printing for Non-Majors	3
Term Prerequisite: Allied Health		Term Prerequisite: PHO 111	
Semester Prerequisite: Allied Health		Semester Prerequisite: IMAG 102/Departmental Approval	
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.		A basic color printing course designed for students who do not plan to major in Imaging Technology. Emphasis will be on exposure controls of negative color films and the production of quality color prints from both negatives and slides.	
IDMS 219 Sonographic Imaging	1	IMAG 111 Introduction to Photographic Technology I	4
Term Prerequisite: Allied Health		Term Prerequisite: None	
Semester Prerequisite: Allied Health		Semester Prerequisite: None	
This course will provide the soon-to-graduate sonographer with an update of positioning, physics, instrumentation, and interpretation knowledge. In addition, the use of a comprehensive test will assess the student's level of knowledge in sonographic subjects.		Introduces students to photographic technology on both a theoretical and practical level. The student will learn camera types and related equipment, exposure controls, beginning and intermediate black-and-white film processing and printing, including contrast controls. This course is the first of a two-course sequence for Imaging Technology majors.	
IDMS 234 Sonographic Physics	2		
Term Prerequisite: Allied Health			
Semester Prerequisite: Allied Health			
The student will study the fundamental principles of acoustical physics; how sound is produced and manipulated, and how it reacts in various mediums.			

- IMAG 112 Design Fundamentals for Imaging Technologies** 3
Term Prerequisite: PHO 110/PHO 120
Semester Prerequisite: Concurrently IMAG 101/111, Departmental Approval
 This course introduces students to design theory and its application to imaging technologies on both a practical and theoretical level. Students will learn and apply design elements and principles to their evolving work.
- IMAG 113 Lighting Concepts and Applications** 3
Term Prerequisite: PHO 120
Semester Prerequisite: IMAG 111/Concurrently, Departmental Approval
 Introduces the student to fundamental lighting concepts encountered in the studio and on location. Students will learn to apply their knowledge by identifying and solving common photographic lighting problems. Students will use professional continuous and electronic flash equipment to produce acceptable images.
- IMAG 114 Introduction to Photographic Color Technology** 3
Term Prerequisite: PHO 128, PHO 140, PHO 154
Semester Prerequisite: IMAG 112, IMAG 113, Departmental Approval
 Introduces the student to the theories and applications of contemporary color photographic materials and processes. Students will learn to produce acceptable color images by applying the concepts of film selection, film testing, color temperature, lighting, and color image design to their evolving work.
- IMAG 117 Introduction to Photographic Technology II** 4
Term Prerequisite: PHO 128, PHO 140, PHO 154
Semester Prerequisite: IMAG 112, IMAG 113, Departmental Approval
 Continuation of IMAG 111. Students will learn intermediate and advanced black-and-white exposure, developing, and printing controls and techniques. Students will acquire knowledge and skills to solve technical, aesthetic, and communication problems. Successful completion required for continuation in the Imaging Technology Program (Still Track) at the 200 level.
- IMAG 118 Film and Multi-Media Technology I** 4
Term Prerequisite: PHO 128, PHO 140, PHO 146/PHO 154
Semester Prerequisite: IMAG 112, IMAG 113, Departmental Approval
 Introduces story telling practices using sound and pictures. Students will learn to plan and produce short programs, developing basic skills in: plot structure, staging scenes, photography, sound recording, editing, and audience evaluation. Successful completion required for continuation in the Imaging Technology Program (Film/Multi-Media Track) at the 200 level.
- IMAG 120 Photographic Technology Lab** 3
Term Prerequisite: PHO 160, Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 Designed for students whose lack of photographic competencies prevent their continuation in the Imaging Technology Program above the 100 level. Individualized learning objectives are formulated for each student. Successful completion of these objectives will allow the student to continue into the 200 level course sequence.
- IMAG 121 Imaging Technology Forum** 2
Term Prerequisite: None
Semester Prerequisite: None
 A survey of the imaging technology field, including the role of the imaging professional, materials, processes, and new technology as related to advertising, communications, film/multi-media, illustration, portrait, and self-expression. Includes an overview of projected employment opportunities in imaging technology.
- IMAG 122 Imaging Technology Workshop** 2
Term Prerequisite: PHO 140
Semester Prerequisite: IMAG 111, Departmental Approval
 A continuing study of the imaging technology field. Students will learn through demonstration, laboratory experiences, and other direct involvement in imaging technologies. Includes presentations, demonstrations and workshops that expose students to the current state of development in the areas of hybrid imaging and emerging technologies.
- IMAG 201 Professional Seminar: Commercial Photography** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 114, IMAG 117, Departmental Approval
 Exposes students to photography for commercial use. Students will explore various tools, techniques, methodologies, principles and opinions as applied to commercial photography. Designed to sharpen students' technical and aesthetic knowledge and skills in order to better compete in the commercial photographic market.
- IMAG 202 Professional Seminar: Photographic Communication** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 114, IMAG 117, Departmental Approval
 Designed for intermediate and advanced students to enhance their competencies and explore areas of interest using still photography in combination with words. Emphasis on communicating clear messages to mass media audiences through documentary photography, newspaper and magazine photojournalism, and public relations photography.
- IMAG 203 Professional Seminar: Film/Multi-Media** 3
Term Prerequisite: PHO 128, PHO 154, PHO 126, Departmental Approval
Semester Prerequisite: IMAG 114, IMAG 118, Departmental Approval
 Provides students with basic photographic skills, an opportunity for intensive study in selected aspects of motion picture production, or multi-media production.
- IMAG 204 Professional Seminar: Imaging for Self-Expression** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 An exploration of self-expression through various imaging technology-based tools, processes, and thought. Students will create process-based images and will research, discuss, critique, formulate opinions, and establish personal goals in order to better understand and practice personal style and expression.
- IMAG 205 Professional Seminar: Hybrid Imaging** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 Designed for intermediate and advanced students to enhance their competencies and explore the areas of emerging hybrid imaging tools and techniques.
- IMAG 206 Professional Seminar: Output Technologies** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 Designed for intermediate and advanced students to enhance their competencies and knowledge in the area of currently available image output technologies.
- IMAG 207 Professional Seminar: Imaging Issues** 3
Term Prerequisite: Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 An exploration of historical, ethical and aesthetic issues relating to imaging technology. Intended to help students better understand, appreciate, and make aesthetic judgements about historical, contemporary, and future imaging technology issues.
- IMAG 208 Professional Seminar: Input Technologies** 3
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 Designed for intermediate and advanced students to enhance their competencies and knowledge in the areas of currently available image input and creation technologies.
- IMAG 220 Intermediate Still Imaging Technology** 4
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200
Semester Prerequisite: IMAG 114, IMAG 117, Departmental Approval
 Introduces the still imaging student to various imaging technologies and their diverse applications. Students will study the historical, contemporary, and future directed concepts that encompass each of the program's areas of emphasis. Application of these concepts will enable students to develop an awareness of their personal interests and directions.
- IMAG 221 Advanced Still Imaging Technology** 4
Term Prerequisite: Departmental Approval
Semester Prerequisite: IMAG 220, Departmental Approval
 A continuation of IMAG 220 for the advanced still photography student to help define the student's major area of study. Students, individually and as team members, will apply critical thinking processes and appropriate imaging technologies to produce sophisticated images that illustrate their specialties, interest, and intended direction for future studies.
- IMAG 222 Intermediate Color Applications and Technology** 3
Term Prerequisite: PHO 160, PHO 200
Semester Prerequisite: IMAG 114, IMAG 117, Departmental Approval
 Introduces the student to the contemporary materials and processes of the negative to positive color photographic print process. Students will learn to produce professionally acceptable prints from a wide variety of color negatives by applying color balancing and printing controls, print finishing techniques, and lab efficiency skills to their work.

IMAG 223 Advanced Color Applications and Technology 4
Term Prerequisite: PHO 202, PHO 204, PHO 220, PHO 240
Semester Prerequisite: IMAG 222, Departmental Approval
 A continuation of IMAG 222 that involves the advanced student with color as a critical communication tool. Students, individually and as team members, will learn to produce highly effective and professionally acceptable photographs with color transparency film. A high level of technical accomplishment and aesthetic development will be reached.

IMAG 224 Emerging Image Technologies I 2
Term Prerequisite: PHO 128, PHO 154, PHO 160, PHO 200
Semester Prerequisite: IMAG 117/IMAG 118, Departmental Approval
 An intermediate level course designed to expose imaging technology majors to the latest technological innovations effecting the areas of photography, imaging and related fields. Course format will include lectures, discussion, demonstration, and hand-on experiences.

IMAG 225 Emerging Image Technologies II 2
Term Prerequisite: Departmental Approval
Semester Prerequisite: IMAG 224, Departmental Approval
 An advanced level study that further explores the effects of new technologies and processes on the areas of photography and imaging. Students will attend a three-day program that includes lectures, demonstrations and workshops related to hybrid imaging and emerging technologies.

IMAG 226 Intermediate Film and Multi-Media Technology II 4
Term Prerequisite: PHO 126, PHO 128, PHO 146/PHO 154, PHO 200
Semester Prerequisite: IMAG 114, IMAG 118, Departmental Approval
 An intermediate level course that exposes the student to advanced storytelling practices using sound and images. Hands-on production exercises help the student to develop skills in scriptwriting, storyboarding, production planning, photography, image making, editing, and sound track production.

IMAG 227 Advanced Film and Multi-Media Technology III 4
Term Prerequisite: PHO 136
Semester Prerequisite: IMAG 226, Departmental Approval
 A continuation of IMAG 226 for moving image majors. Students learn advanced sound and visual production skills, editing techniques, and post-production procedures. Students work individually and as group members and apply critical thinking and problem-solving processes to produce creative, dramatic, and effective communications programs.

IMAG 228 Independent Study 3
Term Prerequisite: PHO 201, PHO 202, PHO 204, PHO 220/Departmental Approval
Semester Prerequisite: IMAG 221/IMAG 227, Departmental Approval
 Allows advanced students to pursue study in areas not formally taught within the curriculum. Students will work in consultation with an instructor. Acceptable written proposal required prior to registration.

IMAG 229 Advanced Imaging Applications 3
Term Prerequisite: PHO 201, PHO 202, PHO 204, PHO 200/Departmental Approval
Semester Prerequisite: IMAG 221/IMAG 227, Departmental Approval
 Allows advanced students to work on improving skills or to enhance skills in an area of strength or interest. Students will work with an instructor in a directed learning experience and share work with other students also enrolled. Acceptable written proposal required prior to registration.

IMAG 230 Imaging Technology Major I 3
Term Prerequisite: PHO 201, PHO 202, PHO 204, PHO 220/PHO 136, PHO 166
Semester Prerequisite: IMAG 221, 223, 225, 227, Departmental Approval
 An advanced level major concentration course, the first of a two-course sequence. Students will create images that are professionally acceptable visual solutions to problems typical of their chosen field. Emphasis is on critical thinking, problem-solving, and refining technical, aesthetic, and communication skills.

IMAG 231 Imaging Technology Major II 3
Term Prerequisite: PHO 221/PHO 222/PHO 244/PHO 245/PHO 246/PHO 216
Semester Prerequisite: IMAG 230, Departmental Approval
 A continuation of IMAG 230. Continued emphasis on problem-solving, critical thinking, and refining technical, aesthetic, and communication skills. Students will create professional quality images that may be included in the portfolio which is required for completion of the Imaging Technology Program.

IMAG 232 Internship 8
Term Prerequisite: PHO 210, PHO 202, PHO 204, PHO 220/Departmental Approval
Semester Prerequisite: IMAG 221/IMAG 227, Departmental Approval
 Allows advanced students to work as an intern developing competencies in the technical, business, creative, and communicative aspects of photography, film-making, or electronic imaging. Acceptable written application and internship agreement required prior to registration.

IMAG 233 The Business of Photography: Practices and Directions 3
Term Prerequisite: PHO 201, PHO 202, PHO 204, PHO 220/PHO 136, PHO 166, Departmental Approval
Semester Prerequisite: IMAG 221, 223, 225, 227, Departmental Approval
 Exposes the student to the general business practices and approaches used in the photographic marketplace. The student will learn to undertake market research, develop a marketing plan, understand and apply basic accounting and tax principles, prepare a business plan, and determine where their specialties and interests fit within the industry.

IMAG 234 Portfolio Assembly and Degree Completion Activities 3
Term Prerequisite: All Required Photo, General Education Degree Requirements Completed Prior to Enrollment
Semester Prerequisite: IMAG 233, IMAG 231/Concurrently, Portfolio Review, Departmental Approval
 Finalizes the student's portfolio and immediate career plans. Students learn to edit and assemble their best work into a cohesive, visual resume for the purpose of securing employment in their chosen major emphasis area; or for gaining acceptance to another institution for continued studies. Restricted enrollment via a portfolio review.

IMRI 200 Introduction to Magnetic Resonance Imaging 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 This course is designed as an overview of basic patient care principles and to prepare the student to meet a variety of emergency situations encountered in the Magnetic Resonance Imaging Department.

IMRI 202 Computers and imaging Technology 2
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Using the IBM-PC in the lab, students are given a basic understanding of the computers and software applicable to imaging technology departments and facilities. DOS, database, word processing, and health software will be used.

IMRI 208 Cross Sectional Anatomy for Imaging 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Course is designed to present an in-depth overview of anatomy (anatomical structures) generally presented in radiography programs. The course presents gross anatomy with a cross-sectional anatomical application.

IMRI 211 MRI Application I 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Integration of anatomy-pathology-physics principles to MRI; application of basic anatomy to cross-sectional aspects of imaging; and use of MRI as a diagnostic tool.

IMRI 212 MRI Application II 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Integration of anatomy-pathology-physics principles in MRI; application of basic anatomy to cross-sectional aspects of imaging; and use of MRI as a diagnostic tool. Utilizing the information presented in MRI 211, the student will be presented with more complex anatomy and pathology.

IMRI 221 MRI Principles I 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Application of principles of physics to the generation of a magnetic resonance image. Integrates computer application to the magnetic resonance image formation.

IMRI 222 MRI Principles II 3
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 Application of principles of physics to generation of a magnetic resonance image. Integrates computer application to magnetic resonance image formation. Utilizing information presented in IMRI 221, the student will be presented with more complex applications of physics principles and their role in the generation of the image.

IMRI 223 Directed Readings/Research MRI 2
Term Prerequisite: Admission to Program
Semester Prerequisite: Admission to Program
 An independent study/research course in which students identify a specific interest area in MRI. Participants develop an understanding of MRI through directed readings and research projects; areas of exploration and development are presented throughout the term during scheduled sessions.

<p>IMRI 231 MRI Physics 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course is designed to present the basic physics of Magnetic Resonance Imaging. An overview of physics is presented with information and application to MRI.</p>	<p>INAU 210 Industrial System Integration 4 Term Prerequisite: IA 103, IA 151 Semester Prerequisite: INAU 200, INAU 151, TECH 102, ELTE 122 Course provides experience in both the physical interconnection and software integration of intelligent industrial equipment. Students work with a manufacturing work cell and integrate current components as well as future components.</p>
<p>IMRI 270 Spectroscopy 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Presents a basic overview of spectroscopy and its application to MRI. Designed to provide the student with an understanding of the principles of spectroscopy and its use as an aid to diagnosis of specific pathologic conditions.</p>	<p>INST 201 Practicum for Science Teachers I 1 Term Prerequisite: IST 211 Semester Prerequisite: INST 211 Concurrently Provides the student an opportunity to observe and participate in science instruction related to INST 211 in an elementary school classroom. Participants will prepare and present hands-on, classroom-ready science activities to elementary students.</p>
<p>IMRI 281 MRI Clinical Experience I 9 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program First in a two-semester sequence of clinical application in MRI; designed to present the student with an environment of combining cognitive, psychomotor, and affective aspects of the profession. The course is programmed with specific performance activities. Credit is arranged for each term with a ratio of one credit hour to each two clinical clock hours.</p>	<p>INST 202 Practicum for Science Teachers II 1 Term Prerequisite: IST 212 Semester Prerequisite: INST 212 Concurrently Provides the student an opportunity to observe and participate in science instruction related to INST 212 in an elementary school classroom. Participants will prepare and present hands-on classroom-ready science activities to elementary students.</p>
<p>IMRI 282 MRI Clinical Experience II 9 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Second in a two-semester sequence of clinical application in MRI; designed to present the student with an environment of combining cognitive, psychomotor, and affective aspects of the profession. The course is programmed with specific performance activities. Credit is arranged for each term with a ratio of one credit hour to each two clinical clock hours.</p>	<p>INST 211 Integrated Science for Teachers I 4 Term Prerequisite: NS 112 Semester Prerequisite: NSCI 122 Primarily for students planning an elementary education career. Emphasizes developing classroom activities, demonstrations, science discovery projects, and experimental equipment that would be useful in an elementary classroom. Laboratory and field experiences involve students with natural phenomena, including their relationship and application to principles studied, with focus on the fall season.</p>
<p>INAU 100 Introduction to Industrial Automation 4 Term Prerequisite: None Semester Prerequisite: None This course provides a hands-on introduction to current manufacturing technology. Students will learn to use MS/PC DOS computer including word processor, spreadsheet, and operating system applications. Students will experience the use of industrial robots, programmable logic controllers, machine vision, computer-aided design, discrete electronic components, and statistical process control.</p>	<p>INST 212 Integrated Science for Teachers II 4 Term Prerequisite: IST 211 Semester Prerequisite: INST 211 Primarily for students planning an elementary education career. Emphasizes developing classroom activities, demonstrations, science discovery projects, and experimental equipment that would be useful in an elementary classroom. Laboratory and field experiences involve students with natural phenomena, including their relationship and application to principles studied, with focus on the spring season.</p>
<p>INAU 110 Principles of Industrial Automation 4 Term Prerequisite: CIM 100 Semester Prerequisite: INAU 100, TECH 101 Course provides basics of fluid power, motor drives, electronics, digital logic, computer architecture, position sensing, and servo control. Topics are accompanied by lab exercises to provide practical experience in the application of these basics.</p>	<p>INSU 265 Principles of Risk and Insurance 3 Term Prerequisite: None Semester Prerequisite: None At the completion of this course, the student will have a working knowledge of the theory of risk, insurance terminology, legal insurance contracts, and use of risk management.</p>
<p>INAU 135 Fiber-Optic Communications 5 Term Prerequisite: IA 135, MTH 102, TEC 152 Semester Prerequisite: TECH 102 A course in the principles and application of fiber-optic communications. Topics covered are particle and wave theory, optics, fiber construction, coupling principles, light resources, and light sensors. Students will learn termination techniques, use of field test equipment, and troubleshooting methods.</p>	<p>INTR 106 Lettering For Designers 2 Term Prerequisite: None Semester Prerequisite: None This course covers theory and application of lettering for designers with an emphasis on small-scale, free-hand pencil lettering.</p>
<p>INAU 150 Introduction to the OS/2 Operating System 3 Term Prerequisite: None Semester Prerequisite: None Course provides an introduction to the multitasking operating system OS/2. Students learn the basics of what multitasking is and what it can do, as well as system requirements, installation, configuration, and operation of standard utilities.</p>	<p>INTR 110 Applied Design (2D/Color) 3 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to visual design for students who want to become professional designers. It includes basic elements and principles of 2-D design, color and 3-D design. Its holistic and practical approach to design will complement all disciplines.</p>
<p>INAU 151 Pascal Programming for Manufacturing 4 Term Prerequisite: None Semester Prerequisite: None An introductory course in computer programming that provides students with experience and a programming library to meet the basic needs of the manufacturing environment. Subjects include program planning, basic Pascal structure, operator interface, disk files, post processors, printer codes, and RS 232C communications.</p>	<p>INTR 111 Applied Arts 3-D 3 Term Prerequisite: None Semester Prerequisite: None This course will be a studio introduction to the materials and creation of crafts used in interiors: textiles, clay, and metals.</p>
<p>INAU 200 Applied Automation 4 Term Prerequisite: IA 101, IA 103 Semester Prerequisite: INAU 110 Course provides experience in the operation, programming, and setup of automated industrial equipment, including robots, vision equipment, and industrial software.</p>	<p>INTR 114 Design Process 3 Term Prerequisite: None Semester Prerequisite: None This is a foundation course exploring the theory and applications of Interior Architecture/Design. Emphasis is on developing the creative problem-solving process through graphic written and verbal formats.</p>
	<p>INTR 132 Presentation Techniques 3 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 110 This course is the study of visual and verbal presentation techniques. The emphasis will be on production sample boards.</p>

<p>INTR 134 Design Portfolio 2 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 132 The portfolio course is an opportunity for students to organize photographs, matte/frame, and display their visual works. At the completion of the course, the students will have developed a format for a portfolio.</p>	<p>INTR 222 AutoCAD for Interiors 4 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 140/Equivalent This course offers computer-aided planning and design using AutoCAD software. Emphasis on contract furniture systems and space planning.</p>
<p>INTR 140 Interior Drafting and Detailing 3 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 106 Study of cabinetry and furniture detailing and construction. Emphasis on development of shop drawings and furniture manufacturing methods.</p>	<p>INTR 230 World Decorative Arts I 3 Term Prerequisite: None Semester Prerequisite: None This course is a survey of the history of decorative art periods, including furniture, interior textiles, and accessories. Covers periods from ancient up to the 19th century industrial revolution.</p>
<p>INTR 151 Kitchen and Bath Design 3 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 101 Recommended This course investigates basic kitchen and bath planning, designing, and remodeling through lecture, discussion, and recitation.</p>	<p>INTR 231 World Decorative Arts II 3 Term Prerequisite: IAD 238 Semester Prerequisite: INTR 230 This course is a survey of the history of the decorative art periods including furniture, interior textiles, and accessories, covering periods for the 19th century industrial revolution to post-modern periods with an examination of preservation principles.</p>
<p>INTR 152 Kitchen/Bath Planning Workshop .5 Term Prerequisite: None Semester Prerequisite: None Basic awareness of kitchen and bath planning, designing, and remodeling developed through lecture, discussion, and recitation.</p>	<p>INTR 232 Twentieth Century Design 2 Term Prerequisite: None Semester Prerequisite: None This course is a survey of twentieth century design applying to styles of furniture, accessories, textiles, and products as originated by signature designers, artists, and architects.</p>
<p>INTR 154 Antiques and Collectibles 2 Term Prerequisite: None Semester Prerequisite: None The student will learn to recognize, date, and evaluate antiques and collectibles from the basis of materials, methods of construction, styles, and periods.</p>	<p>INTR 240 Color/Lighting 3 Term Prerequisite: IAD 132 Semester Prerequisite: INTR 110 This course introduces color and light as a design element for residential and commercial applications. Emphasis is on color systems, value studies, and lighting overlays.</p>
<p>INTR 156 Interior Decorating for the Home 2 Term Prerequisite: None Semester Prerequisite: None This course is a survey of interior decorations on a practical level. Emphasis is on residential furnishing and treatments. Field trips to local market resources for furniture, fixtures, furnishings, and finishes are included.</p>	<p>INTR 241 Service Learning 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Instructor Approval-2nd Year Standing This course allows students to participate in community service/volunteer projects, which includes outdoor education and all forms of active learning, such as habitat for humanity.</p>
<p>INTR 162 Materials for Interiors 3 Term Prerequisite: IAD 131 Semester Prerequisite: INTR 110 Study of non-structural interior finishes and materials, their methods of application, and installation. Emphasis will be on the knowledge of properties of wood, tiles, carpeting, etc.</p>	<p>INTR 242 Home Furnishing Merchandising 3 Term Prerequisite: IAD 150 Semester Prerequisite: INTR 110 This course examines specific home furnishings and products used in the current interiors industry. Emphasis is on furniture manufacturing and merchandising practices in department stores and showrooms.</p>
<p>INTR 170 Introduction to Interiors 3 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 110 Introduction to the profession of interior design and survey of design, elements, and 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 planning of various space and wall elevations will be included.</p>	<p>INTR 244 Visual Display 3 Term Prerequisite: None Semester Prerequisite: None This course covers the development of display fundamentals in color, lighting, design and materials for store windows, showrooms, and exhibits.</p>
<p>INTR 178 Residential Interiors 3 Term Prerequisite: IAD 133 Semester Prerequisite: INTR 132/INTR 170 This course examines the relationship of human needs to interior environmental design with emphasis on alternative housing design.</p>	<p>INTR 248 Contract Interiors 3 Term Prerequisite: IAD 231 Semester Prerequisite: INTR 178 This course emphasizes contract office design. This includes designing commercial interiors, integrating client's needs, and the socio-psychological aspects of the environment, using computer-aided planning programs.</p>
<p>INTR 200 Introduction to Housing 2 Term Prerequisite: None Semester Prerequisite: None 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 society will be studied. (Recommended for all majors.)</p>	<p>INTR 252 Construction Documents and Specifications 2 Term Prerequisite: Departmental Approval Semester Prerequisite: INTR 162 This course is the study of practices and procedures of working drawings, interior materials, cost estimating, installation methods for furniture, cabinets, floor coverings, wall coverings, and window treatments. Emphasis on commercial specifications.</p>
<p>INTR 202 Affordable Housing 3 Term Prerequisite: None Semester Prerequisite: None This course is a comprehensive study which includes familiar topics of conventional "Affordability" (finance programs, community aids, etc.) and also the less-studied realities of design, products, standards, market, and operative expectations, in which total improvement of affordability could take place.</p>	<p>INTR 254 Interior Design Certification Review 2 Term Prerequisite: 2 Years Practical Experience Semester Prerequisite: Majors Only This course is specifically intended to provide Interior Design students with appropriate information plus practicum exercises which will enable them to prepare for the National Council for Interior Design Qualification Examination.</p>
<p>INTR 204 Affordable Housing Workshop 1 Term Prerequisite: None Semester Prerequisite: None This course is a comprehensive study of changes possible within the American economic system for more sustained production of low and moderate cost housing.</p>	<p>INTR 256 Interior Practice Management 3 Term Prerequisite: Departmental Approval Semester Prerequisite: 2nd Year Majors Only This course is an in-depth study of the business and professional practices of interior designers. Emphasis on certification, contracts, marketing, ethics, and project management.</p>

<p>INTR 258 Workroom Practices 3 Term Prerequisite: None Semester Prerequisite: None In this course the students will study trade workroom materials, methods for commercial and residential window treatments, upholstery, bedspreads, etc., and the detailing used to enable the designer to communicate the design concepts to the workroom. Estimating included.</p>	<p>IRAD 220 Clinical Radiation Oncology II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: IRAD 219 The student will identify malignant conditions, epidemiology, treatment methods, radiobiological effects, as well as treatment planning for specific anatomical sites, such as ovary, breast, etc.</p>
<p>INTR 260 Interior Computer Project Laboratory 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is the direct study of special projects not incorporated in regular course offerings through use of CAD applications.</p>	<p>IRAD 231 Radiation Therapy Physics 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Provides the student with specifics of ionizing radiation and principles of radioactivity. Details of production, interactions, and types of radiation, as well as medical uses of radioactive material and technical considerations of application are discussed.</p>
<p>INTR 262 Design Project Laboratory 4 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This course is a directed study of special projects not incorporated in regular course offerings.</p>	<p>IRAD 232 Advanced Therapy Physics 3 Term Prerequisite: RAD 231 Semester Prerequisite: IRAD 231 Provides the student with the specifics of ionizing radiation and the principles of radioactivity. Details of production, interactions, and types of radiation, medical uses of radioactive material, and technical considerations, as well as the application to the treatment of patients are discussed.</p>
<p>INTR 296 Pre-Professional Internship 6 Term Prerequisite: Instructor Approval 2.5 GPA Major 544 Only Semester Prerequisite: Instructor Approval 2.5 GPA Completed First Year Courses 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. Regular scheduled progress reports will be given and discussed with supervising faculty member.</p>	<p>IRAD 234 Quality Assurance in Radiation Therapy 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program 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 J.C.A.H. standards in essential areas.</p>
<p>IPFL 121 Japanese Language and Culture Summer Institute 6 Term Prerequisite: None Semester Prerequisite: None This is an intensive Japanese course designed to provide students who have little or no knowledge of Japanese language basic information about Japanese language and culture. Listening comprehension and oral proficiency will be emphasized. Students will also learn hiragana, katakana, and some kanji (Chinese characters).</p>	<p>IRAD 235 Basic Dosimetry 3 Term Prerequisite: College Algebra Semester Prerequisite: MATH 126/Placement Test 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 are included.</p>
<p>IPFT 211 Study Tour: China 1 Term Prerequisite: None Semester Prerequisite: None Designed to provide students with the opportunity to experience the Chinese culture. Through the course activities, lectures, and field trips, students will have a better understanding of Chinese culture, its civilization, and features of the contemporary daily life of the people. Cities of historical and current importance will be visited.</p>	<p>IRAD 270 Radiobiology 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program 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.</p>
<p>IRAD 105 Introduction Radiation Therapy 3 Term Prerequisite: Admission to Program Semester 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.</p>	<p>IRAD 285 Clinical Experience I 1.5 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program An introductory course to clinical aspects of radiation therapy and oncology. First in a sequence of clinical applications in radiation therapy technology theory. This course is designed to present the student with an environment combining cognitive, psychomotor, and affective aspects of the radiation therapy profession.</p>
<p>IRAD 106 Oncology Principles Patient Care 1 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Provides the student with the basic concepts of diagnostic process, pathophysiology, oncologic problems, oncologic emergencies, chemotherapy protocols, agents and side effects, bereavement, psychological aspects of disease, and specific case studies.</p>	<p>IRAD 286 Clinical Experience II 9 Term Prerequisite: RAD 285 Semester Prerequisite: IRAD 285 Second course in a sequence of clinical applications in radiation therapy technology theory. This course covers all phases of radiation therapy technology and is designed to present the student with an environment combining cognitive, psychomotor, and affective aspects of the radiation therapy profession.</p>
<p>IRAD 204 Principles Oncology I 4 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program 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.</p>	<p>IRAD 287 Clinical Experience III 7 Term Prerequisite: RAD 286 Semester Prerequisite: IRAD 286 Third course in a sequence of clinical applications in radiation therapy technology theory. This course covers all phases of radiation therapy technology and is designed to present the student with an environment combining cognitive, psychomotor, and affective aspects of the radiation therapy profession.</p>
<p>IRAD 205 Principles Oncology II 4 Term Prerequisite: Departmental Approval Semester Prerequisite: IRAD 204 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.</p>	<p>IRAD 288 Clinical Experience IV 9 Term Prerequisite: RAD 287 Semester Prerequisite: IRAD 287 Fourth course in a sequence of clinical applications in radiation therapy technology theory. This course covers all phases of radiation therapy technology and is designed to present the student with an environment combining cognitive, psychomotor, and affective aspects of the radiation therapy profession.</p>
<p>IRAD 219 Clinical Radiation Oncology I 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program The student will identify malignant conditions, epidemiology, treatment methods, radiobiological effects, and treatment considerations for general anatomical sites, such as head and neck, pelvic, etc.</p>	<p>IRAD 289 Advanced Clinical Skills I 13 Term Prerequisite: Departmental Approval Semester Prerequisite: Admission to Program, IRAD 288 First in a series of two courses designed to provide opportunity to explore advanced concepts in radiation therapy and oncology. Course includes competency-based education combined with cognitive, psychomotor, and affective aspects of the radiation therapy profession.</p>

IRAD 290 Advanced Clinical Skills II	7	IRXT 131 Radiologic Physics	3
Term Prerequisite: Departmental Approval		Term Prerequisite: MTH 102/Equivalent	
Semester Prerequisite: Admission to Program, IRAD 289		Semester Prerequisite: MATH 112/Equivalent	
Second in a series of two courses designed to provide opportunity to explore advanced concepts in radiation therapy and oncology. Course includes competency-based education combined with cognitive, psychomotor, and affective aspects of the profession performed at the level of a staff radiation therapist.		Basic physical principles are related to the radiologic process. A study of basic electricity and the operation of the x-ray circuit is presented. Finally, advanced topics regarding the formation of radiation, protection of the x-ray tube, and x-ray attenuation are studied.	
IRXT 100 Introduction to Imaging	4	IRXT 132 Radiobiology and Protection	2
Term Prerequisite: Admission to Program		Term Prerequisite: RXT 131	
Semester Prerequisite: Admission to Program		Semester Prerequisite: IRXT 131/Departmental Approval	
Survey of the role of the radiographer in the health-care industry. Explores the historical development of x-ray, medical, and legal ethics, radiation protection, patient-staff relationships, and other imaging technologies. A clinical component allows the new radiography student to correlate this material in the practical setting.		A focus on the reasons for good radiation hygiene and methods to implement protection of the patient and technologist. Current theories regarding the physiological effects of x-radiation are explored.	
IRXT 111 Radiographic Positioning I	7	IRXT 160 Radiologic Emergencies	1
Term Prerequisite: Admission to Program		Term Prerequisite: Admission to Program	
Semester Prerequisite: Admission to Program		Semester Prerequisite: Admission to Program	
Student radiographers are introduced to radiographic positioning of the upper and lower extremity, chest, abdomen, bony thorax, pelvis, and spine. Associated topographic, skeletal, chest, and abdominal anatomy is studied. A laboratory experience is provided to evaluate the student skills in performing each position/projection.		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, assess the situation, and develop a plan for immediate action.	
IRXT 112 Radiographic Positioning II	7	IRXT 200 Introduction to Radiologic Pathology	1
Term Prerequisite: RXT 100, RXT 111, AHC 104		Term Prerequisite: AHC 106	
Semester Prerequisite: IRXT 100, IRXT 111, 2.5 Minimum in AHCC 104		Semester Prerequisite: AHCC 106	
A continued study of routine radiographic positioning with the addition of fluoroscopic procedures. Included are studies of the skull, G.I. tract, G.U. tract, myelography, and bronchography. In addition, various contrast media are studied. Laboratory experiences are provided to evaluate student skills in performing selected position/projections.		Emphasizes how disease processes are 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.	
IRXT 113 Radiologic Positioning III	3	IRXT 210 Radiographic Department Management	1
Term Prerequisite: RXT 112		Term Prerequisite: Admission to Program	
Semester Prerequisite: 2.5 Minimum in IRXT 112		Semester Prerequisite: Admission to Program/Departmental Approval	
Special radiologic procedures are studied and some related imaging modalities surveyed. Procedures include neurologic, cardiovascular, arthrographic, mammographic, digital imaging, and tomographic studies. Special equipment/supplies used in these examinations are surveyed: needles, catheters, high pressure injectors, film changers, sterile trays, and contrast media.		Designed 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.	
IRXT 114 Cross-Sectional Anatomy	3	IRXT 212 Clinical Practice I	6
Term Prerequisite: RXT 113/Departmental Approval		Term Prerequisite: RXT 100, RXT 111, AHC 104	
Semester Prerequisite: IRXT 113/Departmental Approval		Semester Prerequisite: IRXT 100, IRXT 111, IRXT 121, AHCC 104	
Provides an overview of transverse, coronal, and sagittal cross-sectional anatomy of the human body. Special emphasis will be placed on the brain, thorax and abdominal area. Correlations between cross-sectional anatomy, radiographs, and three-dimensional drawings will be explored.		First in a two-semester sequence of clinical application in radiography. 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.	
IRXT 121 Radiographic Exposure I	3	IRXT 213 Clinical Practice II	6
Term Prerequisite: Admission to Program		Term Prerequisite: RXT 212	
Semester Prerequisite: Admission to Program		Semester Prerequisite: IRXT 212	
The formation of the radiographic image is the focus of IRXT 121. Photographic and geometric variables are related to radiographic factors and their various interactions compared and contrasted. Finally, a study of the history of radiology, basics of radiation formation, and anatomy of the x-ray tube is discussed.		Second course in a two-semester sequence of clinical applications in radiography. 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.	
IRXT 122 Radiographic Exposure II	3	IRXT 214 Comprehensive Experience I	9
Term Prerequisite: RXT 121		Term Prerequisite: RXT 213	
Semester Prerequisite: 2.5 Minimum in IRXT 121		Semester Prerequisite: IRXT 213	
Various beam modifying devices are presented and their relation to formation of a radiographic image studied. Includes a study of manual and automatic processing and the theory of image formation. Finally, darkroom procedures, quality control, both radiographic and photographic are studied.		First in a three-semester sequence of clinical application in radiography. 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.	
IRXT 123 Radiographic Independent Study I	1	IRXT 215 Comprehensive Experience II	9
Term Prerequisite: Departmental Approval		Term Prerequisite: RXT 214	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: IRXT 214	
Opportunity to prepare and submit a formal research paper. 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 audiovisual lab, and/or a combination. Biweekly meetings required to assess progress.		Second in a three-semester sequence of clinical application in radiography. 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.	
IRXT 124 Radiographic Independent Study II	2	IRXT 216 Comprehensive Experience III	9
Term Prerequisite: Departmental Approval		Term Prerequisite: RXT 215	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: IRXT 215	
Opportunity to prepare and submit a formal research paper. 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 audiovisual lab, and/or a combination. Biweekly meetings required to assess progress.		Third in a three-semester sequence of clinical applications in radiography. 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.	
		IRXT 219 Imaging Update	1
		Term Prerequisite: Allied Health Professional	
		Semester Prerequisite: Allied Health Professional	
		This course will provide the advanced imaging student with an update of positioning, exposure, and physics. In addition, the use of a comprehensive test will assess the student's level of knowledge in the imaging technology.	

<p>JAPN 101 Elementary Japanese I 4 Term Prerequisite: None Semester Prerequisite: None First course of a two-semester sequence in elementary Japanese. Designed to provide students with basic knowledge of Japanese for practical communication and skills in speaking, reading, writing, and listening comprehension. Provides information concerning everyday life and culture of Japan. Hiragana and Katakana syllabaries and 40 Kanji will be introduced.</p>	<p>JRNL 256 Newsletter Writing and Production 3 Term Prerequisite: None Semester Prerequisite: None Offers a hands-on approach to newsletter writing, layout, and production for students and professionals. Emphasizes the study and practice of a variety of formats and styles applicable in desktop publishing and other approaches. Some word processing required.</p>
<p>JAPN 102 Elementary Japanese II 4 Term Prerequisite: JPN 102/Equivalent/3.0 Minimum in JPN 101 Semester Prerequisite: JAPN 101/Equivalent Continuation of Japanese 101. Students receive more practice in Japanese for practical communication. Develops speaking, reading, writing, and listening skills. Previously acquired knowledge and skills are refined and ability to communicate in Japanese is increased. Additional 100 Kanji will be introduced. Class is taught mostly in Japanese.</p>	<p>LABR 200 Introduction to Labor Relations 3 Term Prerequisite: None Semester Prerequisite: None This course surveys both historical and legal frameworks of the labor movement. Major labor laws, causes and goals of the labor movement and union structure and behavior will be discussed. Students will explore both labor and management approaches to solving employment disputes.</p>
<p>JAPN 115 Seminar: Conversational Japanese I 3 Term Prerequisite: None Semester Prerequisite: None First course in conversational Japanese. Designed for people with little or no knowledge of Japanese who wish to acquire conversational skills. Students learn correct pronunciation, basic sentence structures, and practical vocabulary for everyday use and travelling. Selected features of Japanese culture and everyday life in Japan will be introduced.</p>	<p>LABR 201 Collective Bargaining 3 Term Prerequisite: LR 200/Departmental Approval Semester Prerequisite: LABR 200/Departmental Approval This course studies the collective bargaining process, the administration of collective bargaining agreements and wage/benefit issues of employment.</p>
<p>JAPN 116 Seminar: Conversational Japanese II 3 Term Prerequisite: JPN 185/Equivalent Semester Prerequisite: JAPN 115/Equivalent Second course in conversational Japanese. Designed for people with some prior knowledge of Japanese who wish to improve their conversational skills. Students learn practical vocabulary and essential grammar to converse in Japanese. Selected features of Japanese culture and everyday life in Japan will be introduced.</p>	<p>LABR 202 Grievances and Arbitration 3 Term Prerequisite: LR 200/Departmental Approval Semester Prerequisite: LABR 200/Departmental Approval 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 skills necessary for grievance handling and understanding the fundamentals of contract language.</p>
<p>JAPN 201 Intermediate Japanese I 4 Term Prerequisite: JPN 103/Equivalent/3.0 Minimum in JPN 102 Semester Prerequisite: JAPN 102/Equivalent First course of a two-semester sequence in intermediate Japanese. Includes introduction of more advanced grammar, vocabulary building, composition, group discussions, and more information on Japanese culture and everyday life. Additional 150 Kanji will be introduced.</p>	<p>LABR 203 Labor Law 3 Term Prerequisite: LR 200/Departmental Approval Semester Prerequisite: LABR 200/Departmental Approval An in-depth study of traditional labor law including NLRB law, court decisions, and historical origins which impact union organizing, representation elections, unfair labor practices, bargaining, strikes, and enforcement of labor contracts.</p>
<p>JAPN 202 Intermediate Japanese II 4 Term Prerequisite: JPN 202/Equivalent/3.0 Minimum in JPN 201 Semester Prerequisite: JAPN 201/Equivalent Continuation of Japanese 201. Includes more advanced grammar, intensive vocabulary building, writing composition, reading contemporary materials, discussions, and student presentations of Japanese language or culture. Additional 150 Kanji will be introduced. Natural and practical communication will be emphasized. Class is taught in Japanese.</p>	<p>LABR 204 Employment Law for Managers 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>JRNL 151 Newswriting and Reporting 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Typing Skills, WRIT 121/Concurrently Recommended Introduction to, and practice in, writing news stories. Students learn news terminology, style, objectivity, attribution, accuracy, and copy-editing skills. Basic news-gathering and reporting tactics are presented and practiced.</p>	<p>LABR 208 Labor Relations in Government 3 Term Prerequisite: None Semester Prerequisite: None This course presents labor relations as practiced in the public sector. Problems and practices of special interest to government employees will be presented.</p>
<p>JRNL 152 Advanced Newswriting and Reporting 3 Term Prerequisite: JRN 151/Departmental Approval Semester Prerequisite: JRNL 151/Departmental Approval Continued practice in writing news stories, with special attention to developing reporting skills. Areas of emphasis include interviewing techniques, public affairs reporting and survey research.</p>	<p>LAND 100 Introduction to Landscape Drafting 2 Term Prerequisite: None Semester Prerequisite: None This course covers the use of drafting equipment with an emphasis on lettering, line convention, and title blocks. The students will develop a basic format for design construction drawings. The course provides essential skills for beginning the Landscape Program.</p>
<p>JRNL 254 Editorial Writing 3 Term Prerequisite: JRN 151/Departmental Approval Semester Prerequisite: JRNL 151/Departmental Approval A course in how to write effective editorials. Students analyze content, structure and style of editorial models, learn methods of finding subjects, learn methods of research, and write editorials and articles on important issues.</p>	<p>LAND 104 Landscape Lecture Series .25 Term Prerequisite: None Semester Prerequisite: None This course is the study of the many facets in the fields of landscape architecture and horticulture.</p>
<p>JRNL 255 Feature Writing 3 Term Prerequisite: JRN 151/Departmental Approval Semester Prerequisite: JRNL 151/Departmental Approval A course in writing feature stories and articles. Students analyze content, structure, and style of feature stories. Students learn strategies for finding subjects, learn methods of interviewing and research, and practice writing and editing their stories.</p>	<p>LAND 130 Interior Landscaping 3 Term Prerequisite: None Semester Prerequisite: None This course includes the identification, culture, placement, and use of foliage and flowering plants in the office, mall, restaurant or home. Basic principles of landscaping are covered to include soil media, watering, light requirements, fertilizer and insect, and disease control. Management in relation to the plant's placement and use within the interior landscape is also discussed.</p>
	<p>LAND 132 Residential Landscaping 2 Term Prerequisite: None Semester Prerequisite: None This course highlights a basic design process approach for developing a 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 his landscape, residential landscaper or nursery person.</p>

<p>LAND 133 Residential Landscape Maintenance 3 Term Prerequisite: None Semester Prerequisite: None This course will provide a basic understanding of landscape maintenance problems and solutions. Students will develop records and schedules for pest control as well as tree, shrub, lawn, and flower maintenance. Plant selection, installation, pruning, and fertilization will be covered.</p>	<p>LAND 163 Designing Ornamental Garden 3 Term Prerequisite: LAT 140 Semester Prerequisite: LAND 140/142 This course is a practical approach to designing the herbaceous garden. Annuals, perennials, herbs, and ornamental grasses are analyzed to create a design that will be in harmony with its environment. Color, height, texture, form, and fragrance are some of the plant's characteristics which will be discussed.</p>
<p>LAND 140 Evergreen and Deciduous Trees 3 Term Prerequisite: None Semester Prerequisite: None This course emphasizes identification of both common and uncommon deciduous trees, shrubs, evergreens, vines, and ground covers used in the landscape trade. Weekly lab walks facilitate development of field identification skills based on form, foliage, bark, bud, flower, and fruit characteristics. Landscape use and basic culture of individual plants are also covered.</p>	<p>LAND 164 Site Design I 3 Term Prerequisite: LAT 150, 152 Semester Prerequisite: LAND 150, 152 This course emphasizes use of the design process to solve a variety of urban and non-urban site planning problems. Project design solutions require graphic delineation stressing plan view presentations. A variety of drawing scales, graphic materials, and techniques will be explored.</p>
<p>LAND 141 Flowering Trees, Shrubs Ground Covers 3 Term Prerequisite: None Semester Prerequisite: None This course explores spring flowering trees, shrubs, broadleaf evergreens, and ground covers. Identification in the field is emphasized during weekly lab walks. Design characteristics of individual plants including size, habit, flowers, fruit, bark, foliage, and buds are discussed as well as basic cultural requirements.</p>	<p>LAND 165 Site Design II 3 Term Prerequisite: LAT 164 Semester Prerequisite: LAND 164 This course focuses on advanced analysis and planning techniques for business, housing, and recreational sites. Environmental impact considerations and land use conflicts are examined and applied in creating alternative design solutions.</p>
<p>LAND 142 Perennial and Annual Flowering Plants 3 Term Prerequisite: None Semester Prerequisite: None This course covers the identification and basic culture of approximately 170 perennial and annual flowering and budding plants. Specific features of each plant will be discussed in relation to their proper landscape use. Herbs, grasses, rock and water garden plants will also be highlighted.</p>	<p>LAND 170 Site Grading I 3 Term Prerequisite: LAT 150 Semester Prerequisite: LAND 150 This course covers basic through advanced principles, methods and procedures for grading a site. Use of contour lines, land form interpretation, and earthwork computation are studied and applied to problem-solving for both typical and special requirement sites.</p>
<p>LAND 145 Orientation to Landscape Architecture and Planning 3 Term Prerequisite: None Semester Prerequisite: None This course will introduce the student to various aspects of the landscape architecture profession. Different aspects of the profession will be presented through discussion, videos, slides, field trips, and guest speakers. Topics will include urban planning, zoo design, ecological planning, landscape construction, recreation and park design.</p>	<p>LAND 171 Site Grading II 3 Term Prerequisite: LAT 170 Semester Prerequisite: LAND 170 This is an advanced site grading course that builds on the skills gained in LAND 170. This Michigan Soil Erosion Control Act is emphasized with respect to the requirements related to circulation systems and recreational and utility facilities.</p>
<p>LAND 150 Principles of Landscape Architecture 3 Term Prerequisite: None Semester Prerequisite: None Students will explore the broad scale philosophical, historical, and technical aspects of landscape architecture. Basic problem-solving techniques and design theory are introduced along with implementation of the design process.</p>	<p>LAND 172 Site Layout 3 Term Prerequisite: LAT 171 Semester Prerequisite: LAND 171 This course covers plan dimensioning and layout techniques for vehicle and pedestrian circulation systems, building locations, utilities, and sporting and recreational facilities. Professional graphic techniques are emphasized.</p>
<p>LAND 152 Landscape Graphics Communications - Beginning 3 Term Prerequisite: LAT 150/Concurrently Semester Prerequisite: LAND 150/Concurrently This course explores basic 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 reproduction printing methods.</p>	<p>LAND 180 Landscape Ecology 3 Term Prerequisite: None Semester Prerequisite: None This course is for the professional as well as the interested individual covering the relatively new field of landscape environments. 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.</p>
<p>LAND 153 Landscape Graphics Communications - Advanced 3 Term Prerequisite: LAT 152 Semester Prerequisite: LAND 152 This course acquaints the student with visual presentation techniques used in landscape architecture. Plan, section, and three dimensional graphics are explored using a range of media. The students will develop sketching and mechanical drafting techniques for the preparation of professional graphic presentations.</p>	<p>LAND 181 Landscape Restoration and Management 3 Term Prerequisite: None Semester Prerequisite: None This course will cover the detailed steps necessary to complete a total restoration of a damaged ecosystem. Specific system designs dealing with wetlands and prairies in particular will be highlighted. Specific native plants, animals, and insects will be discussed. Field experiences and native plant identification are a critical part of this course.</p>
<p>LAND 160 Planting Design I 3 Term Prerequisite: LAT 150 Semester Prerequisite: LAND 150 This course provides an overview of the planting design principles from site analysis to construction documents. Planting design principles are emphasized as well as practical aspects of plant selection and design implementation in a range of design situations. Contemporary issues concerning today's design and construction industries are also discussed.</p>	<p>LAND 185 Arboriculture (Urban/Forestry) 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>LAND 161 Planting Design II 3 Term Prerequisite: LAT 160 Semester Prerequisite: LAND 160 This course applies the planting design skills gained in LAND 160 to a broad range of sites and issues typically encountered in today's landscape design and construction industries. Topics covered include functional uses of plants, native plant material, and planting design in the urban environment.</p>	<p>LAND 195 Irrigation Design 3 Term Prerequisite: None Semester Prerequisite: None This course is for the professional or beginner interested in irrigation system design, installation, maintenance and troubleshooting. Lectures will cover a range of systems including residential, commercial, drip, and golf course.</p>

<p>LAND 225 Landscape Cost Estimation 3 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to the study of landscape contracting and the cost estimating process. The class covers the project management process and the costing factors associated with it. The areas of material costs, equipment cost, labor costs, and related management charges will be evaluated. The preparation of bids and the bidding process will be highlighted.</p>	<p>LAND 285 Microcomputer Animation 3 Term Prerequisite: Departmental Approval Semester Prerequisite: LAND 282 This course will familiarize the student with the video animation aspects of computer design and presentation. The student will learn to produce an animation project using the latest computer technology. Students will also become familiar with the integration of video and animation in various design and management-related projects.</p>
<p>LAND 242 Ecological Land Planning 3 Term Prerequisite: None Semester Prerequisite: None This course will introduce the student to the land planning process. The ecological method of land planning will be emphasized with projects demonstrated. Field trips to planning meetings and project sites will be an intricate part of this course.</p>	<p>LAND 286 LandCADD: Videoscapes 3 Term Prerequisite: LAT 282 Semester Prerequisite: LAND 282 This computer course will cover how to use video-imagery and animation in a landscape design situation by way of lecture, video and computer usage. Computer paint as well as imaging will be demonstrated. LandCADD's software as well as others will be utilized.</p>
<p>LAND 250 Landscape Construction Methods 3 Term Prerequisite: ATM 150 Semester Prerequisite: TECH 100, LAND 150 This course examines the properties and uses of concrete, asphalt, masonry, wood, and other landscape construction materials. Basic design and installation methods of landscape structures are emphasized in addition to the introduction of professional construction drafting techniques.</p>	<p>LAND 295 Landscape Independent Study 4 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval The independent study is designed for students who wish to pursue a specialty area in Landscape Architecture beyond that which is offered in our curriculum. Inquiry through research and design of landscapes is required.</p>
<p>LAND 252 Landscape Construction Details 3 Term Prerequisite: LAT 250 Semester Prerequisite: LAND 250 Focuses on graphic techniques for drawing construction details and coordination of details with site plan layout. Studies detailing utilities, irrigation systems, circulation systems, recreational facilities, and various light construction features. Design-build procedures are stressed, including material tabulation and cost estimating.</p>	<p>LAND 296 Landscape Project Lab 2 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval The independent study is designed for students who wish to pursue a specialty area in Landscape Architecture beyond that which is offered in our curriculum. Inquiry through research and design of landscapes is required.</p>
<p>LAND 255 Beginning ARC/INFO 3 Term Prerequisite: LAT 282/Equivalent Computer Course Semester Prerequisite: LAND 282 This course will be an introduction to the use of the ARC/INFO software. ARC/INFO is a leading product used in the design of Geographic Information Systems. Basic product use and modeling will be demonstrated. There will be hands-on experience in the lab.</p>	<p>LAND 297 Landscape Project Lab 3 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval The independent study is designed for students who wish to pursue a specialty area in Landscape Architecture beyond that which is offered in our curriculum. Inquiry through research and design of landscapes is required.</p>
<p>LAND 276 Landscape Documents, Specifications and Cost Estimating 3 Term Prerequisite: LAT 100 Semester Prerequisite: LAND 150 This course explores the relationship and principles between specifications and working drawings. The cost of projects as well as bid proportions will be highlighted. The student will prepare bids, write specifications and participate in a class bid opening.</p>	<p>LEGL 115 Legal Assistant Career and Ethics 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Introduction to the legal assistant's role in the legal system, including essential skills used in the litigation process and law practice. Introduces student to legal terminology, legal analysis, procedural and substantive law. Surveys paralegal employment and regulation. 2.0 minimum required to continue program.</p>
<p>LAND 277 Landscape Office Practice 3 Term Prerequisite: None Semester Prerequisite: None Introduces the elements of office business practice and organization, record-keeping, on-the-job inspection, close out, initial proposal writing, and contract formulation.</p>	<p>LEGL 120 Legal Research I 3 Term Prerequisite: Minimum 2.0 in LAW 115 Semester Prerequisite: 2.0 in LEGL 115, LEGL 215 Introduces research procedures and resources for finding federal and Michigan law. Students will learn to actuate research publications: digests, encyclopedias, reporters, statutes, court rules, treatises, administrative publications, citators, etc. Students are given research assignments utilizing the publications, and the assignments must be completed using the Michigan Uniform System of Citation.</p>
<p>LAND 282 Microcomputers in Landscape Planning 3 Term Prerequisite: None Semester Prerequisite: None This course assumes no previous computer exposure or experience. It is a beginning class for the individual interested in computers and what they can do for you in landscape design, maintenance, construction, plant selection, land survey and inventory, cost estimating, and many other related areas.</p>	<p>LEGL 121 Legal Writing I 3 Term Prerequisite: LAW 120 Semester Prerequisite: LEGL 120, WRIT 122 Students will learn to analyze court opinions and apply them to particular fact situations. This skill will then be used to write summaries of court opinions, legal memoranda, appellate briefs and other legal documents. Learning methods include reading assignments, class discussion, lecture and writing assignments of increasing difficulty.</p>
<p>LAND 283 Beginning LandCADD 3 Term Prerequisite: LAT 282/Equivalent Semester Prerequisite: LAND 282/Equivalent This course is for the individual with basic AutoCAD/LandCADD exposure interested in learning more about computer-aided design using the LandCADD software package. The LandCADD site planning module will be fully explored as well as additional modules including irrigation design, plant data base, E-Z estimate, and quadrangles. Advanced 3-D design options will also be covered.</p>	<p>LEGL 130 Michigan Laws and Courts 2 Term Prerequisite: None Semester Prerequisite: None Students will learn the various Michigan courts, the federal court system, alternatives to litigation, and how to identify and properly cite various sources of law. Areas of law studied will include criminal, domestic, probate, employment, and property. Note: Course is designed for court and conference reporting.</p>
<p>LAND 284 LandCADD Advanced 3 Term Prerequisite: LAT 283 Semester Prerequisite: LAND 283 This course is a continuation of Beginning LandCADD. Advanced options will be explored including 3-D.</p>	<p>LEGL 160 Critical Thinking in Law 3 Term Prerequisite: None Semester Prerequisite: None 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 part of each session.</p>

LEGL 210 Litigation Procedures	4	LEGL 224 Administrative Law	3
Term Prerequisite: Departmental Approval Semester Prerequisite: 2.0 in LEGL 115, LEGL 215 Provides in-depth study of pre-trial, trial and post-trial practice and procedure. Emphasizes Michigan and federal rules of court. Detailed study of drafting pleadings, discovery procedures and case preparation for trial and appeal. Course also covers evidentiary rules as they relate to trial practice and preparation.		Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 The relationship of governmental administrative agencies to private citizens is explored by studying how law is created and enforced by such agencies at the state and federal levels. Legal assistant students will focus on topics including rulemaking procedures, regulations, adjudication, licensing, and informal action.	
LEGL 211 Tort Law	2	LEGL 225 Legal Research and Writing II	3
Term Prerequisite: LAW 210 Semester Prerequisite: LEGL 210 Covers principles of negligence, intentional torts, and strict liability. Emphasizes the role of the legal assistant in dealing with these areas of law in actual practice situations.		Term Prerequisite: LAW 120, LAW 121 Semester Prerequisite: LEGL 120, LEGL 121 Reviews principles of legal research, analysis, and writing. Student will draft legal memoranda, opinion letters, and an appellate brief based on extensive research assignments in federal and Michigan publications. Some classes may be at off-campus libraries.	
LEGL 215 Business Law I, Basic Principles	3	LEGL 226 Legal Interviewing and investigation	3
Term Prerequisite: None Semester Prerequisite: None Introduction to the legal system, its purpose, and the fundamental principles of various areas of the law. Course content includes sources of law, court procedures, contracts, torts, crimes, constitutional rights, no-fault auto insurance, landlord-tenant law, and bailments. Taught in traditional classroom style or via Computer Managed Learning (C.M.L.).		Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 Interviewing and investigation methods including information gathering, analysis, and effective communication. Emphasis will be placed on the role of the legal assistant with numerous practical exercises.	
LEGL 216 Business Law II, Commercial Law	3	LEGL 227 Bankruptcy and Collections	3
Term Prerequisite: LAW 215 Semester Prerequisite: LEGL 215 An in-depth analysis of the Uniform Commercial Code allows students to explore the law of sales, commercial paper, secured transactions, banking, insurance, and debtor-creditor rights. Taught in traditional classroom style or via Computer Managed Learning (C.M.L.).		Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 Explores federal bankruptcy law and procedure with emphasis on the legal assistant's role in collecting information, interviewing clients, and preparing documents. Topics include a comparison of selected chapters within the bankruptcy code, exemptions, preferences, petitions, schedules, and the part played by the bankruptcy trustee.	
LEGL 217 Business Law III, Business Organizations	3	LEGL 280 Legal Assistant Internship	3
Term Prerequisite: LAW 215 Semester Prerequisite: LEGL 215 Introduces basic business organizations, including agency law, partnerships, sole proprietorships, and corporations. Additionally, the course will delve into government regulation of business, real estate, wills, trusts, and estates. Taught in traditional classroom style or via Computer Managed Learning (C.M.L.).		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Student will experience the paralegal career by working as a legal assistant in a supervised capacity. Placements include private law firms, governmental law offices, courts, corporations, and other law-related settings. Requirements include at least 160 hours in the workplace, weekly reports, periodic meetings and performance evaluations by on-site supervisor.	
LEGL 218 Litigation Specialties	3	LING 230 Introduction to Linguistics	3
Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 211 Covers several specialty areas of law, including personal injury, professional malpractice, products liability, workers' compensation, and no-fault auto insurance. Emphasizes role of legal assistant in these practice areas, including drafting of pleadings and other legal instruments.		Term Prerequisite: None Semester Prerequisite: None Examines human language from the perspective of contemporary American linguistics: generative syntax, phonology, and morphology. Special attention to the structure of English. Considers regional and social variation, and implications for teachers of language skills.	
LEGL 220 International Business Law	3	MACH 100 Manufacturing Processes	4
Term Prerequisite: LAW 215 Semester Prerequisite: LEGL 215 Introduction to international business transactions by focusing on foreign and U.S. law which impacts them. Students will explore a basic international transaction, including sales contracts, letters of credit, imports, exports, commercial terms, and insurance. Conflicts of law will also be discussed, as will a comparison of dispute resolution mechanisms.		Term Prerequisite: None Semester Prerequisite: None This course provides students with a comprehensive study of the materials, concepts, and processes used in modern manufacturing, which is augmented by field trips to local manufacturing plants. This course is designed for those who are pursuing careers in manufacturing design, engineering, and supervision.	
LEGL 221 Real Estate Transaction	3	MACH 105 Machine Tool Survey	3
Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 Covers fundamental principles of real property law and introduces the student to common types of real estate transactions encountered by a legal assistant in a typical real estate practice. Subject matter includes deeds, land contracts, mortgages, title insurance, environmental issues, forfeitures and foreclosures, and landlord-tenant relationships.		Term Prerequisite: ATM 150 Semester Prerequisite: TECH 100 Informs students of the machine tool principles and practices used in industry. Safety, terminology, measurement, and procedures are used to complete required projects. A working knowledge of hand and machine tools is achieved through a series of lectures, demonstrations, and hands-on projects.	
LEGL 222 Probate Law and Procedure	3	MACH 110 Machine Tool Technology I	4
Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 Probate process will be addressed in detail, from commencement of proceedings through closing the estate of a decedent. Other topics will include wills, trusts, guardianships, conservatorships, adoptions, and other probate court procedures. Emphasis is on the part played by the legal assistant in preparation of documents and other probate practice tasks.		Term Prerequisite: ATR 100, ATM 150 Semester Prerequisite: MACH 105, TECH 100 Informs students of shop safety, shop terminology, hand tools, machine tools, measurement and layout practices. To complete the course a series of lectures, demonstrations, and projects are used to guide the students. The competency required to successfully complete this course is at the apprentice level.	
LEGL 223 Domestic Relations	3	MACH 111 Machine Tool Technology II	4
Term Prerequisite: LAW 115, LAW 215 Semester Prerequisite: LEGL 115, LEGL 215 In-depth study of marriage, divorce, separation, annulment, paternity proceedings, custody, support, property division and other areas of domestic relations law. Emphasis will be on the legal assistant's role in dealing with clients and applying appropriate statutes, case law, and court rules as part of a domestic law practice.		Term Prerequisite: ATR 101, ATR 102 Semester Prerequisite: MACH 110 This course is structured to apply hands-on applications to metal working saws, mills, drills, and surface grinders. Bench work and layout procedures with technical terminology and mathematical applications are developed to the technical level of an apprentice.	

MACH 120-MATH 130

MACH 120 Effective Use of Machinery's Handbook 4	MATH 060 Beginning Algebra: Part A 2
Term Prerequisite: ATM 151	Term Prerequisite: 2.0 in MTH 009/Placement Test
Semester Prerequisite: TECH 101	Semester Prerequisite: 2.0 in MATH 040/Placement Test
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 Machinery's Handbook.	This is the first half of MATH 062, for those who wish to cover Beginning Algebra in two semesters. The topics include the real number system, basic algebraic properties, simplifying expressions, solving linear equations and inequalities, properties of positive and negative exponents, and operations with polynomials. Applications are included throughout the course.
MACH 130 Die Construction 4	MATH 061 Beginning Algebra: Part B 2
Term Prerequisite: DT 100, ATM 150	Term Prerequisite: 2.0 in MTH 010
Semester Prerequisite: TECH 090, TECH 100	Semester Prerequisite: 2.0 in MATH 060
This course will provide each student with a basic understanding of the essential principles of cutting and forming operations, die components such as punches, punch plates, die blocks and strippers, and an in-depth knowledge of how to repair and maintain the equipment common to the die industry.	This is the second half of MATH 062, for those who wish to cover Beginning Algebra in two semesters. The topics include factoring polynomials, operations with algebraic fractions, graphing linear equations in two variables, solving systems of linear equations, square roots, and solving quadratic equations. Applications are included throughout the course.
MACH 135 Metallurgy and Heat Treat 4	MATH 062 Beginning Algebra 4
Term Prerequisite: None	Term Prerequisite: 2.0 in MTH 009/Placement Test
Semester Prerequisite: None	Semester Prerequisite: 2.0 in MATH 040/Placement Test
Course is designed to give students a working knowledge of the properties, uses and heat treat processes of commonly used metals and alloys. The basic principles of metallurgy presented apply to the design, selection, processing, and testing of metal products.	Topics include the real number system, basic properties, simplifying expressions, solving linear equations and inequalities, properties of integer exponents, operations with polynomials, factoring, operations with algebraic fractions, graphing linear equations in two variables, solving systems of linear equations, square roots, and solving quadratic equations. Applications are included throughout the course.
MACH 140 Tooling Theory and Practices 4	MATH 075 Basic Geometry 2
Term Prerequisite: ATR 102	Term Prerequisite: 2.0 in MTH 012/Placement Test
Semester Prerequisite: MACH 110	Semester Prerequisite: 2.0 in MATH 061/062/Placement Test
This course examines tooling used in mechanical material removal. Tooling materials from high speed steel to diamond will be discussed and demonstrated. Tooling geometry, resharpening methods, speeds and feeds, failure mechanisms, and problem diagnosis will be addressed. Students will analyze tooling performance and write up technical reports.	An informal course for students who wish to review or be introduced to 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 angles and of the circle. Proofs and constructions are not included.
MACH 150 Introduction to Plastics 3	MATH 112 Intermediate Algebra 4
Term Prerequisite: None	Term Prerequisite: 2.0 in MTH 012/Placement Test
Semester Prerequisite: None	Semester Prerequisite: 2.0 in MATH 061/062/Placement Test
This course provides each student with a comprehensive understanding of plastics, which includes the properties, design factors and manufacturing processes.	This is an extension of Beginning Algebra with emphasis on polynomials, rational expressions, rational exponents, radicals, graphing linear and quadratic equations and inequalities, complex numbers, and functions. Also emphasized are inequalities, rational equations, quadratic equations, systems of equations, and their applications.
MACH 194 Machine Tool Technology Project Lab 4	MATH 121 College Algebra I 4
Term Prerequisite: ATR 103/Departmental Approval	Term Prerequisite: 2.0 in MTH 102/Placement Test
Semester Prerequisite: MACH 120/Departmental Approval	Semester Prerequisite: 2.0 in MATH 112/Placement Test
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.)	First in two-course sequence. Graphing calculator required. Topics include functions, mathematical models, symmetry, absolute value, distance, solving equations algebraically and graphically, solving inequalities, linear functions, quadratic functions, geometric transformations, real and complex zeros, and rational, radical, exponential, and logarithmic functions. Degree credit may not be earned in both MATH 121-122 and MATH 126.
MACH 210 Principles of Electric Discharge Machining (EDM) 4	MATH 122 College Algebra II and Trigonometry 3
Term Prerequisite: CNC 101	Term Prerequisite: 2.0 in MTH 164/Placement Test
Semester Prerequisite: CNCP 110	Semester Prerequisite: 2.0 in MATH 121/Placement Test
This course introduces the student to the fundamentals of Electrical Discharge Machining (EDM). Safety, principles of operation, programming, and operation of both Ram and Wire EDM are explored. Lectures, demonstrations and projects are used. Projects assigned will require set-up, programming, and operation of EDM machines.	Second in a two-course sequence. Graphing calculator required. Topics include right triangle trigonometry, reference angles, graphing, identities, inverse trig functions, law of sines and cosines, DeMoivre's Theorem, roots of complex numbers, binomial theorem, polar coordinates, vectors, sequences, mathematical induction, and series. Degree credit may not be earned in both MATH 121-122 and MATH 126.
MATH 001 Seminar: Math Minus Anxiety .25	MATH 126 College Algebra and Trigonometry 5
Term Prerequisite: None	Term Prerequisite: 2.0 in MTH 102/Placement Test
Semester Prerequisite: None	Semester Prerequisite: 3.0 in MATH 112/Placement Test
A workshop for students who feel insecure about doing math and need help and encouragement to succeed in 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.	Combination of MATH 121 and 122. Topics include functions, absolute value, solving equations and inequalities, graphing, linear and quadratic functions, zeros, rational, radical, exponential, logarithmic and trigonometric functions, right triangle trigonometry, law of sines and cosines, DeMoivre's Theorem, binomial theorem, vectors, sequences, mathematical induction, and series. Degree credit may not be earned in both MATH 126 and MATH 121-122.
MATH 005 Mathematics Laboratory 0	MATH 130 Finite Mathematics 3
Term Prerequisite: None	Term Prerequisite: 2.0 in MTH 164/Placement Test
Semester Prerequisite: None	Semester Prerequisite: 2.0 in MATH 121/Placement Test
When registering for a Math Lab course, students must register for both a specific course and a MATH 005 section. The MATH 005 section determines the time and place of attendance in a Mathematics Laboratory. This time is used for studying, instructional help, and testing.	This is an alternate course to MATH 122 for students whose programs do not require trigonometry. Topics studied include matrices, linear programming, permutations, combinations, probability, random variables, and the binomial theorem.
MATH 020 Arithmetic Skills 3	
Term Prerequisite: Placement Test	
Semester Prerequisite: Placement Test	
The course focuses on arithmetic skills and practical applications with whole numbers, decimals, fractions, percents and proportions. Work is done both with and without a calculator. Confidence building and study skills for success in mathematics are emphasized.	
MATH 040 Pre-Algebra Mathematics 4	
Term Prerequisite: MTH 008/Placement Test	
Semester Prerequisite: MATH 020/Placement Test	
This course reviews whole numbers, fractions, and decimals. Topics studied include ratio and proportions, percents, measurement (including metric), statistical graphs, geometry, signed numbers, and simple algebraic expressions and equations. Applications are emphasized in all topics.	

MATH 141 Calculus with Applications	3	MATH 297 Independent Study in Mathematics	3
Term Prerequisite: 2.0 in MTH 164/Placement Test Semester Prerequisite: 2.0 in MATH 121/Placement Test This course is for students in business, economics, social science, life sciences, and other areas not requiring a rigorous study of calculus. Topics studied include limits, derivatives, and integrals with an emphasis on applications to the above-mentioned disciplines.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of mathematics not covered by an existing course. Student works independently under the supervision of a faculty member. Students devote nine or more hours per week to this study in addition to their work with the assigned instructor.	
MATH 151 Calculus I	4	MATH 298 Independent Study in Mathematics	4
Term Prerequisite: 2.0 in MTH 165/Placement Test. Semester Prerequisite: 2.0 in MATH 122/MATH 126/Placement Test The first of a three-semester sequence in differential and integral calculus. Topics include limits, continuity, differentiation of rational and trigonometric functions, applications of derivatives, curve sketching, elementary indefinite integration, and the Fundamental Theorem of Calculus.		Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of mathematics not covered by an existing course. Student works independently under the supervision of a faculty member. Students devote 12 or more hours per week to this study in addition to their work with the assigned instructor.	
MATH 152 Calculus II	4	MDCS 200 Dynamics of Relationships	.5
Term Prerequisite: 2.0 Minimum in MTH 213 Semester Prerequisite: 2.0 Minimum in MATH 151 Applications of the definite integral are emphasized along with methods of integration and differentiation involving exponential, trigonometric, and logarithmic functions. Integration by parts, partial fractions, improper integrals, polar coordinates, sequences, and series are also studied.		Term Prerequisite: None Semester Prerequisite: None This workshop will train participants to develop positive, productive relationships. Participants will develop a variety of skills to deal with specific kinds of problems.	
MATH 201 Math for Liberal Arts	3	MDCS 201 Listening and Facilitation Skills	.5
Term Prerequisite: MTH 102 Proficiency Semester Prerequisite: MATH 112 Proficiency Topics studied provide an understanding of what mathematics is. Topics include number theory, logic, probability, mathematical games, graph theory, geometry, and algorithmic reasoning. A strong historical theme is present throughout. The student is involved in concept development as well as in finding answers.		Term Prerequisite: None Semester Prerequisite: None This seminar aims to enhance the skills of all personnel in individual listening and in facilitation of groups and teams. If participants are able to use these skills, they are more likely to function more effectively as they seek to implement organizational goals and objectives.	
MATH 253 Calculus III	4	MDCS 203 Increasing Human Effectiveness	1.75
Term Prerequisite: 2.0 Minimum in MTH 214 Semester Prerequisite: 2.0 Minimum in MATH 152 Applications of infinite series are emphasized. Vectors, applications of vectors, multivariable functions, partial differentiation, gradients, directional derivatives, double and triple integration are also studied.		Term Prerequisite: None Semester Prerequisite: None Effective communication skills are essential for any relationship. The ability to establish and maintain productive relationships is vital in a professional as well as personal life. Increasing Human Effectiveness explores factors affecting interpersonal relationships and the processes used to give and gather information.	
MATH 254 Introduction to Differential Equations	3	MDCS 205 Sexual Harassment	.25
Term Prerequisite: MTH 215 Semester Prerequisite: 2.0 Minimum in MATH 253 An introduction to the basic methods for solving ordinary differential equations, including the methods of undetermined coefficients, variation of parameters, series, Laplace transforms, and numerical methods. Applications are emphasized.		Term Prerequisite: None Semester Prerequisite: None This seminar will increase participants' understanding of what is and what is not sexual harassment and how to handle a situation that involves sexual harassment whether subtle or blatant, whether against male or female.	
MATH 260 Linear Algebra	3	MDCS 206 Valuing Cultural Diversity	.5
Term Prerequisite: 2.0 Minimum in MTH 215 Semester Prerequisite: 2.0 Minimum in MATH 253 This introduction to linear algebra includes the study of systems of linear equations, matrix algebra, vector spaces, linear transformations, eigenvalues and eigenvectors, with applications.		Term Prerequisite: None Semester Prerequisite: None The aim of this seminar is to apply knowledge learned about workforce diversity to life and work situations. Working with diverse populations is a critical factor for success in the 1990s and beyond. People who understand and value cultural, gender, and racial differences will be better equipped to work with one another and to improve their working relationships. Participants will apply specific program content to situations involving potential conflict, opportunities for self awareness, and work-group effectiveness.	
MATH 281 Honors Math Seminar I	1	MDCS 210 Solving Time Management Frustrations	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students solve a set of challenging mathematics problems which are not normally encountered in other classes. Creative and independent thinking is encouraged and developed.		Term Prerequisite: None Semester Prerequisite: None 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, schedule, and utilize time management skills.	
MATH 282 Honors Math Seminar II	1	MDCS 211 How to Get Things Done	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students may take this course after taking MATH 281. Students solve a set of challenging mathematics problems, different from those in MATH 281, which are not normally encountered in other classes. Creative and independent thinking is encouraged and developed.		Term Prerequisite: None Semester Prerequisite: None 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.	
MATH 295 Independent Study in Mathematics	1	MDCS 214 Stress Management	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of mathematics not covered by an existing course. Student works independently under the supervision of a faculty member. Students devote three or more hours per week to this study in addition to their work with the assigned instructor.		Term Prerequisite: None Semester Prerequisite: None 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.	
MATH 296 Independent Study in Mathematics	2	MDCS 220 Managing Your Career	.5
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An independent study in some area of mathematics not covered by an existing course. Student works independently under the supervision of a faculty member. Students devote six or more hours per week to this study in addition to their work with the assigned instructor.		Term Prerequisite: None Semester Prerequisite: None An intensive oneday seminar designed to acquaint the participants with personal career-planning techniques. The program emphasizes selfdirection and responsibility for career growth. Primarily emphasis is upon becoming successful in one's current position first and then building long-term career goals based upon this success.	

<p>MDCS 221 You and Your Boss: A Successful Team .5 Term Prerequisite: None Semester Prerequisite: None There's skill involved in complementing the strengths of your boss and together forming a productive work team. This is a specific "how to" course that trains participants to assess their strengths and those of their boss and to build on strengths to develop successful working relationships.</p>	<p>MDCS 245 Customer Service 1.25 Term Prerequisite: None Semester Prerequisite: None All employees have the potential for creating good customer relations and improving the image of the organization. The critical factors include increased motivation through a positive mental attitude, effective communication with different types of customer personalities, sensitive handling of customer complaints, and successful strategies for meeting needs to satisfy customers.</p>
<p>MDCS 225 Problem-Solving/Decision-Making .5 Term Prerequisite: None Semester Prerequisite: None 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 an individual.</p>	<p>MDCS 250 Management Skills I 1.25 Term Prerequisite: None Semester Prerequisite: None This two-day seminar is designed to help supervisors analyze their present strengths and skills affecting their management of groups of employees. Participants will explore and practice techniques to aid them in becoming more effective managers.</p>
<p>MDCS 229 Effective Presentation Skills 1.25 Term Prerequisite: None Semester Prerequisite: None This twoday seminar covers the techniques of an effective presentation: planning, preparing, and presenting. This seminar culminates with participants giving a 10-minute presentation. Emphasis will be given to practicing and critiquing presentation skills.</p>	<p>MDCS 251 Management Skills II 1.25 Term Prerequisite: None Semester Prerequisite: None This seminar is designed to help supervisors analyze their present strengths and skills affecting their management of group employees. Participants will explore and practice techniques to aid them in becoming more effective managers.</p>
<p>MDCS 230 Developing Instructional Materials 1.75 Term Prerequisite: None Semester Prerequisite: None Learn how to write goals and objectives, sequence instruction, identify strategies, develop assessment tools, and evaluate your instruction materials. During the seminar, you will develop materials for your own training programs.</p>	<p>MDCS 252 Supervisory Skills Training 2.5 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>MDCS 231 Guiding the Training Process 1.75 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MDCS 255 Power and Risk Management 1.25 Term Prerequisite: None Semester Prerequisite: None This workshop is designed to give some basic power concepts, and to help develop an understanding of how the organization in which we work affects one's ability to have and to use power effectively. This workshop looks at the organizations and how they affect people's power strategies.</p>
<p>MDCS 232 Applying the Principles of Adult Learning .5 Term Prerequisite: None Semester Prerequisite: None This seminar considers four fundamental principles of adult learning. Topics include motivation resistant learners, creating a positive climate for learning, participative training techniques, and learning contracts.</p>	<p>MDCS 259 Managing Problem Employees .5 Term Prerequisite: None Semester Prerequisite: None Participants will learn why some employees perform their jobs unacceptably and are "problems" to supervisors and what they can do about them.</p>
<p>MDCS 233 Instructional Media for Trainers 1.25 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MDCS 260 Leading Diverse Work Groups 1.5 Term Prerequisite: None Semester Prerequisite: None Participants in this seminar will learn to apply knowledge about work force diversity to work situations relative to human resource management, communication, potential conflict, and work group effectiveness.</p>
<p>MDCS 234 Teaching Through Demonstration 1.25 Term Prerequisite: None Semester Prerequisite: None 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. Participants also learn how to overcome anxiety and learning barriers.</p>	<p>MDCS 261 Managing Diverse Workforce-'90s 1.75 Term Prerequisite: None Semester Prerequisite: None Participants in this seminar will learn to apply knowledge about work force diversity to work situations relative to human resource management, communication, potential conflict, and work group effectiveness. Participants will be better able to do their job, and be better equipped to promote improved working relations within the organization.</p>
<p>MDCS 235 Using Audiovisual Equipment 1.25 Term Prerequisite: None Semester Prerequisite: None In this basic level seminar, participants will learn to set up, operate, trouble shoot, and disassemble the following equipment: 16mm film projector, overhead projector, slide projector, audiotape player, video recorder, and flip chart.</p>	<p>MDCS 264 Leading Effective Meetings .5 Term Prerequisite: None Semester Prerequisite: None The purpose of this workshop is to help participants develop the skills necessary for leading effective meetings. Those skills include the many facets of planning and preparing for a meeting, conducting a meeting, and following up on a meeting.</p>
<p>MDCS 239 Train-the-Trainer 1.75 Term Prerequisite: None Semester Prerequisite: None The new and the seasoned trainer can use this seminar to re-think training strategies and to sharpen skills in developing and facilitating training activities. The emphasis in this seminar is on the practical strategies of organizing and conducting instructional or training activities. There will be an opportunity to practice these skills.</p>	<p>MDCS 266 Managing Organizational Change .5 Term Prerequisite: None Semester Prerequisite: None This workshop 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 internal and external environment.</p>
<p>MDCS 240 Telemarketing .5 Term Prerequisite: None Semester Prerequisite: None This seminar is designed to make people more productive over the telephone. It teaches telephone selling skills to help participants make better use of time and increase sales. It will also show how to put information power to work.</p>	

MDCS 268 Project Management	1.25	MDCS 282 Solving Performance Problems	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This training will prepare state personnel to understand and effectively administer a project. All aspects of analyzing project intent, planning, budgeting, use of funds, program evaluation, staff administration, information management, report writing, crises elimination, and trouble avoidance, will be covered.		A primary element for solving performance problems is creating and sustaining a supportive work environment. This seminar provides training to supervisors and managers that will help identify and solve work problems and encourage peak employee activity.	
MDCS 270 Management I	2.5	MDCS 290 Selection and Evaluation Interviewing	1.25
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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.		This seminar covers the three stages of the hiring process. Activities include developing interview questions from civil service job descriptions, discussing Equal Employment Opportunity and Affirmative Action concerns, practicing interview techniques, interpreting interview information, and describing critical orientation procedures for new employees.	
MDCS 271 Management II	2.5	MDCS 295 Job Description and Performance Standards	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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.		This workshop 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 internal and external environment.	
MDCS 272 Management III	2.5	MDCS 296 Employee Selection Interviewing	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Effective managers must know how to work with groups, both direct and indirect. Management III examines group dynamics and processes effective ways of leading and working with and through groups. Since managing is more than knowledge, this program stresses development of attitude, skills, and behavior.		Learn a three-stage model for interviewing (planning, conducting the interview, deciding), the characteristics of an effective interview, and legal and illegal pre-employment inquires. Practices skills for conducting the interview.	
MDCS 275 Dynamic Leadership	.5	MDCS 297 Coaching Work Performance	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Dynamic leaders create visions and translate those 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.		Learn to address performance problems so that employees know what is wrong and how to correct it. Learn how to reinforce expected performance, communicate expectations, and utilize effective feedback methods and goal setting.	
MDCS 276 Team Building	.5	MDCS 298 Employee Performance Appraisal	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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.		The primary reason for implementing a performance appraisal system is to effectively communicate with employees about job performance. In this seminar participants will learn how to set standards, evaluate performance, and conduct performance appraisal meetings.	
MDCS 277 Leading Group Decision-Making	.5	MDCS 299 Managing Discipline	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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 seminar will train participants in the skills of leading and the processes of decision-making.		Learn the difference between prevention and corrective discipline, how to utilize documentation, and the critical steps of due process to ensure the rights of all individuals.	
MDCS 278 Strategic Planning	.5	MEDA 100 MA Administrative/Communication Skills	5
Term Prerequisite: None		Term Prerequisite: Admission to Program	
Semester Prerequisite: None		Semester Prerequisite: Admission to Program	
Effective strategic planning is essential for longterm success in the work market. It focuses on doing the right thing, on being effective. This seminar teaches a team approach to strategic planning.		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. Also provides students with an understanding of interpersonal skills.	
MDCS 279 Communicating Thoughts Effectively	.5	MEDA 114 Legal Ethical Concepts	1
Term Prerequisite: None		Term Prerequisite: Admission to Program	
Semester Prerequisite: None		Semester Prerequisite: Admission to Program	
Collecting one's thoughts and speaking extemporaneously to present one's reaction, viewpoint, or pertinent information is a vital ability for leaders. This workshop will instruct participants in the strategies for gathering one's thoughts and presenting them clearly and logically.		Designed to familiarize the student with the basic concepts relating to medical ethics, legal medicine, and professional liability.	
MDCS 280 Improving Interpersonal Relationships	.5	MEDA 124 Microcomputers in Health	2
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: Allied Health Professional	
Good interpersonal skills are essential for productive working relationships and for maintaining an efficient working environment. This seminar provides training to managers on techniques for strengthening interpersonal skills for improved working relationships.		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, database management, and medical office management.	
MDCS 281 Working With Difficult People	.5	MEDA 131 Clinical Skills I	4
Term Prerequisite: None		Term Prerequisite: CHS 121, AHC 108	
Semester Prerequisite: None		Semester Prerequisite: AHCC 108	
Difficult people create problems! In this practical seminar, participants will observe and practice effective strategies for handling difficult people. Participants will be able to reduce the problems difficult people create.		Designed to provide knowledge in clinical skills relating to the following topics: physical measurements; health history and physical examination; infection control; instrument sanitation, disinfection and sterilization; health care process; problem-oriented medical records; physical therapy; and universal precautions.	

<p>MEDA 132 Clinical Skills II 4 Term Prerequisite: MA 131 Semester Prerequisite: MEDA 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.</p>	<p>MFGM 111 Machine Maintenance II 4 Term Prerequisite: ATR 218 Semester Prerequisite: MFGM 110 Advanced theory and practice of machine tool repair including preventive maintenance. Also, the theory and repair of pumps and pneumatic tools will be covered.</p>
<p>MEDA 141 Basic Medical Laboratory Procedures 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course introduces the student to the clinical laboratory. Laboratory organization and safety will be discussed. Quality assurance issues will be emphasized. Basic principles and procedures for laboratory tests will be presented including collection and preparation of specimens, venipuncture, capillary puncture, urinalysis, and hematological testing.</p>	<p>MFGM 120 Industrial Presses 4 Term Prerequisite: None Semester Prerequisite: None 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 employees, press operators, and die setup employees.</p>
<p>MEDA 142 Advanced Medical Laboratory Procedures 2 Term Prerequisite: MA 141 Semester Prerequisite: MEDA 141 This course enables the student to understand and perform some of the more complex laboratory tests performed in medical offices. Basic pathophysiology will be discussed. Tests from the following areas will be covered: clinical chemistry, immunology, microbiology and hematology. Collection and preparation of specimens, etc.</p>	<p>MFGM 125 Rigging 2 Term Prerequisite: ATM 150 Semester Prerequisite: TECH 100/Equivalent 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 will be covered.</p>
<p>MEDA 143 Introduction to Radiography 2 Term Prerequisite: Admission to Program Semester 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.</p>	<p>MFGM 170 Fork Lift Truck Driver Training .5 Term Prerequisite: None Semester Prerequisite: None This course will teach the safe operation of industrial lifting and touring trucks. All instruction leads toward a State of Michigan lift truck certificate.</p>
<p>MEDA 151 Medical Assistant Pharmacology 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Admission to Program 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.</p>	<p>MGMT 200 Problem Solving and Thinking Skills for Managers 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>MEDA 181 Administrative Externship 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Admission to Program Administrative externship is designed to provide application of administrative theory. This course is programmed with specific performance objective and activities.</p>	<p>MGMT 223 Supervisory and Human Resources Management 4 Term Prerequisite: None Semester Prerequisite: None This course presents management principles and practices for first-line supervisors. Managerial functions of planning, organizing, staffing, directing, and controlling are discussed. Employee relations from recruitment through post-retirement are emphasized. Students will understand the responsibilities of supervisors for overall work performance and employee development and evaluation.</p>
<p>MEDA 182 Clinical Externship 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Admission to Program 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.</p>	<p>MGMT 225 Principles of Management 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>METR 220 Introduction to Meteorology 3 Term Prerequisite: NS 121/Instructor Approval Semester Prerequisite: Science Inventory Passed, MATH 062 A study of the interrelationships of the elements (temperature, moisture, pressure, wind) that create weather. Human-atmospheric interactions (e.g., pollution, severe weather, greenhouse effect), world climate, and climatic change are also discussed. Laboratory includes making weather observations and measurements, and learning how to draw and interpret weather maps.</p>	<p>MGMT 227 Training and Development for Business 2 Term Prerequisite: None Semester Prerequisite: None Training and development for business is a course designed to cover all aspects of training in the business environment. The course will focus on assessing training needs, identifying training barriers, curriculum design, instructional techniques, evaluation, and adult learning theory.</p>
<p>MFGM 101 Industrial Hydraulics 4 Term Prerequisite: ATM 151 Semester Prerequisite: TECH 100 Industrial Hydraulics introduces the theory of fluid power and circuits covering pumps, pressure valves, flow valves, cylinders, filters and motors, etc., as they are used in industry today. This will be done with lectures and labs related to each of the respective components.</p>	<p>MGMT 228 Organizational Behavior 3 Term Prerequisite: None Semester Prerequisite: None Examines the dynamics of relationships at work. Integrates and applies behavioral and social science knowledge, using a systems approach, and focusing on the nature of both people and organizations. Students will study individual and group behavior and will have opportunities to work on skills necessary for successful interaction in organizations.</p>
<p>MFGM 102 Industrial Pneumatics 3 Term Prerequisite: ATM 151 Semester Prerequisite: TECH 100 Introduces the students to the theory of industrial pneumatic systems. The theory of gas laws, pumps, filters, valves, etc., will be discussed as they are applied to the industrial pneumatics systems. The use of lecture and labs will give the students a hands-on approach to the use of pneumatics.</p>	<p>MGMT 237 Introduction to Total Quality Management 3 Term Prerequisite: None Semester Prerequisite: None Provides an introduction to concepts of total quality management applied to non-manufacturing industries. Covers the history of TQM including key thinkers/leaders. Explores new ways of thinking and leading. TQM tools and practices, using teams, empowerment, and "learning organizations."</p>
<p>MFGM 110 Machine Maintenance I 4 Term Prerequisite: Departmental Approval Semester Prerequisite: TECH 100/Equivalent Theory and industrial application of machine repair, preventive maintenance, safe practices, and troubleshooting, with actual dismantling and rebuilding of tool room machines.</p>	

<p>MGMT 239 Time and Stress Management 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MGMT 251 Communication Skills for Managers 1 Term Prerequisite: None Semester Prerequisite: None 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 supplement is included.</p>
<p>MGMT 240 How Managers Make Things Happen 2 Term Prerequisite: None Semester Prerequisite: None A practical skills-building program that concentrates on the functions that most often determine success in management. It shows you how to improve your performance in each key area by analyzing your job, breaking it down into functional components, spotting weaknesses, and taking concrete action to turn them around.</p>	<p>MGMT 252 How to Deliver a Winning Presentation 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>MGMT 241 How Successful Women Manage 1 Term Prerequisite: None Semester Prerequisite: None This course is an overview of the various functions and processes involved in management. Students will explore 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 management.</p>	<p>MGMT 253 How to Write Winning Reports 1 Term Prerequisite: None Semester Prerequisite: None This course helps students develop a more concise straightforward writing style. It will help you express your ideas more clearly in memos, letters and reports.</p>
<p>MGMT 242 Manager's Guide to Working With People 1 Term Prerequisite: None Semester Prerequisite: None Designed for managers who want to work effectively with people, both on and off the job. Students will acquire an understanding of human needs and motivation, leadership styles, problem-solving techniques, and effective self-assertive methods. Students will also learn how to deal with difficult behavior by instituting positive work strategies.</p>	<p>MGMT 254 How to Write a Business Plan 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>MGMT 243 How to Delegate Effectively 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MGMT 255 How to Use Lotus 1-2-3 1 Term Prerequisite: None Semester Prerequisite: None 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 procedure of Lotus 1-2-3.</p>
<p>MGMT 244 Supervisory Management 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MGMT 256 Strategic Planning for Entrepreneurial Business 1 Term Prerequisite: None Semester Prerequisite: None Owners and managers of new and growing businesses, or of companies that operate within an entrepreneurial environment, will learn how to prepare a strategic plan. Students will learn about organizational charts, goal-setting matrices, diagnostic summary sheets, and checklists—all designed to help them create a plan that works.</p>
<p>MGMT 245 Leadership Skills for Managers 1 Term Prerequisite: None Semester Prerequisite: None In this course the learner will discover the secrets of great leadership and learn about the four basic leadership styles. You will master the art of goal setting, find your most effective leadership style, and know when to use the right style at the right time.</p>	<p>MGMT 257 Using Math as a Business Tool 1 Term Prerequisite: None Semester Prerequisite: None This course is designed to increase familiarity with formulas 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 break-even analysis.</p>
<p>MGMT 246 Fundamentals of Modern Personnel Management 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MGMT 260 How to Analyze the Competition 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>MGMT 247 How to be a Successful Project Manager 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>MGMT 261 Psychology of Selling and Winning 1 Term Prerequisite: None Semester Prerequisite: None This course helps 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. It teaches participants what to do to become top professional salespeople and why they should do it in order to sell successfully.</p>
<p>MGMT 250 Fundamentals of Finance and Accounting/Non-Financial Mgrs 2 Term Prerequisite: None Semester Prerequisite: None Provides the manager with an understanding of finance. Will help students learn to read and interpret financial statements, annual reports, and balance sheets. This course will help students use financial and accounting data more effectively.</p>	<p>MGMT 262 How to Keep Satisfied Customers 1 Term Prerequisite: None Semester Prerequisite: None This 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.</p>
	<p>MGMT 263 Successful Marketing for Service Organizations 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>

<p>MGMT 264 How to Write a Marketing Plan 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>	<p>MGMT 300 Introduction to Management 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Explores the roles and functions of middle to upper level managers. Presents an overview and analysis of processes by which managers help organizations obtain their stated goals. Students apply managerial theories and skills to help them develop abilities in the areas of planning, communication, decision-making, change management, and ethics.</p>
<p>MGMT 265 Using Microcomputers in Marketing 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>	<p>MGMT 301 Strategic Management and Policy 3</p> <p>Term Prerequisite: MGT 300/BUS 225 Semester Prerequisite: MGMT 300/MGMT 225</p> <p>The course pulls together learning from the areas of management and marketing to consider an overall organizational perspective—strategic plan formulation and implementation for the whole organization. The process involves pursuing organizational mission while managing the relationship of the organization to its environment.</p>
<p>MGMT 270 Time and Stress Management 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course covers principles of time management, as applied to both personal and professional situations. Learners will also become aware of positive and negative stress, relaxation techniques, and ways to reduce stress through changes in lifestyle.</p>	<p>MGMT 304 Organizational Development 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Based on the assumption that all managers must recognize, plan for, and manage organizational change, this course examines the process of improving organization effectiveness by means of a systematic change program. Students practice identifying problems, selecting appropriate interventions, building action plans, and developing facilitator skills.</p>
<p>MGMT 271 Managing and Resolving Conflict 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>In this course you will learn about the practical knowledge, proven techniques and psychological insights needed to resolve conflicts successfully. By using case studies, critical incidents, and realistic examples of conflict resolution, you will learn these crucial skills.</p>	<p>MGMT 329 Advanced Management Communication Skills 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This is an advanced course in interpersonal communication skills for business. It includes components of listening, interpersonal communication, oral presentations, interviewing techniques, meeting management, business report writing, and persuasive speaking. This class is both informational and experiential.</p>
<p>MGMT 272 Success Through Assertiveness 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>	<p>MGMT 332 Managerial Ethics 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>
<p>MGMT 273 Understanding and Assessing Personal Interaction Skills 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>	<p>MGMT 335 Managerial Statistics 3</p> <p>Term Prerequisite: MTH 012/Equivalent Semester Prerequisite: MATH 062/Equivalent</p> <p>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.</p>
<p>MGMT 274 Personal Financial Planning 2</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course will show students how to start building financial security. It emphasizes spending strategies and capital-building techniques rather than house-keeping methods. Included is a computer template disk to accompany Lotus 1-2-3 for student use during the course.</p>	<p>MGMT 337 Human Resource Management Skills 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>
<p>MGMT 275 How to Build Memory Skills 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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.</p>	<p>MGMT 338 Current Topics in Management 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Study of specific topics and issues in today's society that affect managerial decisions. Students explore internal and external constraints on actions. External factors considered are legal, social, educational, and political. Special emphasis is given to international events impacting domestic management practices. Internal factors considered are shareholders, employees, and customers.</p>
<p>MGMT 276 How to Improve Writing Skills 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>This course helps students strengthen their ability to write and speak effectively. Learners will understand the proper use of words and phrases associated with business. Workbook practice and review exercises are provided.</p>	<p>MGMT 339 Management Styles and Corporation Strategies 3</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>Numerous current materials relating to management styles and corporation strategies in Japan will acquaint the student with management as practiced in Japan. Japanese management practices are presented as an alternative managerial style for the United States to explore. (This course is offered only as part of the Japan Adventure Program.)</p>
<p>MGMT 277 Speed Learning 1</p> <p>Term Prerequisite: None Semester Prerequisite: None</p> <p>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 audiocassettes.</p>	<p>MGMT 346 Managerial Finance 3</p> <p>Term Prerequisite: ACC 101/ACC 210/Equivalent Semester Prerequisite: ACCG 101/ACCG 210/Equivalent</p> <p>This course is designed to provide necessary and practical skills to deal with financial matters and communicate with people who specialize in finance. Topics covered include basic financial analysis, short-term and long-term financing, financial planning, and managing the finance function.</p>
<p>MGMT 280 Management Internship 3</p> <p>Term Prerequisite: Coordinator Approval Semester Prerequisite: Coordinator Approval</p> <p>Internships provide students with actual job training and experience by working with business owners and/or managers in organizing and/or operating a business. Minimum of 160 hours of work required.</p>	

MICR 203 Microbiology 3	MKTG 122 Field Sales Internship 3
Term Prerequisite: 2.0 BIO 101/Equivalent	Term Prerequisite: MKT 120/Departmental Approval
Semester Prerequisite: BIOL, CHEM Recommended	Semester Prerequisite: MKTG 120/Departmental Approval
An introduction to bacteria, viruses, and parasitic organisms as they relate to human health. Emphasis on bacterial and viral structure and life cycles; antimicrobial therapy; immunology and host defenses; and the epidemiology, treatment, and prevention of selected infectious human diseases.	Practical field sales experience working in consumer or industrial sales. Opportunity to develop advanced selling techniques and refine selling skills. Minimum of 160 hours of work required.
MICR 204 Microbiology Laboratory 1	MKTG 123 Computer Field Sales Internship 3
Term Prerequisite: PGY 212/Concurrently	Term Prerequisite: Departmental Approval
Semester Prerequisite: MICR 203 Concurrently	Semester Prerequisite: MKTG 120/Departmental Approval
Basic laboratory principles of microbiology for allied health students. Emphasis on microscopy, aseptic cultivation of microorganisms, differential staining, assays of antimicrobial agents, and diagnostic laboratory techniques. Students will identify unknown bacterial species and examine medically important parasites.	Practical computer field sales experience working in consumer or industrial sales. Opportunity to develop advanced selling techniques and refine selling skills. Minimum of 160 hours of work required.
MILS 101 The Military Profession 1	MKTG 124 Practical Selling 3
Term Prerequisite: None	Term Prerequisite: Working in Sales
Semester Prerequisite: None	Semester Prerequisite: Working in Sales
This course analyzes the military profession and organization of the U.S. Army from several academic perspectives and explores the technical, ethical, and personal ramifications of service as an officer in the U.S. Army. This course provides an introduction to military leadership which draws upon examples from military history.	This course is hands-on training helping students improve their sales technique and ultimately their earnings.
MILS 102 Land Navigation 1	MKTG 130 Retailing 3
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This course includes an overview and practical exercise in the use of military topographic maps. This course will cover methods of reading and interpreting map symbols; determining elevation and relief; measuring distance; and using the techniques of intersection, resection, modified resection, and polar coordinates to determine location. Lab includes land navigation exercises using a lensatic compass in a field environment.	Students will gain understanding of activities and strategies used in selling goods to ultimate consumers. The course develops an awareness of problems facing retailers and explores feasible solutions. Career opportunities in retailing are examined.
MILS 201 Leadership Assessment Program: The Military Leader 1	MKTG 131 Fashion Merchandising 2
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This course examines individual leadership development using standardized assessment technology to evaluate potential to command and lead. Communications, administrative, personal relations and decision-making skills training, ethical career assessment, and sources of professional obligation will be reviewed. Lab includes rappelling and smallbore rifle marksmanship.	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 are explored.
MILS 202 Military First Aid, Leadership Assessment, Fitness Training 1	MKTG 135 Telemarketing 2
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This course provides instruction in emergency first-aid techniques including casualty evaluation, life saving measures, CPR, and environmental injury prevention. It reviews the Army's Physical Fitness Program, and individual and group fitness programs are introduced. Rappelling, individual/squad tactics, and field training exercises are provided. Lab includes leadership training.	This course is designed to make people more productive over the telephone. The course teaches skills to help increase productivity and sales by mastering the art of telephone selling. The course will demonstrate practical methods and alternatives that work to increase efficiency and closing percentages.
MKTG 100 Current Issues in Business 3	MKTG 140 Introduction to Advertising 3
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
This is an introductory course designed to enhance a student's occupational preparedness and competence by promoting a better understanding of the competitive enterprise system. Classroom instruction will be combined with relevant marketing projects and professional community involvement to give students a solid foundation of marketing knowledge and managerial "know-how."	Methods and techniques used in modern advertising. Information on the entire advertising function. Preparation of an advertising campaign will be required to facilitate hands-on understanding of the component parts which include marketing review, marketing plan, creative strategy, and media selection.
MKTG 119 Marketing and Managing Your Professional Image 3	MKTG 200 Principles of Marketing 3
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
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. Students will understand the importance of a professional image as it relates to business success and will develop a personal image development plan.	Designed to define marketing, develop an understanding of the marketing concept and functions, and generally investigate the field of marketing. Will cover the marketing environment, identifying consumer needs, examining product, price, promotion, and distribution strategies within our society. Provides a basic marketing understanding with practical applications.
MKTG 120 Sales 3	MKTG 202 Managerial Marketing 3
Term Prerequisite: None	Term Prerequisite: MKT 200
Semester Prerequisite: None	Semester Prerequisite: MKTG 200
This course presents the fundamentals of sales and highlights its role in the marketing mix. Students will develop basic skills needed to enter the field. Topics include customer buying habits, the sales process, product demonstration techniques, and the analysis of human relations aspects of sales.	The course focuses on the solution of marketing problems through case analysis. It relates marketing to the total enterprise by analyzing problems, and suggesting approaches to business decision-making. Particular attention is paid to the elements of the marketing mix and how marketing management deals with these variables.
MKTG 121 Advanced Sales 2	MKTG 204 Marketing Research 3
Term Prerequisite: MKT 120/Coordinator Approval	Term Prerequisite: MKT 200
Semester Prerequisite: MKTG 120/Departmental Approval	Semester Prerequisite: MKTG 200
An analysis of the sales interview. Student presentations are videotaped to assess individual skill levels, evaluate sales style and provide direction for improvement.	Types of data, sampling, data collection, analysis, interpretation, and applications of marketing research. A practical managerial approach—not a statistical or mathematical orientation. Students will design and execute a marketing research project.
	MKTG 220 Sales Management 2
	Term Prerequisite: MKT 120/Equivalent
	Semester Prerequisite: MKTG 120/Equivalent
	Explores strategies used in managing salespeople. Training, recruiting, motivation, evaluation, planning, and organizing are all emphasized. The case method of learning is utilized, along with role-playing.

MKTG 221 Consumer Behavior	2	MTEC 150 Visual Media Design	4
Term Prerequisite: None		Term Prerequisite: MRT 150/Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: Departmental Approval	
Covers the basic perspectives involved in consumer motivation and decision-making. Students will investigate relevant variables that shape consumer actions and concepts that integrate the study of consumer behavior with the practice of marketing.		This course places special emphasis on the components of effective visual communication. The development of pre-production processes related to visual composition, scriptwriting, storyboarding, lighting, and floor plot designs are emphasized. An introduction to studio and field production formats is included in classroom activities. Class sessions contain instructional and performance exercises.	
MKTG 231 Independent Study in Marketing	1	MTEC 151 Electronic Field Production I	4
Term Prerequisite: Coordinator Approval		Term Prerequisite: MRT 152	
Semester Prerequisite: Coordinator Approval		Semester Prerequisite: MTEC 150	
Advanced marketing students design, implement, and draw conclusions relevant to a marketing project in a specific area of interest in marketing. Minimum of 16 hours work is required.		This course provides the student with an introduction to the process of single camera, remote video production. In addition, the course helps the student in developing an aesthetic reference for critiquing contemporary video programming. In-class assignments are evaluated using technical and artistic guidelines.	
MKTG 232 Independent Study in Marketing	2	MTEC 220 Audio Production II	4
Term Prerequisite: Coordinator Approval		Term Prerequisite: MRT 120, Departmental Approval	
Semester Prerequisite: Coordinator Approval		Semester Prerequisite: MTEC 120	
Advanced marketing students design, implement, and draw conclusions relevant to a marketing project in a specific area of interest in marketing. Minimum of 32 hours work is required.		A second course in audio production providing advanced audio theory and production practice. Included are topics in tape editing of musical material, use of audio effects in production, additional production mixing, and an introduction to digital editing.	
MKTG 233 Independent Study In Marketing	3	MTEC 221 Audio Recording II	4
Term Prerequisite: Coordinator Approval		Term Prerequisite: MRT 220, Departmental Approval	
Semester Prerequisite: Coordinator Approval		Semester Prerequisite: MTEC 121	
Advanced marketing students design, implement, and draw conclusions relevant to a marketing project in a specific area of interest in marketing. Minimum of 48 hours work is required.		A second course in audio recording that covers advanced techniques used in multi-track studio recording for music, film and video. Emphasis is on use of the multi-track studio and signal processing equipment for multi-track mixdown. Topics in acoustics, equipment alignment, and engineering skills are also included.	
MKTG 235 Marketing Internship	3	MTEC 223 Sound Reinforcement Practicum	1
Term Prerequisite: Coordinator Approval		Term Prerequisite: MRT 218, Departmental Approval	
Semester Prerequisite: BUSN 118, MKTG 200, Coordinator Approval		Semester Prerequisite: MTEC 122	
Practical work experience in an approved business setting. Minimum of 160 hours work required.		A practical sound reinforcement activity combining specific theories related to the larger project with the opportunity to design, assemble, load, transport, erect, operate, and strike a large outdoor reinforcement system. Students operate the system to provide reinforcement for the bands that play in Riverfront Park on the Fourth of July.	
MTEC 101 Basic Home Video	2	MTEC 224 Audio Production III	3
Term Prerequisite: None		Term Prerequisite: MRT 125, Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: MTEC 220	
An introductory course for non-majors designed to instruct the amateur camcorder user and semi-professional video camera operator in the techniques of producing effective video presentations. Students will learn how to incorporate professional video techniques into both home and business video programs.		An advanced production course emphasizing the use of digital audio editing techniques to produce or sweeten audio elements for video and other media. Projects will be produced at digital audio workstations. A course for Media Technology majors.	
MTEC 102 Old Time Radio	2	MTEC 227 Audio Recording III	3
Term Prerequisite: None		Term Prerequisite: MRT 225, Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: MTEC 221	
A non-technical review for non-majors of the early days of radio in the United States. Consideration will be given to historical aspects of the medium such as network development, the emergence of personalities, and the popularity of various programs. Recordings of early presentations will be played in class.		A third course in audio recording that addresses topics in digital audio, MIDI control of synthesizers and applications involving SMPTE. Students work with computers and synthesizers to produce multi-track recordings.	
MTEC 110 An Introduction to the Broadcast and Electronic Media	4	MTEC 230 Radio Production II	4
Term Prerequisite: None		Term Prerequisite: MRT 132, Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: MTEC 130	
A survey of the history, technology, regulation, economics, programming, and societal effects of the electronic media.		Presentation of advanced studio and remote-production techniques. Emphasis on writing, producing, and performing for commercials, news, and sports programs.	
MTEC 120 Audio Production I	4	MTEC 231 Radio Programming and Promotions	3
Term Prerequisite: None		Term Prerequisite: MRT 132, Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: MTEC 130	
A beginning course which covers the basics of audio theory and production techniques. Included are topics in tape editing, tape recorders, and audio mixing. This class provides the foundational theory for the other classes in the audio series.		A survey of diverse radio formats. Consideration is given to the role of the program director and the tools used in format decision-making. Techniques used in creating and promoting station image and the effects of ratings are analyzed.	
MTEC 121 Audio Recording I	4	MTEC 232 Radio Workshop	2
Term Prerequisite: MRT 120, Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: MTEC 220		Semester Prerequisite: Departmental Approval	
A beginning course in audio recording which covers the basic principles of multi-track recording, mixing console theory and operation, studio microphone techniques, and audio remote recording.		An opportunity for practical experience through access to the campus radio facility. Students work in a variety of station staff positions.	
MTEC 122 Sound Reinforcement	4	MTEC 240 Script and Copywriting for the Media	3
Term Prerequisite: MRT 120, Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: MTEC 220		Semester Prerequisite: MTEC 110	
A beginning course in sound reinforcement which covers the theory and practice of sound systems and components used for concert sound and other live reinforcement operations. Includes equipment specifications, system design, troubleshooting, and operation of live systems.		Basic writing techniques and formats used in preparing program scripts for television, radio, and multi-media productions. Emphasis on practical copywriting techniques for commercial, promotion, public affairs, documentary, and entertainment programs.	
MTEC 130 Radio Production I	4		
Term Prerequisite: None			
Semester Prerequisite: None			
An introduction to the operational realities of commercial radio stations. Emphasis will be given to basic studio production and performance (on-air) techniques. Business, legal, and programming issues will be addressed.			

MTEC 241 Reporting for Radio and Television 3	MTEC 296 Media Internship 4
Term Prerequisite: Departmental Approval Semester Prerequisite: MTEC 130, MTEC 150, MTEC 151 Survey of the broadcast radio and television news industry. This course includes several practical exercises in preparing news stories through writing, production, and presentation.	Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An opportunity for students to work in external media settings under professional supervision. Students work closely with faculty in arranging and evaluating the workplace experience. Interview results determine intern placement. The internship is intended only for media technology majors who have completed at least 75% of their academic programs.
MTEC 242 Media Sales and Marketing 3	MTEC 299 Special Projects 4
Term Prerequisite: Departmental Approval Semester Prerequisite: MTEC 110 A presentation of the concepts and skills used in creating advertising campaigns and selling air time for cable and commercial television and radio operations.	Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An opportunity for students to work closely with faculty in the design and development of media-based programs to be used by departments or divisions within the College.
MTEC 243 The Ethics and Social Impact of the Media 3	MUSC 101 Lanswingers Vocal Ensemble 1
Term Prerequisite: None Semester Prerequisite: None An exploration of the effects upon society of electronic media programming. Issues such as the impact of television violence on children and the negative media portrayal of specific individuals and groups are considered.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval The purpose of Lanswingers, a vocal jazz ensemble, is to develop artistic and creative vocal jazz skills for ensemble performance. Advanced solo experience, microphone techniques, and vocal improvisational skills will be developed. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 245 The Media Producer/Director 3	MUSC 102 Women's Chorus 1
Term Prerequisite: Departmental Approval Semester Prerequisite: MTEC 130, MTEC 150 An in-depth examination of the roles the producer and director play in the creation of radio, television, video, and film programming. Special emphasis on the development of a program treatment, budget, and script. An overview of the programming and financial strategies a producer can use to obtain program funding.	Term Prerequisite: None Semester Prerequisite: None An ensemble of women vocalists composed of students and community members, which develops general musicianship and provides training in choral singing. This group performs two to four concerts throughout the year. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 250 Television Studio Production 4	MUSC 108 Concert Choir 1
Term Prerequisite: MRT 152 Semester Prerequisite: MTEC 150 An advanced production course focusing on the development of the technical and creative skills necessary to direct the work of a studio production team. Production assignments are modeled after activities found in broadcast production environments. Additional academic exercises include interpretation and translation of script ideas into effective video programming.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval A select group of singers who perform a wide range of music, sacred and secular. This group performs two to four concerts throughout the year. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 251 Electronic Field Production II 4	MUSC 113 Musical Performance 1
Term Prerequisite: MRT 250 Semester Prerequisite: MTEC 151 An advanced production course designed to provide the student with high-level instruction in videography and electronic editing techniques. Class sessions contain instructional and critical analysis exercises of contemporary video programming. All production exercises are conducted outside of classroom sessions. Course assignments are evaluated on technical and artistic guidelines.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval An ensemble/company of performers composed of students and community members, providing musical theater experience culminating in a live performance. Members are selected for their acting as well as singing ability and past performance experience. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 252 Lighting for Television and Video 3	MUSC 119 Lansing Concert Band 1
Term Prerequisite: MRT 152, MRT 250 Semester Prerequisite: MTEC 150, Departmental Approval An advanced instructional seminar on lighting techniques for video and television production. Special emphasis is placed on developing creative and technical lighting approaches applicable to a broad range of program subjects. In-class examples and assignments are used for developing individual lighting techniques.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval A community band serving as the official band of the City of Lansing. The group holds at least fifteen concerts throughout the year, playing all types of music but concentrating mainly on traditional concert band literature. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 254 Electronic Presentational Graphics 3	MUSC 123 Jazz Ensemble 1
Term Prerequisite: Departmental Approval Semester Prerequisite: MTEC 150, Departmental Approval An introduction to the production of electronically generated visuals for use with video presentations. Computer and video hardware will be used to create desktop graphics and special effects as elements of television programs.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval The jazz ensemble will rehearse and perform pieces of various styles and from various periods in jazz and big band development. Improvisational skills will be taught and developed. The group performs two to four concerts throughout the year. Students are required to attend live performances. May be taken up to six semesters for credit.
MTEC 290 Guided Independent Study 1	MUSC 124 Music Performance Workshop 2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An opportunity for self-directed learners to explore topics of particular interest more thoroughly. Students will meet intermittently throughout the semester with an assigned faculty member for guidance and evaluation of progress. A proposal detailing the area of independent investigation must be submitted by the student prior to registration.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval A summer program for talented high school students to develop basic music skills in music theory, keyboard, and vocal skills. This course culminates in performance of a final recital. Students are required to attend live performances. Acceptance is by audition and interview only.
MTEC 295 Media Practicum 4	MUSC 127 Orientation to Music Performance 1
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An opportunity to gain practical production experience in the media. Students are assigned to work on various audio, video, radio, and television projects within the Media Department. Faculty guidance and evaluation are an integral part of the experience. Practicum is intended only for advanced media technology students.	Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is for high school students accepted into the dance or theater summer program. A survey of the basic skills used in music including elements of theory, use of keyboard, and use of voice. Students are required to attend live performances.

MUSC 133-MUSC 188

<p>MUSC 133 Jazz Theory I 2 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This course is designed to acquaint students with basic jazz theoretical principles. Students will gain an understanding of chord symbols, scales and modes, chord-scale relationships, chord substitutions, and harmonization techniques. Students are required to attend live performances.</p>	<p>MUSC 169 Introduction to Musicianship II 2 Term Prerequisite: MUS 168 Semester Prerequisite: MUSC 168 This course is for novice musicians to further their understanding of music notation and theory fundamentals. MUSC 169 builds on materials covered in MUSC 168 and develops an awareness of chords and harmonic principles. Students are required to attend live performances.</p>
<p>MUSC 138 Class Piano Major I 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The first in a series of two, this course is designed to develop the practical keyboard skills used in a music career. Students will gain keyboard facility, skill in sight-reading, and the ability to transpose. This series does not teach classical piano performance. MUSC 138 will cover all major scales. Students are required to attend live performances.</p>	<p>MUSC 173 Basic Musicianship I 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course allows students to gain an understanding of theoretical music principles of notation, melodic organization, rhythm, and chords. MUSC 173 is the first in a sequence of two courses in music theory and ear-training as a freshman requirement for a four-year college music degree. Students are required to attend live performances.</p>
<p>MUSC 139 Class Piano Major II 2 Term Prerequisite: MUS 138 Semester Prerequisite: MUSC 138 Last in a series, this course will increase technical facility through playing more advanced scale patterns and minor scales in all forms. Students will gain skill in accompanying a melody using a variety of patterns. Students will learn to read open score and lead sheet using letter and numeral notation.</p>	<p>MUSC 174 Basic Musicianship II 4 Term Prerequisite: MUS 173 Semester Prerequisite: MUSC 173 This course allows students to gain an understanding of theoretical music principles of harmony, form, and orchestration. MUSC 174 is the last in a sequence of two courses in music theory and ear-training as a freshman requirement for a four-year college music degree. Students are required to attend live performances.</p>
<p>MUSC 144 Beginning Piano I 1 Term Prerequisite: None Semester Prerequisite: None Course assumes no prior music experience or knowledge. Students are introduced to the basic rudiments of playing piano. Concepts such as staff notation, rhythmic notation, correct fingering/hand positions, major scales, and primary chords will be the focus for this course. May be taken up to three semesters for credit.</p>	<p>MUSC 179 Class Voice Major I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to develop stage presence and train singers in the international phonetic alphabet assisting the singer in pronunciation of English and foreign languages. MUSC 179 focuses on English and Italian. The performance of languages uses literature of major composers from the United States, Great Britain, and Italy.</p>
<p>MUSC 145 Beginning Piano II 1 Term Prerequisite: MUS 144 Semester Prerequisite: MUSC 144 This course is designed to take the student to an intermediate level of playing. Smaller rhythmic subdivisions, more complex fingering patterns, and triad inversions are introduced and developed. Students are required to attend live performances. May be taken up to three semesters for credit.</p>	<p>MUSC 180 Class Voice Major II 1 Term Prerequisite: MUS 179 Semester Prerequisite: MUSC 179 This course continues to develop stage presence and use of the International Phonetic Alphabet. Focus is on the German and French languages. The performance of these languages will utilize the literature of major composers of German lieder and French chanson. Students are required to attend live performances.</p>
<p>MUSC 146 Intermediate Piano I 1 Term Prerequisite: MUS 145 Semester Prerequisite: MUSC 145 The focus of this course is to develop a more individualized method of learning. Concepts such as phrasing and expression will be stressed. Students will also develop technical skills through the playing of scales and arpeggios. Students are required to attend live performances. May be taken up to three semesters for credit.</p>	<p>MUSC 182 Class Voice I 1 Term Prerequisite: None Semester Prerequisite: None The first in a series of two courses for group and individual work on varied song literature. Emphasis is placed on vocal techniques such as breathing, posture, diction, and tone production. Stage presence is also emphasized. Students are required to attend live performances. May be taken up to three semesters for credit.</p>
<p>MUSC 147 Intermediate Piano II 1 Term Prerequisite: Departmental Approval Semester Prerequisite: MUSC 146 This class will culminate in performing (from a required list) a piece of music from memory. Students are required to attend live performances. May be taken up to three semesters for credit.</p>	<p>MUSC 183 Class Voice II 1 Term Prerequisite: MUS 182 Semester Prerequisite: MUSC 182 The advanced course in a series of two. This course will refine techniques, such as breathing, posture, diction, tone production, and stage presence, introduced in MUSC 182. Students are required to attend live performances. May be taken up to three semesters for credit.</p>
<p>MUSC 155 Class Voice Commercial I 2 Term Prerequisite: None Semester Prerequisite: None Beginning course designed to introduce students to vocal techniques and performance skills required in singing/performing commercial music. Breathing, posture, diction, tone production, interpretative skills, and microphone techniques are presented and developed. Students are required to attend live performances. May be taken up to three semesters for credit.</p>	<p>MUSC 185 Music Reading I 2 Term Prerequisite: None Semester Prerequisite: None This course is for students with no previous music experience in ear-training to develop music reading skills through singing with solfège. Students are introduced to the principle of sight-reading and the fundamentals of melodic and rhythmic dictation. Students are required to attend live performances.</p>
<p>MUSC 156 Class Voice Commercial II 2 Term Prerequisite: MUS 255 Semester Prerequisite: MUSC 155 The advanced course in a series of two, this course will refine techniques introduced in MUSC 155. Students will prepare a final public performance. Students are required to attend live performances. May be taken up to three semesters for credit.</p>	<p>MUSC 186 Music Reading II 2 Term Prerequisite: MUS 185 Semester Prerequisite: MUSC 185 This course is designed to further develop skills in sight-reading and ear-training introduced in MUSC 185 using different clefs, duet singing, the minor mode, and harmonic progressions. Students are required to attend live performances.</p>
<p>MUSC 168 Introduction to Musicianship I 2 Term Prerequisite: None Semester Prerequisite: None This course is for beginning musicians to gain an understanding of notating and reading pitch, rhythm, and music terminology and theory. Students are introduced to musical scales, key signatures, intervals, and chords. Students are required to attend live performances.</p>	<p>MUSC 188 Guitar I 1 Term Prerequisite: None Semester Prerequisite: None The first in a sequence of two courses for beginners. Note reading, music theory, single-note melody lead and chord accompaniments are taught. Folk, Blues and classical tradition of the guitar are presented in addition to the introduction of "finger-style" and "flat-pick" techniques. Student must provide own guitar. Students are required to attend live performances.</p>

<p>MUSC 189 Guitar II 1 Term Prerequisite: MUS 188 Semester Prerequisite: MUSC 188 The last in a sequence of two courses for beginners. Note reading, music theory, single-note melody lead, and chord accompaniment are taught. This course builds on the cumulative material covered in MUSC 188. Student must provide own guitar. Students are required to attend live performances.</p>	<p>MUSC 208 Private Brass Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>
<p>MUSC 199 Music Appreciation 2 Term Prerequisite: None Semester Prerequisite: None Designed for non-music majors, this course develops well-informed, focused listening. Students are acquainted with representative composers, compositions, and musical characteristics of a variety of style periods from early music through 20th century music. Students are required to attend live performances.</p>	<p>MUSC 209 Private Keyboard Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 40 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>
<p>MUSC 200 Music Fundamentals for Elementary Classroom Teachers 3 Term Prerequisite: None Semester Prerequisite: None A mandatory course for elementary, special education, and early childhood majors, this course assumes little, if any, prior musical experience. The basic fundamentals of music are covered, in addition to a sampling of successful teaching methods for singing and focused listening. Performance skills are taught through the piano and recorder.</p>	<p>MUSC 210 Private Keyboard Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>
<p>MUSC 201 Private Voice Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 40 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>	<p>MUSC 211 Private Guitar Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 40 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>
<p>MUSC 202 Private Voice Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>	<p>MUSC 212 Private Guitar Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>
<p>MUSC 203 Private Woodwind Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to the fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>	<p>MUSC 213 Private Voice Non-Major 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 40 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>
<p>MUSC 204 Private Woodwind Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six times for credit.</p>	<p>MUSC 214 Private Voice Non-Major 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 60 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>
<p>MUSC 205 Private Percussion Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 40 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>	<p>MUSC 217 Private Instrument Non-Major 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 40 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>
<p>MUSC 206 Private Percussion Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for music majors. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. Students are required to attend live performances. May be taken up to six semesters for credit.</p>	<p>MUSC 218 Private Instrument Non-Major 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 60 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>
<p>MUSC 207 Private Brass Major 1 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 40 minutes per week, for music majors. Enrollment is by audition only. Audition held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six times for credit.</p>	<p>MUSC 220 Private Keyboard Non-Major 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 40 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>

MUSC 221-MUSC 270

<p>MUSC 221 Private Keyboard Non-Major 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 60 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>	<p>MUSC 240 Music History I 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students will be exposed to composers and musical characteristics of specific style periods starting with Greek and Romanesque and continuing through the Pre-Classic 18th century. A research project will be started, with completion during the second semester. Students are required to attend live performances.</p>
<p>MUSC 223 Private Guitar Non-Major 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is a private lesson, 40 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>	<p>MUSC 241 Music History II 3 Term Prerequisite: MUS 240 Semester Prerequisite: MUSC 240 Students will be exposed to composers and musical characteristics from the Classic style period through the 20th century. Research project (assigned in MUSC 240) will be due during the second semester. Students are required to attend live performances.</p>
<p>MUSC 224 Private Guitar Non-Major 2 Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval This course is a private lesson, 60 minutes per week, for non-majors. Only music, dance or theatre majors, or dual enrolled and special admissions high school students, are eligible to enroll. Students are required to attend live performances.</p>	<p>MUSC 244 Studio Production Commercial 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course, as an introduction to multi-channel recording techniques, covers equipment functions, separation techniques, basic tracks, overdubs, and the roles of musicians, producers, and engineers in the commercial recording field. The second half of the course consists of recording session observation in an off-campus recording studio. Students are required to attend live performances.</p>
<p>MUSC 227 Independent Study 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Advanced study in areas related to, but not taught in, the curriculum with minimal faculty supervision. Students must submit written application detailing their projects for department approval. Students are required to attend live performances.</p>	<p>MUSC 245 Jazz History 2 Term Prerequisite: None Semester Prerequisite: None Students will be introduced to the origins and traditions of the music loosely categorized as "jazz." Musical styles influential in the development of jazz, such as Stride, Ragtime, New Orleans, Swing, Bebop, Avant-garde, and others, will be studied. Students are required to attend live performances.</p>
<p>MUSC 228 Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Advanced study in areas related to, but not taught in, the curriculum with minimal faculty supervision. Students must submit written application detailing their projects for department approval. Students are required to attend live performances.</p>	<p>MUSC 248 Rock History I - Blues to the British Invasion 2 Term Prerequisite: None Semester Prerequisite: None This course provides an overview to the elements of rock and roll and its origins. The student will be introduced to the major figures of rhythm and blues/early rock and roll via their music. Students are required to attend live performances.</p>
<p>MUSC 230 Directed Independent Study 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Advanced study in areas relating to, but not taught in, the curriculum. Student will meet with an assigned faculty member one hour per week. Students must submit written application detailing their projects for department approval. Students are required to attend live performances.</p>	<p>MUSC 249 Rock History II - From 1963 to Present 2 Term Prerequisite: None Semester Prerequisite: None Students will be introduced to the changes in pop music that have occurred since the early '60s. Developments in styles will be covered via examination of a variety of recordings from the early '60s to the present. Students are required to attend live performances.</p>
<p>MUSC 231 Directed Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Advanced study in areas relating to, but not taught in, the curriculum. Student will meet with an assigned faculty member once per week. Students must submit written application detailing their projects for department approval. Students are required to attend live performances.</p>	<p>MUSC 251 Blues History 2 Term Prerequisite: None Semester Prerequisite: None Students will be given an overview of the African-American music form known as the Blues. Using recordings of the musicians as the primary source, supplemented with reading materials, the student will become familiar with the stylistic variations of both regional styles and individual performers. Students are required to attend live performances.</p>
<p>MUSC 232 Music Seminar 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to assist the needs of students, and to enhance the curriculum and special interests for the community. Students are required to attend live performances.</p>	<p>MUSC 253 Business of Music 3 Term Prerequisite: None Semester Prerequisite: None An introduction to the business aspects of the music industry. Areas covered include copyrights, trademarks, publishing, recording and record company operations, personal managers, booking agents, concert promotions, and unions. Students are required to attend live performances.</p>
<p>MUSC 233 Music Seminar 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to meet the needs of students, and to enhance the curriculum and special needs for the community. Students are required to attend live performances.</p>	<p>MUSC 254 Band Management 2 Term Prerequisite: MUS 253/Approval Semester Prerequisite: MUSC 253/Approval This course is designed to assist the professional musician or manager in creating or improving a performing band. All major aspects of band management are covered, including intra-band arrangements, contracts, negotiations, format and material choice, equipment, finances, promotion and sales, road management, and basic organizational information. Students are required to attend live performances.</p>
<p>MUSC 235 Harmonica I 1 Term Prerequisite: None Semester Prerequisite: None This is an introductory course that demonstrates the sound techniques employed in the mastery of the harmonica in the key of C. Emphasis is on Blues style of play. Student must provide own harmonica. Students are not required to read or learn to read music. Students are required to attend live performances.</p>	<p>MUSC 270 Rock Guitar I 1 Term Prerequisite: None Semester Prerequisite: None A presentation on fundamental rhythm and lead guitar techniques and music theory concepts applicable to rock music from its Rhythm and Blues origin to the present, as well as other related popular styles. Student must provide own guitar. Students are required to attend live performances.</p>
<p>MUSC 236 Harmonica II 1 Term Prerequisite: MUS 235 Semester Prerequisite: MUSC 235 As a sequel to MUSC 235, this course introduces Blues changes. The student will perform five Blues songs and develop the ability to improvise over standard Blues changes. Student must provide harmonicas in the keys of C, A, and D. Students are not required to read music or learn to read music.</p>	

MUSC 271 Rock Guitar II	1	MUSC 284 Private Instrument Commercial	1
Term Prerequisite: MUS 270 Semester Prerequisite: MUSC 270 Course emphasizes application, review, and further assimilation of the guitar techniques and music theory concepts covered in MUSC 270. Progressively more advanced chord and scale forms will be covered. Students are encouraged to begin developing improvisational skills essential to most rock and popular music styles. Student must provide guitar.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 40 minutes per week, for commercial music majors, emphasizing techniques and styles specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 273 Advanced Musicianship I	4	MUSC 285 Private Instrument Commercial	2
Term Prerequisite: MUS 175 Semester Prerequisite: MUSC 174 This course allows students to gain an understanding of theoretical music principles of altered chords and analytic techniques with regard to period style. This course is the first in a two course music theory and ear-training sequence as a sophomore requirement for a four-year college music degree. Students are required to attend live performances.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 60 minutes per week, for commercial music majors, emphasizing techniques and styles specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 274 Advanced Musicianship II	4	MUSC 286 Private Keyboard Commercial	1
Term Prerequisite: MUS 176 Semester Prerequisite: MUSC 273 This course allows students to further their understanding of theoretical music principles and analytic techniques through the twentieth century. This course is the second in a two course music theory and ear-training sequence as a sophomore requirement for a four-year college music degree. Students are required to attend live performances.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 40 minutes per week, for commercial music majors emphasizing techniques and style specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 276 Lyric Writing	2	MUSC 287 Private Keyboard Commercial	2
Term Prerequisite: None Semester Prerequisite: None This course introduces students to the craft of writing song lyrics. The work of professional songwriters as well as the students' work will be examined and discussed. Students are required to attend live performances.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 60 minutes per week, for commercial music majors emphasizing techniques and style specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 278 Rock Percussion	1	MUSC 288 Private Guitar Commercial	1
Term Prerequisite: None Semester Prerequisite: None This course allows students to gain an understanding of rock music rhythms and concepts of notation and rudiments through an emphasis on progressive work in percussion techniques. MUSC 278 will demonstrate prevailing performance practice on a drum set. Students are required to attend live performances.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 40 minutes per week, for commercial music majors, emphasizing techniques and styles specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 279 Advanced Rock Percussion	1	MUSC 289 Private Guitar Commercial	2
Term Prerequisite: MUS 280/Approval Semester Prerequisite: MUSC 278/Approval This course allows students to further their understanding of drum set percussion techniques, rock rhythms, and concepts learned in MUSC 278. Students will experience a wide range of percussion instruments and their applications to Rock, Pop, and Jazz. Students are required to attend live performances.		Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 60 minutes per week, for commercial music majors, emphasizing techniques and styles specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.	
MUSC 280 Private Songwriting	1	MUSC 297 Synthesizers and Computer Music I	2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Private coaching for music majors, 40 minutes per week, in writing and copyrighting music compositions, giving attention and suggestion in harmony, chord substitution, and formal design. Students are required to attend live performances. May be taken up to six semesters for credit.		Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval This course introduces students to the role of computers in the music discipline. Topics include historical overview, sound synthesis techniques, synthesis hardware and signal processing, computer-assisted analysis, and instruction on DEC, VAX 11/780, IBM personal computers, and a digital synthesizer. Students are required to attend live performances.	
MUSC 281 Private Songwriting	2	MUSC 298 Synthesizers and Computer Music II	2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Private coaching for music majors, 60 minutes per week, in writing and copyrighting music compositions, giving attention and suggestion in harmony, chord substitution, and formal design. Students are required to attend live performances. May be taken up to six semesters for credit.		Term Prerequisite: MUS 297 Semester Prerequisite: MUSC 297 This course allows students to further their understanding of sound synthesis techniques using a personal computer and a digital synthesizer. This course is an extension of MUSC 297 with emphasis on advanced synthesis technique, performance, and composition. Students are required to attend live performances.	
MUSC 282 Private Voice Commercial	1	NSCI 110 Science Discovery: A Process	4
Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 40 minutes per week, for commercial music majors emphasizing techniques and style specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.		Term Prerequisite: None Semester Prerequisite: None Emphasizes reducing anxiety and improving reasoning skills necessary for participation in science courses. Methods to identify and reduce science anxiety associated with science topics are presented. Science reasoning skills will be inventoried, including: observation, experimental techniques, critical thinking, and communication.	
MUSC 283 Private Voice Commercial	2		
Term Prerequisite: Audition Approval Semester Prerequisite: Audition Approval Private lesson, 60 minutes per week, for commercial music majors emphasizing techniques and style specifically related to commercial music. Enrollment is by audition only. Auditions held the Friday prior to fall semester or as requested during fall and spring semester juries. May be taken up to six semesters for credit.			

<p>NSCI 121 Integrated Natural Science I 4 Term Prerequisite: Science Inventory Passed, MTH 009 Semester Prerequisite: Science Inventory Passed, MATH 060 The first of two general science courses focusing on important scientific discoveries and revolutions in their cultural and historical environment. Science processes, methods, and reasoning skills are emphasized throughout. NSCI 121 includes the period from 200 B.C. to 1900. Recommended for education majors.</p>	<p>NURS 145 Practical Nursing Role 1 Term Prerequisite: NUR 124 Semester Prerequisite: NURS 120-123 Examines the role of the practical nurse, ethical and legal dimensions of practice, professional organizations, differentiated practice, nursing issues, role transition, and preparation for employment. Required to be eligible for NCLEX-PN (National Council Licensing Examination-Practical Nurse).</p>
<p>NSCI 122 Integrated Natural Science II 4 Term Prerequisite: NS 111 Semester Prerequisite: NSCI 121 The second of two general science courses focusing on important scientific discoveries and revolutions in their cultural and historical environment. Science processes, methods, and reasoning skills are emphasized throughout. NSCI 122 includes the period from late 1800s to present. Recommended for education majors.</p>	<p>NURS 200 Pharmacology 3 Term Prerequisite: Admission to Nursing Program, PGY 212 Semester Prerequisite: PHGY 202 This course is recommended for students who wish to transfer to a BSN program. Drug categories are discussed in depth as well as nursing responsibilities associated with medication administration. Students are expected to calculate drug dosages.</p>
<p>NSCI 131 Natural Science I: The Science of the Water Planet 4 Term Prerequisite: NS 110, Science Inventory Passed, 2.0 in MTH 060 Semester Prerequisite: Science Inventory Passed, MATH 060 A general education course designed to provide students with a basic understanding of the methods and applications of science. Topics include basic chemistry, thermodynamics, the hydrologic cycle, climate, and weather. Critical thinking and problem-solving skills are applied to environmental issues. Laboratory activities illustrate and amplify lecture topics.</p>	<p>NURS 210 LPN-RN Transition 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Introduces the returning Licensed Practical Nurse (LPN) to the nursing process, patient records, role transition, and curriculum concepts. Assessment and evaluation of nursing skills will be done.</p>
<p>NSCI 132 Natural Science II: Life on the Water Planet 4 Term Prerequisite: 2.0 Minimum in NS 121, NS 122 Semester Prerequisite: 2.0 Minimum in NSCI 131 This course builds upon NSCI 131. Topics include ecosystems, population dynamics, evolution and origins, plate tectonics, and human interactions with the earth as a sustainable system. Critical thinking and problem-solving skills are applied to environmental issues. Laboratory activities illustrate and amplify lecture topics.</p>	<p>NURS 220 Nursing Process IV: Family Health 10 Term Prerequisite: Completed Practical Nursing Program Semester Prerequisite: Admission to Program, NURS 140 The student is expected to use the nursing process in caring for clients adapting to psychosocial health problems, maternal-child health problems, and children with chronic illnesses. Clinicals in psychiatric, maternal-child, and pediatric units of acute care hospitals and home health care systems.</p>
<p>NURS 101 Nursing Directed Study I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course consists of 16 hours of directed study in selected nursing content.</p>	<p>NURS 230 Nursing Process V: Chronic and Critical Health Problems 8 Term Prerequisite: NUR 222 Semester Prerequisite: Admission to Program, NURS 220 The student is expected to use the nursing process in caring for adult clients adapting to critical and chronic health problems. Homeostatic changes in the neurological, cardiovascular, and respiratory systems are discussed, as well as fluid-electrolyte and acid-base imbalance. Clinicals in acute care hospitals, nursing homes, and home health care agencies.</p>
<p>NURS 102 Nursing Directed Study II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course consists of 32 hours of directed study in selected nursing content.</p>	<p>NURS 240 Nursing Process VI: ADN as Provider and Manager of Care 4 Term Prerequisite: NUR 222 Semester Prerequisite: Admission to Program, NURS 220 The role of the nurse as manager of care and the role of the associate degree nurse within the discipline of nursing are presented. Students are expected to use the nursing process with various management systems within a health care system. Clinicals in acute care hospitals and nursing homes.</p>
<p>NURS 103 Nursing Directed Study III 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course includes 24-72 hours of directed study in selected nursing content. May include classroom, campus lab, and/or clinical lab.</p>	<p>OADM 010 Keyboarding 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for students having no previous typing experience. Basic keyboarding skills using the touch method for the typist are developed. Emphasis is on speed and accuracy using the alphabetic keyboard, the figure keys, and symbol keys. Skill level of 35 wpm is required.</p>
<p>NURS 104 Nursing Directed Study IV 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is made up of 64-128 hours of directed study in selected nursing content. May include study in the classroom, campus lab, or clinical lab.</p>	<p>OADM 011 Office Skills Training 10 Term Prerequisite: None Semester Prerequisite: None This course consists of three sessions: (1) basic word processing, (2) principles of effective letter writing, and (3) records management, including creation, protection, storage, and disposition of business records.</p>
<p>NURS 120 Nursing Process I: Introduction to Nursing 8 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program The nursing process is presented as a critical thinking/problem-solving technique to provide health care. Assessment skills and therapeutic communication skills presented. The scope of nursing practice is defined, specifically legal, ethical, and professional considerations. The processes of aging and grieving emphasized. Clinicals in nursing homes and extended care facilities.</p>	<p>OADM 100 College Typewriting I 4 Term Prerequisite: Keyboarding Experience Semester Prerequisite: OADM 010/Placement Test In addition to building speed and accuracy developed in keyboarding, this course emphasizes formatting for personal letters and envelopes, post cards, basic business letters and envelopes, memorandums, unbound reports, and tabulated material.</p>
<p>NURS 130 Nursing Process II: Common Acute Health Problems 6 Term Prerequisite: NUR 123, PGY 212 Semester Prerequisite: Admission to Program Students are assisted in using the nursing process in the care of adults adapting to common acute health problems. Pathophysiology and nursing interventions affecting the cardiovascular, respiratory, endocrine, gastrointestinal, neurological, and musculoskeletal body systems is presented. Clinical in acute care hospital systems.</p>	<p>OADM 101 College Typewriting II 4 Term Prerequisite: BUS 100 Semester Prerequisite: OADM 100/Placement Test In addition to building speed and accuracy developed in Typewriting I, this course emphasizes formatting additional letter parts, memorandums, form letters, complex tables, long reports, business forms, administrative communications, employment communications, and simulations.</p>
<p>NURS 140 Nursing Process III: Maternal-Child Health 5 Term Prerequisite: NUR 124, PSY 205 Semester Prerequisite: Admission to Program, NURS 130 The concepts of parenting, cultural diversity, and human sexuality are discussed within the context of family dynamics. Assessment and care of the newborn is also presented. Basic needs and developmental tasks of early childhood through adolescence are discussed. Clinicals in maternal-child and pediatric units of acute care hospital systems.</p>	<p>OADM 102 Proofreading 1 Term Prerequisite: None Semester Prerequisite: None This course is designed to teach proofreading and editing skills essential to the production of accurate and coherent business communications.</p>

OADM 103 Business Research Report Writing	3	OADM 199 Medical Vocabulary	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course emphasizes the use of reports in the business environment and the steps necessary to create effective reports. Included in the course is studying the nature of research, conducting research using primary and secondary sources, and writing an entire report with business applications.		This course provides instruction in spelling, definition structure, and concepts of medical terminology using a body-systems approach.	
OADM 104 College Gregg Shorthand I	4	OADM 200 Critical Thinking	3
Term Prerequisite: Typing Ability		Term Prerequisite: None	
Semester Prerequisite: OADM 010/Placement Test		Semester Prerequisite: None	
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 two minutes at 96 percent accuracy is required before advancing to Shorthand II.		Critical thinking is designed to provide basic and higher-order thinking skills including reasoning, creative thinking, decision-making, and problem-solving. Emphasis is placed on gaining proficiency in critical awareness to enable students to confidently appraise and discriminate information, problems, issues, etc., whether in a societal, educational, or organizational setting.	
OADM 105 College Gregg Shorthand II	4	OADM 203 Professional Office Procedures	2
Term Prerequisite: BUS 104		Term Prerequisite: None	
Semester Prerequisite: OADM 104/Equivalent		Semester Prerequisite: None	
This course emphasizes skills developed in Shorthand I in addition to developing greater ability in taking and transcribing dictation. Minimum level is 80 wpm for two minutes at 98 percent accuracy.		The topics of this course include ergonomics, telephone techniques, handling incoming and outgoing mail, writing certain office documents such as minutes and reports, planning meetings and travel arrangements, and managing office finances. Computer usage may be emphasized.	
OADM 107 Business Calculating Machines	1	OADM 204 Business Communications	3
Term Prerequisite: BUS 117/Previous Math		Term Prerequisite: BUS 125	
Semester Prerequisite: OADM 117/Previous Math		Semester Prerequisite: OADM 125/WRIT 119	
This course utilizes the 10-key adding machine, calculator, and electronic printing calculators; operations of addition, subtraction, multiplication, and division; plus business-type problems dealing in percentages, interest, etc.		This course emphasizes competent writing in business through learning appropriate business writing style. Emphasis is placed on tone, clarity, conciseness, and completeness. Sentence structure and appropriate paragraphing are stressed for effective total messages. Students practice writing routine, informational, persuasive, and employment-related communications.	
OADM 114 College Speedwriting	4	OADM 206 Legal Vocabulary and Forms Preparation	3
Term Prerequisite: Typing Ability		Term Prerequisite: None	
Semester Prerequisite: OADM 010/Placement Test		Semester Prerequisite: None	
Students will learn an alphabetic shorthand. The minimum performance level for dictation and transcription is 70 wpm for three minutes at 96 percent accuracy.		This course utilizes basic legal terminology in general and specialized areas of law. It defines legal terms and their use in legal context and stresses forms preparation.	
OADM 117 College Business Math	3	OADM 215 Records and Information Management I	3
Term Prerequisite: MTH/Placement		Term Prerequisite: None	
Semester Prerequisite: MATH 040/Placement Test		Semester Prerequisite: None	
This course is offered in a classroom or self-paced laboratory format. The content covers basic math functions such as decimals, fractions, pre-algebra; and business transactions such as financial statements, finance charges, markups/markdowns, payroll, taxes, inventory, depreciation, installment buying charges, payroll, and annuities.		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.	
OADM 121 College Typewriting Skillbuilding	2	OADM 216 Records and Information Management II	3
Term Prerequisite: Previous Typing		Term Prerequisite: BUS 215	
Semester Prerequisite: Previous Typing		Semester Prerequisite: OADM 215	
This course is offered in a classroom or self-paced laboratory format. 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.		This course will familiarizes students with the aspects of micrographics and the study of planning, organizing, and controlling records and information management systems as it pertains to records management and information control.	
OADM 122 Records and Information Forms and Documents Management	1	OADM 220 Administrative Office Management	4
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course emphasizes the management of documents (both organizationally internal and external), forms, correspondence, and reports. Management of both paper- and electronic-based forms and documents will include the design, analysis, usage, retention, and disposal procedures for manual and electronic records systems.		This course emphasizes the principles of office management and the role of an office as a service center. Office functions, structure and design, workflow, procedures, job analysis, and issues relating to human resources are covered.	
OADM 125 Business English	3	OADM 230 Seminar: Special Subjects	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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 communication. Business English is required for machine transcription and word processing.		Classroom instruction is given on special topics of current interest to office personnel. Topics for each seminar vary.	
OADM 195 Human Behavior in the Work Place	3	OADM 231 Seminar: Special Subjects	.75
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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 become more aware of the impact of positive interactions at work. Proficiency in enhancing good human relations and in handling difficult situations is stressed.		Classroom instruction is given on special topics of current interest to office personnel. Topics for each seminar vary.	
OADM 198 Medical Record Management	3	OADM 232 Seminar: Special Subjects	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is a concentrated study of the health-care providers, control reimbursement, legal, and quality assurance systems which affect the maintenance of the medical record in various health-care delivery settings.		Classroom instruction is given on special topics of current interest to office personnel. Topics for each seminar vary.	
		OADM 233 Professional Secretary Seminar	.5
		Term Prerequisite: None	
		Semester Prerequisite: None	
		Seminars in the professional secretary series prepare employed secretaries and students nearing the end of their course of study for the certified professional secretary and the professional legal secretary examinations. Topics for each seminar vary.	

<p>OADM 234 Professional Secretary Seminar .75 Term Prerequisite: None Semester Prerequisite: None Seminars in the professional secretary series prepare employed secretaries and students nearing the end of their course of study for the certified professional secretary and the professional legal secretary examinations. Topics for each seminar vary.</p>	<p>PARA 222 Medical Trauma II 5 Term Prerequisite: ESA 221 Semester Prerequisite: PARA 221 PARA 222 incorporates previous knowledge of Basic EMT and PARA 221. Provides theoretical background material for management of prehospital emergencies including assessment and management of neurological, behavioral, abdominal, metabolic, geriatric, and multiple trauma patients. The principles of triage, management of mass casualty incidents, and telecommunications are also included.</p>
<p>OADM 235 Professional Secretary Seminar 1 Term Prerequisite: None Semester Prerequisite: None Seminars in the professional secretary series prepare employed secretaries and students nearing the end of their course of study for the certified professional secretary and the professional legal secretary examinations. Topics for each seminar vary.</p>	<p>PARA 231 Cardiology I 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This is a course to enable paramedic students to read EKG rhythm strips. It will give them background and understanding of the anatomy, physiology, electrophysiology, and pathophysiology of the heart and cardiovascular system. Much emphasis will be placed on arrhythmia interpretation, treatment modalities, and patient management.</p>
<p>OADM 238 Seminar: Special Subjects 1 Term Prerequisite: None Semester Prerequisite: None Classroom instruction is given for local corporations on special topics of current interest. Topics for each seminar vary.</p>	<p>PARA 232 Cardiology II 3 Term Prerequisite: ESA 231 Semester Prerequisite: PARA 231 This course utilizes information learned in PARA 231 as a basis for more advanced arrhythmia interpretation. Management of cardiac arrest including medications, cardioversion, and defibrillation will be a major emphasis. Pacemakers, other advanced procedures, and arrhythmia will be presented. Application of information, judgement and decision-making are evaluated.</p>
<p>OADM 240 Office Internship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course is designed to provide on-the-job training relating to an office administration major. Placement is made in an approved training station to earn credits for satisfactory work performance and to earn wages for work performed. Volunteer work may substituted for earning wages. Minimum of 160 hours work is required.</p>	<p>PARA 241 Pharmacology I 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This is the first course in a two-course sequence. It is designed to give the student background information necessary for the preparation and administration of drugs used in the field. ACLS drugs will be covered in depth.</p>
<p>OADM 275 Understanding Cultural Differences 3 Term Prerequisite: None Semester Prerequisite: None This course is designed to help students become familiar with, understand, and appreciate people from different cultures to promote a more effective basis for working together in the business world. Emphasis and application is placed upon business etiquette and business practices as they differ in various cultures.</p>	<p>PARA 242 Pharmacology II 2 Term Prerequisite: ESA 241 Semester Prerequisite: PARA 241 This is the second course in a two-course sequence. In-depth information on ACLS drugs will be covered. Common drugs that paramedics administer in the field will also be covered. Drug classification, action, use, and side effects are included.</p>
<p>OCNL 225 Basic Oceanology and Limnology 3 Term Prerequisite: None Semester Prerequisite: None An introduction to the physical and chemical properties of aquatic science. Topics include: waves, currents, tides, geology of the ocean and lake basins, marine and fresh water biology, and man's interactions with natural waters. Laboratory and field activities emphasize basic concepts of aquatic science.</p>	<p>PARA 251 Skills I 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Skills I will introduce and evaluate competency of most manual skills required in a paramedic curriculum. These skills will be demonstrated and supervised during practice. It is necessary that the student have adequate basic EMT skills upon entry, as these will be updated and tested.</p>
<p>OEDC 110 Seminar: Wilderness Survival Techniques 3 Term Prerequisite: None Semester Prerequisite: None This course provides basic outdoor survival skills and techniques to campers, outdoor enthusiasts, and group leaders. Among the topics are shelter, fire, water, signals, orienteering, food procurement, hot/cold stress management, toxic bites, edible plants of the world, and survival at sea. Optional three day field trip exercise.</p>	<p>PARA 252 Skills II 2 Term Prerequisite: ESA 251 Semester Prerequisite: PARA 251 This course is a continuation of Skills I with similar demonstration/practice format. Several new competencies will be introduced. Measurement criteria for Skills I competencies become more stringent. Although geared to field setting, some skills necessary for hospital practice included. ACLS certification will be completed.</p>
<p>OEDC 111 Seminar: Wild Food Plants 3 Term Prerequisite: None Semester Prerequisite: None This course introduces 77 kinds of edible wild plants and their toxic look-a-likes from Michigan and adjoining states. The students learn to distinguish these plants on the basis of observed plant characteristics. The material is illustrated in slides and handouts. Several outdoor experiences are provided. Conservation stressed.</p>	<p>PARA 261 Clinical I 5 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course provides clinical time for paramedic students in the first term. Time will be spent in nursing homes, hospitals including ED, CCU, ICU, Burn Unit, and OB. Time will also be spent in simulations on campus and designated EMS agencies under licensed paramedics.</p>
<p>PARA 200 Paramedic Directed Study 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course provides selection of content from the Paramedic curriculum to update or enhance current knowledge and skill for returning students and health care professionals. Through evaluation of previous learning, examinations, self study, and scheduling into needed lectures and labs students are advanced placed or readmitted into the Paramedic program.</p>	<p>PARA 262 Clinical II 5 Term Prerequisite: ESA 261 Semester Prerequisite: PARA 261 This course provides clinical time for paramedic students in the second term. Time will be spent in hospitals, including ED, CCU, ICU, Burn Unit, OB, Peds Psych Unit, OR, and Morgue. Time will also be spent in simulations on campus and designated EMS agencies under licensed paramedics.</p>
<p>PARA 221 Medical Trauma I 5 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course builds on previous knowledge acquired as Basic EMT. Provides theoretical background material for management of prehospital emergencies. Course includes roles and responsibilities, anatomy/physiology, airway maintenance, parenteral therapy, assessment and management of respiratory, maternal, neonatal, and pediatric emergencies.</p>	<p>PEAA 103 Athletic Training I 2 Term Prerequisite: None Semester Prerequisite: None This course is an overview of injury prevention and care techniques, first-aid principles, and equipment and facilities. Other course topics covered are taping procedures and the legal implications for the athletic trainer.</p>

PEAA 104 Athletic Training II	2	PEAB 103 Total Fitness D	2
Term Prerequisite: PEA 103		Term Prerequisite: None	
Semester Prerequisite: PEAA 103		Semester Prerequisite: None	
This course will complement the skills and knowledge acquired in Athletic Training. Course emphasis will be placed on injury assessment, injury treatments, and further rehabilitation skills as they relate to athletic injury.		This course involves students in planning a fitness regimen. Students will be given a fitness assessment, including aerobic capacity, body composition, flexibility, and strength. Students will receive a computer-generated exercise plan tailored to individual needs. Nutritional aspects of health and stress reduction techniques will be discussed as part of daily lifestyles.	
PEAA 107 Officiating Basketball	2	PEAB 105 Aerobic Walking	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is an officiating mechanics class for students wishing to officiate basketball at the high school and college level. Proper court positioning, arm signals, and whistle use are topics covered.		This course centers on improving one's fitness level through outdoor walking at an individually determined speed. Students will also develop a personalized healthy lifestyle plan which integrates exercise, diet, and stress management.	
PEAA 110 Coaching Basketball	2	PEAB 107 Jogging: Beginning	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to prepare the student for coaching the technical aspects of basketball as well as to enhance the student's knowledge of the duties, roles, and responsibilities of the coach. Material will apply to all levels of competition with emphasis placed on high school and college levels.		This course introduces jogging as a fitness modality and covers how to care for feet, proper equipment choices, clothing, and safety.	
PEAA 111 Coaching Volleyball	2	PEAB 110 Fitness Maintenance	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to develop coaching skills in the areas of basic through advanced individual volleyball skills as well as team strategies. Teaching skill progressions and practice planning will be covered.		This course is for students with prior experience and knowledge in physical fitness-related activities and a desire to continue fitness maintenance.	
PEAA 112 Coaching Soccer	2	PEAB 112 Body Flexibility	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course places emphasis on teaching the proper execution of the fundamental skills and components of soccer. Individual and team skills will be taught as well as skill progression.		This course is designed to increase body flexibility by learning proper stretching techniques and applying these techniques to increase muscle and joint flexibility.	
PEAA 113 Rules of Golf	2	PEAB 113 Tone and Stretch	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course examines the rules of golf through the interpretations of the United States Golf Association's decisions.		This course combines calisthenics and stretching. Students will use floor exercises to tone muscles and increase flexibility. Proper stretching techniques as well as which muscle groups are being worked will be examined.	
PEAA 114 Basic Lifeguarding	1	PEAB 120 Aerobic Exercise	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to provide the necessary minimum skills of training to qualify for an entry level lifeguard.		This course helps students to improve cardiovascular function and oxygen efficiency to enhance muscle structure and function through toning exercises, aerobic dancing, and stretching.	
PEAA 115 Lifeguard Training	2	PEAB 121 Aerobic Maintenance	2
Term Prerequisite: None		Term Prerequisite: PEH 105	
Semester Prerequisite: None		Semester Prerequisite: PEAB 120	
This course is designed to provide the necessary minimum skills training for a person to qualify as a non-surf lifeguard.		This course is designed to increase aerobic capacity through progressive levels of time and intensity using low, moderate or high impact movement. All movements may be modified to the intensity level of the individual student.	
PEAA 116 Water Safety Instruction	2	PEAB 122 Triathlon Training	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to assist in teaching basic aquatic skills for instructors. Teaching modalities and how different students learn is covered.		This course is designed to teach proper techniques in swimming, running, and bicycling. A vigorous training program is designed to challenge the student.	
PEAB 100 Total Fitness A	2	PEAB 123 ALPHA	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is a comprehensive fitness course with a view toward the whole person. Students will be given a fitness assessment, including aerobic capacity, body composition, flexibility, and strength. Students will receive a computer-generated exercise plan tailored to individual needs.		Adopted Lifestyle and Physical Health Activities (ALPHA) incorporates weight training with several aerobic components to increase strength and aerobic capacity through circuit weight training.	
PEAB 101 Total Fitness B	2	PEAC 100 Bowling: Beginning	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course views the whole person's fitness needs. Students will be given a fitness assessment, including aerobic capacity, body composition, flexibility, and strength. Students will receive a computer-generated exercise plan tailored to individual needs. Nutritional aspects of health will be discussed.		This course is a basic introduction to bowling. Primary emphasis is placed on spot bowling, release, and approach. Students become familiar with bowling etiquette and scoring.	
PEAB 102 Total Fitness C	2	PEAC 101 Bowling: Intermediate	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is a comprehensive fitness course with a view of the whole person. Students will be given a fitness assessment, including aerobic capacity, body composition, circuit-training, and strength. Students will receive a computer-generated exercise plan tailored to individual needs. Nutritional aspects of health will be discussed as well as stress reduction techniques.		This course develops further strategies in spot bowling, consistent ball release, and scoring strategies.	
		PEAC 102 Bowling: Advanced	1
		Term Prerequisite: PEC 128	
		Semester Prerequisite: PEAC 101	
		This course is an extensive review of skills introduced at the beginning and intermediate level. Students develop strategies in lane reading.	

<p>PEAC 103 Golf: Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to the basics of golf which include equipment, grip, stance and posture, club swing, and the rules and etiquette of golf.</p>	<p>PEAD 100 Bicycling/Touring 1 Term Prerequisite: None Semester Prerequisite: None This course deals with emergency repairs, proper fit of bicycle, good cycling techniques, and safe use of roads. Students are shown a variety of routes suitable for bicycling in the Lansing area.</p>
<p>PEAC 104 Golf: Advanced/Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course will provide continuation of the development of grip, stance, and club swing. Visualization and imagery will be introduced in relation to the golf swing.</p>	<p>PEAD 101 Bicycling Camping/Touring 1 Term Prerequisite: None Semester Prerequisite: None This course is a two-day, self-contained bicycle trip in a scenic area of Michigan. Participants carry on their bicycles all gear and items needed for the entire trip. Students will cycle 45-50 miles each day.</p>
<p>PEAC 105 Golf: Intermediate 1 Term Prerequisite: None Semester Prerequisite: None This course will review the basics of golf: equipment, grip, stance and posture, and club swing. Students will be given drills to foster and improve proper swing mechanics for course play.</p>	<p>PEAD 104 Tai Chi I 1 Term Prerequisite: None Semester Prerequisite: None This course introduces the first 30 forms of the Yang-style Tai Chi. Students develop techniques to focus on relaxation and inner calmness. Slow movements train the mind to be in better control of the body.</p>
<p>PEAC 106 Golf: Advanced 1 Term Prerequisite: PED 116 Semester Prerequisite: PEAC 105 This course is designed for the advanced player. Emphasis is placed on "course strategy" and the rules of golf.</p>	<p>PEAD 105 Tai Chi II 1 Term Prerequisite: PEG 120 Semester Prerequisite: PEAD 104 This course covers more difficult forms in Tai Chi. Yang-style Tai Chi stresses the health and well-being of the whole person. Yang-style movements allow students to move in slow, smooth, steady, and continuous movement.</p>
<p>PEAC 108 Pool: Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course introduces students to the fundamentals of pool (pocket billiards). Primary course emphasis is on stance, grip, bridge, aim, and stroke. Cue ball position shots such as stop, follow, draw, and center are covered.</p>	<p>PEAD 107 Aikido 1 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to the philosophy of Aikido. Basic movements of Aikido as a martial art are introduced.</p>
<p>PEAC 109 Pool: Intermediate 1 Term Prerequisite: PEC 106 Semester Prerequisite: PEAC 108 This course reviews the fundamentals of stance, grip, bridge, aim, and stroke. Skill improvement and concentration techniques are stressed.</p>	<p>PEAD 108 Aikido Continuing 1 Term Prerequisite: PEG 126 Semester Prerequisite: PEAD 107 This course presents the 6th KYU forms through the 3rd KYU techniques. This course examines the philosophical underpinnings of Aikido.</p>
<p>PEAC 111 Table Tennis: Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to table tennis as played by tournament players. Strokes covered include forehand and backhand topspin drives, pushes and blocks, and defensive strokes. Discussions will include the rules of table tennis tournaments.</p>	<p>PEAD 110 Yoga: Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course is an introduction to yogic breathing and gentle yogic stretching exercises with emphasis in guided relaxation and meditation. Psycho-acoustic music is used to reduce stress and tension.</p>
<p>PEAC 112 Table Tennis: Intermediate 1 Term Prerequisite: None Semester Prerequisite: None This course is an extension of the beginning course and provides more training in the basic strokes. More advanced strokes such as the loop and the lob are covered.</p>	<p>PEAD 111 Yoga: Continuing 1 Term Prerequisite: None Semester Prerequisite: None This course promotes psycho-physical integration of body and mind through yogic breathing, stretching, and relaxation. Guided breathing and visualization are used to enhance depth and quality of relaxation and meditation.</p>
<p>PEAC 113 Competitive Table Tennis 1 Term Prerequisite: PEC 113 Semester Prerequisite: PEAC 112 This course is offered for students who are considering participation in United States Table Tennis Association-sanctioned tournaments. Match play is stressed. Rules are discussed in detail and observed during practice. Footwork and service practice is strongly encouraged.</p>	<p>PEAD 112 Yoga: Special 1 Term Prerequisite: None Semester Prerequisite: None This course teaches modified and adaptive yogic breathing and stretching exercises to enhance the body's mobility of the movement-handicapped person. Feldenkeis audio and video instructional tapes are used to extend range of movement. Self-massage, guided relaxation, and meditation are used to reduce stress and tension as well as to enhance well-being.</p>
<p>PEAC 115 Tennis: Beginning 1 Term Prerequisite: None Semester Prerequisite: None This course will introduce the basic skills of tennis, including the backhand, the forehand, the serve, the rules, and scoring.</p>	<p>PEAD 113 Parent/Infant Water Adjustment 1 Term Prerequisite: None Semester Prerequisite: None This course places emphasis on parent/infant water adjustment, safety and fun. Emphasis is placed on development of water experience and improvement of motor skills and coordination. (Infant ages between 6 mos.-2 yrs.)</p>
<p>PEAC 116 Tennis: Intermediate 1 Term Prerequisite: None Semester Prerequisite: None This course will introduce the student to the lob, half volley and a number of different serves. The student should be able to demonstrate and execute the fundamentals of tennis: ground strokes, net volley, serve, and the knowledge of scoring the game.</p>	<p>PEAD 114 Parent/Toddler Water Adjustment 1 Term Prerequisite: PEF 115 Semester Prerequisite: PEAD 113 This course places emphasis on parent/toddler water adjustment, skill development, safety and fun. Emphasis is on development of water experiences; improvement of motor development, coordination, and social skills. Toddlers should be 2-5 yrs. old, depending upon skill development and/or instructor approval.</p>
<p>PEAC 117 Tennis: Advanced 1 Term Prerequisite: None Semester Prerequisite: None This course deals with developing good ball control, court position, topspin shots, and serve/slice shots. Students should be able to execute and demonstrate the following tennis skills: solid ground strokes, net volleys, lobs, and good control of the serve.</p>	<p>PEAD 115 Parent/Child Swim 1 Term Prerequisite: PEF 121 Semester Prerequisite: PEAD 114 This course focuses on parent/child water skill development, socialization skills and safety. Individualized instruction is given for advancement of motor skill and coordination in the aquatic environment. Children should be 4-5 yrs. old and/or instructor's approval.</p>

PEAD 116 Parent/Child Gymnastic Tumbling I	1	PEAF 100 Swimming: Primary Skills	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces basic tumbling skills to work toward greater motor skill development through tumbling, stretching, balancing skills, and controlled movement.		This course focuses on the development of basic swimming strokes, rhythmic breathing, survival swimming, and beginning diving skills.	
PEAD 117 Parent/Child Gymnastics Tumbling II	1	PEAF 101 Swimming: Stroke Development	1
Term Prerequisite: PEH 103		Term Prerequisite: PEF 100	
Semester Prerequisite: PEAD 116		Semester Prerequisite: PEAF 100	
This course introduces children to elementary combinations of movements to enhance flexibility, strength, and coordination. Children learn balancing techniques and sequential movements on a low balance beam.		This course stresses development of skills in front crawl and backstroke. Students will be introduced to the elementary backstroke and breaststroke.	
PEAD 120 Ice Skating	1	PEAF 102 Swimming: Stroke Refinement	1
Term Prerequisite: None		Term Prerequisite: PEF 101	
Semester Prerequisite: None		Semester Prerequisite: PEAF 101	
This course acquaints students with ice skating as a leisure time activity. Points of emphasis in the course are proper fit and care of figure skating boots and blades, basic skating terminology and technique, and proper posture, and control on ice.		This course builds upon the stroke development level skills. Skill development is placed on front crawl and rhythmic breathing, breaststroke, diving, and survival swimming skills. Emphasis is placed on polishing strokes and increasing swimming distances.	
PEAD 121 Racewalk Technique	1	PEAF 104 Swimming/Training	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to build one's basic walking skills into a race-walking stride for fitness or racing.		This course is designed for persons interested in skill development in all competitive swimming strokes as well as in a fitness program design. The student should be able to swim 500 yards in ten minutes.	
PEAE 100 Basketball: Beginning	1	PEAF 105 Advanced Swimming/Training	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces the student to the fundamental skills of basketball. Course emphasis is placed on ball handling, passing, shooting, and rules.		This course is designed for competitive swimmer seeking a high level of swimming. Advanced swimming/training incorporates some dry land training and water polo.	
PEAE 102 Basketball: Advanced	1	PEAF 106 Water Walking/Toning	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed for the student who has a sound understanding of basketball skills. Drills will be used to enhance passing and shooting skill development. Emphasis is placed on team play as well as individual skill improvement.		This course utilizes a variety of walking moves in shallow water to enhance cardiovascular fitness. Toning exercises for arms, abdominals and thighs are used extensively.	
PEAE 103 Volleyball: Beginning	1	PEAF 107 Water Exercise I	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces the student to the fundamental skills of volleyball. Course emphasis is on proper serving, setting, forearm passing, spiking, positioning, rules, and game strategy.		This course utilizes stationary water exercises and water games to improve cardiovascular fitness and flexibility.	
PEAE 104 Volleyball: Intermediate	1	PEAF 108 Water Exercise II	1
Term Prerequisite: PEE 124		Term Prerequisite: None	
Semester Prerequisite: PEAE 103		Semester Prerequisite: None	
This course focuses on the development of proper serving, setting, forearm passing, and spiking skills. Game strategies and player positioning are taught in more detail.		This course uses stationary water exercise and an introduction to swimming techniques to improve cardiovascular fitness. Wall exercises and water jugs are used to increase strength and flexibility.	
PEAE 106 Competitive Volleyball	1	PEAF 109 Water Exercise-Plus	2
Term Prerequisite: PEE 125		Term Prerequisite: None	
Semester Prerequisite: PEAE 104		Semester Prerequisite: None	
This course provides the student with a conceptual framework for advanced offensive and defensive systems of play. Individuals work on skill drills and intra-class competition.		This course is an intensive water fitness exercise program designed to increase cardiovascular output and muscle strength. Students use water movements to increase flexibility and strength.	
PEAE 107 Indoor Soccer	1	PEAF 110 Hydro-Fit Exercise I	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to introduce students to the basics of indoor soccer. Passing and shooting drills are emphasized along with team play. Modifications to soccer rules are used to accommodate indoor soccer rules.		This course is designed to give the student an overall water fitness workout with little impact to joints or back. The class is held in deep water while exercising with Hydro-Fit weights; participants must be comfortable in deep water.	
PEAE 110 Softball: Beginning	1	PEAF 111 Hydro-Fit Exercise II	2
Term Prerequisite: None		Term Prerequisite: PEF 110	
Semester Prerequisite: None		Semester Prerequisite: PEAF 110	
This course introduces the student to the fundamental skills of softball. Course emphasis is on proper throwing, catching, fielding, and hitting procedures.		This course is a water fitness program using water resistance to tone, strengthen, develop coordination and increase flexibility by using Hydro-Fit exercise equipment. Emphasis is placed on increasing abdominal, shoulder/arm, and lower body strength.	
PEAE 115 Waterpolo	1	PEAF 112 Scuba	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is an introduction to the basic skills of waterpolo. Students will work on passing, shooting, and dribbling skills which will then be integrated into a team concept.		This course is a basic course in scuba diving. The course includes both classroom and pool training instruction. Upon successful completion of class, the student is eligible for scuba certification following open water training.	

PEAF 113 Scuba: Advanced	2	PEAG 111 Body Building: Intermediate	2
Term Prerequisite: PEF 109		Term Prerequisite: PEG 129	
Semester Prerequisite: PEAF 112		Semester Prerequisite: PEAG 109	
This course is designed for certified divers who wish to further their scuba diving skills and knowledge. Topics covered will include diving equipment, underwater navigation, stress and rescue, limited visibility and night diving, dry suit diving, and underwater photography. Certification as an advanced and/or specialty diver is available with optional open water training.		This course expands the student's ability to use machines and free weights to increase variations and methods of lifting techniques. Students will also monitor food intake to provide information to assist with proper diet and nutritional needs.	
PEAG 100 Fencing: Beginning	1	PEAH 114 Seminar: Special Subjects	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to introduce the student to basic skills and theories in foil fencing. Course emphasis is placed on twelve basic skills: advance, retreat, lunge, disengage, coupe', one-two double', reposite, counter parry and reposite, and advance-lunge.		Seminars are designed to meet specific community needs.	
PEAG 101 Fencing: Intermediate	1	PEAH 116 Seminar: Special Subjects	2
Term Prerequisite: PEG 103		Term Prerequisite: None	
Semester Prerequisite: PEAG 100		Semester Prerequisite: None	
This course builds upon the twelve basic fencing skills and introduces rules and complex fencing movements. Students will use acquired skills in fencing bouts.		Seminars are designed to meet specific community needs.	
PEAG 102 Fencing: Advanced	1	PEAH 118 Seminar: Special Subjects	3
Term Prerequisite: PEG 104		Term Prerequisite: None	
Semester Prerequisite: PEAG 101		Semester Prerequisite: None	
This course reviews the basic skills of fencing and its rules. Students will be introduced to a sequence of fencing movements in foil facing as well as limited use of Sabre' and Epee'.		Seminars are designed to meet specific community needs.	
PEAG 103 Judo: Beginning	1	PEAI 201 Independent Study	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to familiarize students with basic judo techniques of falling, throwing and grappling.		This course is a directed research project in the area of physical education, recreation or athletics.	
PEAG 104 Judo: Intermediate	1	PEAI 202 Independent Study	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course works toward a series of sequential judo movements with continued emphasis on throwing and grappling.		This course is a directed research project in the area of physical education, recreation or athletics.	
PEAG 105 Karate: Beginning	1	PEAI 203 Independent Study	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course introduces the basic skills of karate: kicking with the feet and knees and punching with the fist and hands.		This course is a directed research project in the area of physical education, recreation or athletics.	
PEAG 106 Karate: Intermediate	1	PEAI 204 Independent Study	4
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course further develops karate skills in punching with the fists and hands, kicking with feet and knees and essential body movement in combative activities with an emphasis on free sparrings.		This course is a directed research project in the area of physical education, recreation or athletics.	
PEAG 107 Karate: Advanced	1	PEAJ 105 Angling: Beginning	1
Term Prerequisite: PEG 110		Term Prerequisite: None	
Semester Prerequisite: PEAG 105		Semester Prerequisite: None	
This course places primary emphasis on the development of sparring techniques as they relate to punching and kicking. Students spar and move toward the competitive aspect of Karate as a martial art.		This course is an introduction to the sport of angling with demonstrations of basic angling tackle and techniques. Information is provided on Michigan sport fish and their habitat. The class will take fishing trips for steelhead, walleye, salmon, trout, bass and other game fish.	
PEAG 108 Weight Training: Beginning	2	PEAJ 107 Angling: Advanced	1
Term Prerequisite: None		Term Prerequisite: PEJ 101	
Semester Prerequisite: None		Semester Prerequisite: PEAJ 105	
This course is designed to promote physical fitness through weight training. Instruction will include different principles, methods and techniques for progressive resistance training. Students will design a program of their choice with emphasis on weight reduction, muscle strengthening and body building with an aerobic component.		This course is designed to improve the angler's skills and knowledge of fish habitat. Many sophisticated angling techniques will be discussed. Weekly fishing trips for Michigan's premier gamefish are scheduled.	
PEAG 109 Body Building: Introduction	1	PEAJ 115 Sailing: Beginning	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to introduce weight training and proper lifting techniques. Introduction to safety rules, proper use of machinery and concepts of lifting will be emphasized.		This course is an introduction to basic sailing on Lake Michigan. Students will become familiar with the parts and functions of a sailing vessel. Students will be taught rigging procedures, use of wind and other basic sailing functions.	
PEAG 110 Body Building: Beginning	2	PEAJ 116 Basic Sailing/Cruising	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course acquaints students with the beginning aspects of body structuring through the application of weights. Emphasis on weight reduction or increase in muscle size through an individualized training program is stressed.		This course will help students gain first-hand experience in the art of sailing and seamanship. Students will attain confidence necessary to handle a cruising sailing vessel under various conditions which present themselves in the Great Lakes.	
		PEAJ 117 Advanced Sailing	2
		Term Prerequisite: None	
		Semester Prerequisite: None	
		This course is designed to give the student an opportunity to experience a major voyage on the Great Lakes applying the terms and course objectives covered in the introductory cruising class. Major emphasis will be placed on advanced piloting and helmsmanship.	

PHGY 202 Human Physiology 4	PHYS 191 Introduction to Biophysics 3
Term Prerequisite: BIO 101/Equivalent, ANT 211	Term Prerequisite: 2.0 Minimum in MTH 102/Equivalent
Semester Prerequisite: 2.0 Minimum ANAT 201, BIOL, CHEM Recommended	Semester Prerequisite: 2.0 Minimum in MATH 112/Equivalent
The physiology of the various organ systems in the human body is presented with emphasis on regulation and integration of body function. Emphasis is on normal function, but clinical aspects may be discussed when appropriate. Laboratory topics complement the lecture.	A one-semester introduction to physics with an emphasis on applications to biological systems. Topics include force and motion, energy, collisions, biomechanics, fluid pressure and flow, bioelectricity and magnetism, sound, light, radioactivity, and nuclear medicine. Laboratory activities illustrate and amplify lecture topics.
PHIL 151 Introduction to Logic and Critical Thinking 4	PHYS 201 Introductory Physics I 4
Term Prerequisite: None	Term Prerequisite: 2.0 Minimum in MTH 165/Equivalent
Semester Prerequisite: None	Semester Prerequisite: 2.0 Minimum in MATH 126/Equivalent
Introduction to modern logic and elements of reasoning, with special attention given to the roles of language in reasoning, distinguishing deductive from inductive arguments, recognizing levels of meaning and differing world views (Weltanschauungen), analyzing truth-functional relations, avoiding fallacious reasoning or misleading language, and using logical skills in everyday life.	First in a two-semester sequence of algebra-based physics courses designed to present the fundamental principles of physics, emphasizing applications to other fields. Topics include mechanics, solids and fluids, heat, sound, nuclear physics, and alternative energy sources and technologies. Laboratory activities and projects complement the lecture topics.
PHIL 152 Introduction to Ethics 4	PHYS 202 Introductory Physics II 4
Term Prerequisite: None	Term Prerequisite: 2.0 Minimum in PHY 201/Equivalent
Semester Prerequisite: None	Semester Prerequisite: 2.0 Minimum in PHYS 201/Equivalent
Designed to explore essential requirements for moral reasoning and to call attention to both the factual foundation as well as the traditional criteria utilized for value judgments. Major ethical theories will be discussed, along with their applications to everyday situations. The course will include cross-cultural references, when appropriate.	Continuation of PHYS 201. Topics include electricity and magnetism, vibrations and waves, sound, light and optics, quantum physics, elementary particles, relativity, and cosmology. Laboratory activities and projects complement the lecture topics.
PHIL 153 Knowledge and Reality 4	PHYS 215 Physics I: Mechanics 4
Term Prerequisite: None	Term Prerequisite: 2.0 Minimum in MTH 213/Equivalent
Semester Prerequisite: None	Semester Prerequisite: 2.0 Minimum in MATH 151/Equivalent
Select issues from classical and contemporary philosophy provide an introduction to differences between knowledge and opinion, ways of supporting knowledge claims, and the relationship between the knower and what exists.	First in a three-semester sequence of calculus-based physics courses for science and engineering students. Topics include force and motion, momentum, work and energy, the conservation laws of energy and momentum, rotational motion, static equilibrium, gravitation, and oscillations. Integrated special topics will include relativity, nuclear physics, and thermodynamics.
PHIL 211 World Philosophies I 4	PHYS 216 Physics II: Electromagnetism, Waves, and Optics 4
Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended)	Term Prerequisite: 2.0 Minimum PHY 215/Equivalent, MTH 214
Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended)	Semester Prerequisite: 2.0 Minimum PHYS 215/Equivalent, MATH 152
Surveys major developments in philosophy and their relation to the historical contexts in which they occur. Beginning with the early Eurasian (Chinese, Indian, and Mediterranean) philosophies, this survey includes Near Eastern thought of the Islamic civilization and concludes with early scientific reasoning in Europe.	Second in a three-semester sequence of calculus-based physics courses for science and engineering students. Topics include electric and magnetic forces and fields, electromagnetic energy, currents and circuits, electromagnetic oscillations and waves, mechanical waves and sound, light waves, and physical and geometrical optics.
PHIL 212 World Philosophies II 4	PHYS 217 Physics III: Thermodynamics and Modern Physics 4
Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENG/WRI 122 Recommended)	Term Prerequisite: 2.0 Minimum PHY 215/Equivalent, MTH 214
Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended)	Semester Prerequisite: 2.0 Minimum PHYS 215/Equivalent, MATH 152
Surveys major developments in philosophy and their relation to the historical contexts in which they occur. Beginning with the scientific revolution and Enlightenment, the survey extends to global concerns of modernity.	Third in a three-semester sequence of calculus-based physics courses for science and engineering students. Topics include thermodynamics, quantum physics, nuclear physics and radioactivity, condensed matter physics, special relativity, elementary particles, and cosmology.
PHIL 260 Contemporary Ethical Problems 4	PHYS 225 Physics I Laboratory 1
Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended)	Term Prerequisite: PHY 215 Concurrently/Equivalent
Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended)	Semester Prerequisite: PHYS 215 Concurrently/Equivalent
This is an advanced course designed to examine contemporary moral issues which arise through technological and social developments. It will explore the limits of traditional ethical theories and/or their possible adaptation to a changing world. Where appropriate, course includes issues of cross-cultural importance which involve multinational concerns.	Laboratory course which complements Physics I. Experiments include investigations in mechanics, radioactivity, and heat. The lab is intended to increase students' knowledge of natural and technological phenomena as they learn effective laboratory techniques for gathering and interpreting data, communicating their results, and designing and implementing individual and team projects.
PHIL 295 Independent Study 1	PHYS 226 Physics II Laboratory 1
Term Prerequisite: Departmental Approval	Term Prerequisite: PHY 216 Concurrently/Equivalent
Semester Prerequisite: Departmental Approval	Semester Prerequisite: PHYS 216 Concurrently/Equivalent
Special research projects and/or individual readings in Philosophy. Students will invest no less than 32 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.	Laboratory course which complements Physics II. Experiments include investigations in electromagnetism, sound, and optics. The lab is intended to increase students' knowledge of natural and technological phenomena as they learn effective laboratory techniques for gathering and interpreting data, communicating their results, and designing and implementing individual and team projects.
PHIL 296 Independent Study 2	POLS 120 American Political System 4
Term Prerequisite: Departmental Approval	Term Prerequisite: None
Semester Prerequisite: Departmental Approval	Semester Prerequisite: None
Special research projects and/or individual readings in Philosophy. Students will invest no less than 32 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.	An analysis of the American political system. Emphasis is given to the federal system, with special attention to American government at the national level.
PHON 108 Introduction to Phonics 3	POLS 121 State and Local Government 4
Term Prerequisite: None	Term Prerequisite: None
Semester Prerequisite: None	Semester Prerequisite: None
Explores 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.	A study of state and local governmental activities, their structures, functions, and methods of organizing resources and making policy. Consideration is given to the relationships between governmental units and the problems they confront, including relations between federal, state, and local government.

<p>POLS 130 Honors: American Political System 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An analysis of the American political system. Emphasis is given to the federal system, with special attention to American government at the national level. This course is the same as POLS 120 except that it is taught as a seminar for honor students only.</p>	<p>PSYC 099 Seminar: Elder College Psychology 5 Term Prerequisite: None Semester Prerequisite: None This course is designed to explore aspects in adult development particularly related to the elderly. Specific topics vary with each seminar.</p>
<p>POLS 200 Political Behavior 3 Term Prerequisite: None Semester Prerequisite: None This introductory course examines the theories and concepts of political science and the methodology used by political scientists to analyze and understand American politics. Special emphasis is placed on political institutions and the relationships of those involved in the political process.</p>	<p>PSYC 175 Psychology of Death: A Preparation for Living 3 Term Prerequisite: None Semester Prerequisite: None Examines 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.</p>
<p>POLS 205 Government Internship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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.</p>	<p>PSYC 185 Seminar: Children and Death: Grief and Loss 2 Term Prerequisite: None Semester Prerequisite: None This course will provide a theoretical base and concrete tools to work with children in the grieving process. Students will explore their personal awareness of death as well as children's developmental issues as survivors and terminal patients.</p>
<p>POLS 206 Advanced Government Internship 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval This course offers the student an advanced opportunity to participate in the actual workings of the political process.</p>	<p>PSYC 195 Seminar: Biofeedback 3 Term Prerequisite: None Semester Prerequisite: None A survey of understanding stress and illness with application of instruments to achieve stress reduction. Includes quieting response, meditation, breathing techniques, progressive relaxation, nutrition, guided imagery, visualization, personal health risk profile, and burn-out prevention. Students will use instruments in a lab in order to gain skill in personal stress reduction.</p>
<p>POLS 230 Sex Roles and Political Change in a Post-Industrial Society 3 Term Prerequisite: None Semester Prerequisite: None An exploration of change in sex-roles and family structure in response to changing economic, social, and political forces. Topics to be covered include sex-role socialization, divorce and remarriage, and social changes in the economy, politics, and the military. The course blends a variety of perspectives within the social sciences.</p>	<p>PSYC 200 Introduction to Psychology 4 Term Prerequisite: None Semester Prerequisite: None The basic orientation to the field of psychology, designed as a general survey and as preparation for advanced courses in the field. Topics include methods, nervous systems, sensation, perception, development, learning, motivation, emotion, cognition, personality, abnormality, therapy, and social behavior.</p>
<p>POLS 250 American Political Parties and Interest Groups 3 Term Prerequisite: None Semester Prerequisite: None Emphasizes the origins, structure, and functions of political parties, examines the American political system in terms of citizens' concerns 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.</p>	<p>PSYC 202 Psychology of Personality 3 Term Prerequisite: PSY 200 Semester Prerequisite: PSYC 200 Discussion of concepts of adjustment, conflict, mental processes, and behavior modification. Survey of leading theories of personality, emphasizing their implications for assessing and modifying normal personality.</p>
<p>POLS 270 International Relations 3 Term Prerequisite: None Semester Prerequisite: None A course in contemporary international relations, with emphasis upon politics. Concepts, theories, and rudimentary methods are surveyed. The relationship between international politics and U.S. foreign and domestic policy is explored.</p>	<p>PSYC 203 Social Psychology 3 Term Prerequisite: PSY 200 Semester Prerequisite: PSYC 200 Designed to give the student an understanding of the influence of social interaction upon the development of personality. Emphasis is on the interaction between the individual, group, and society.</p>
<p>POLS 290 Seminar: Supreme Court and Landmark Decisions 3 Term Prerequisite: None Semester Prerequisite: None An analysis of the United States Supreme Court. Particular emphasis will be devoted to Supreme Court decision-making. A number of landmark Supreme Court decisions will be reviewed from historical, political, public policy, institutional, and behavioral perspectives.</p>	<p>PSYC 204 Educational Psychology 3 Term Prerequisite: PSY 200 Semester Prerequisite: PSYC 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.</p>
<p>POLS 295 One Credit Independent Study in Political Science 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving research, reading, and experience in political science. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specific academic goals.</p>	<p>PSYC 205 Human Growth and Development 3 Term Prerequisite: PSY 200 Semester Prerequisite: PSYC 200 A study of the human life cycle from conception to death. Designed to investigate, describe, and explain changes in the physical, social, emotional, and cognitive areas that are a result of the continuous interaction of maturation and experience.</p>
<p>POLS 296 Two Credit Independent Study in Political Science 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving research, reading, and experience in political science. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specific academic goals.</p>	<p>PSYC 209 Cognitive Psychology 3 Term Prerequisite: PSY 200 Semester Prerequisite: PSYC 200 Cognitive psychology is the scientific analysis of human mental processes and memory structures in order to understand human behavior. Topics include: attention, arousal, visual processing, recognition, memory processing, memory recall, problem-solving, language, and disorders of cognition.</p>
<p>POLS 297 Three Credit Independent Study in Political Science 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Independent project involving research, reading, and experience in political science. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specific academic goals.</p>	<p>PSYC 210 Biological Psychology 3 Term Prerequisite: PSY 200, Science Course/PSY 201 Semester Prerequisite: PSYC 200 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.</p>

PSYC 221 Child Psychology	3	PVAA 287 Applied Appraisal Concepts II	1
Term Prerequisite: PSY 200		Term Prerequisite: BUS 283/Departmental Approval	
Semester Prerequisite: PSYC 200		Semester Prerequisite: PVAA 282/Departmental Approval	
Explores theories and principles of child development from conception to puberty. The course covers psychological, sociological, and biological aspects of maturation and development.		Field inspection and appraisal of commercial and industrial properties which emphasize potential appraisal problems using the cost approach to value.	
PSYC 222 Adolescent Psychology	3	PVAA 288 Income Approach to Value I	2
Term Prerequisite: PSY 200		Term Prerequisite: BUS 283/RE 291	
Semester Prerequisite: PSYC 200		Semester Prerequisite: PVAA 282/REAL 279	
Examines theoretical and empirical literature related to adolescence, emphasizing biological, psychological, and sociological aspects of maturation and development from puberty to young adulthood.		This course introduces the advanced student to the appraisal concepts used in the appraisal of income-producing properties.	
PSYC 240 Psychology of Human Sexuality	3	PVAA 289 Income Approach to Value II	2
Term Prerequisite: PSY 200		Term Prerequisite: BUS 288	
Semester Prerequisite: PSYC 200		Semester Prerequisite: PVAA 288	
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.		Advanced study of the appraisal concepts utilized in the appraisal of income-producing properties.	
PSYC 250 Abnormal Psychology	3	QUAL 100 Introduction to Quality Assurance	3
Term Prerequisite: PSY 200		Term Prerequisite: None	
Semester Prerequisite: PSYC 200		Semester Prerequisite: None	
An exploration of the nature, development, diagnosis, and treatment of psychopathology viewed from a general-systems (psychological, social, and physiological) perspective. Significant research, major theories, diagnostic techniques, and therapeutic techniques are discussed with respect to various psychological disorders.		This course explores the historical evolution of total quality management and introduces the concepts of continuous improvement and process systems. Current quality control theories from both service and manufacturing environments are examined.	
PSYC 295 One Credit Independent Study in Psychology	1	QUAL 103 Probability and Statistics for Quality Assurance	3
Term Prerequisite: Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: None	
An independent project involving research, reading, and experience in psychology. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specific academic goals.		This course introduces the student to basic probability and statistics as related to quality assurance. Material covered includes probability concepts, counting techniques, binomial distribution, hypergeometric distribution, normal distribution, and process capability concepts.	
PSYC 296 Two Credit Independent Study in Psychology	2	QUAL 106 Statistical Problem-Solving in Quality Assurance	3
Term Prerequisite: Departmental Approval		Term Prerequisite: QC 103	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: QUAL 103/Equivalent	
An independent project involving research, reading, and experience in psychology. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specific academic goals.		This course covers basic problem-solving techniques in quality assurance. Many graphical and numerical approaches will be presented utilizing both path one and path two techniques.	
PSYC 297 Three Credit Independent Study in Psychology	3	QUAL 109 Control Charts for Quality Assurance	4
Term Prerequisite: Departmental Approval		Term Prerequisite: QC 103	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: QUAL 103	
An independent project involving research, reading, and experience in psychology. The project, chosen by the student, must be approved in advance by the Department Chair, must be supervised by a member of the faculty, and must meet specified academic goals.		This course introduces the student to the theory, application, design, selection and implementation of both variable and attribute control charts. Material covered also includes using a control chart to numerically analyze a process, distinguishing between capability and control, and analyzing control chart patterns in terms of probabilities.	
PVAA 281 Property Valuation and Assessment Administration I	3	QUAL 112 Cost of Quality	2
Term Prerequisite: None		Term Prerequisite: Departmental Approval	
Semester Prerequisite: None		Semester Prerequisite: QUAL 100	
An introductory course presenting the Michigan property tax system, basic property valuation concepts, property descriptions, eminent domain, land economics, tax mapping, and aerial photograph interpretation.		Introduces the student to definitions and philosophy of quality costs through the interactions of typical accounting methods and the alignment of quality cost practices. Topics include: basic financial concepts, trend analysis, problem areas, reducing costs and planning.	
PVAA 282 Property Valuation and Assessment Administration II	3	QUAL 115 Metrology I	3
Term Prerequisite: Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: PVAA 281/Departmental Approval		Semester Prerequisite: QUAL 103	
Presents concepts of residential and agricultural appraisals and soil survey.		Introduces the student to the theory, use, and application of conventional and digital precision instrumentation. Designed to fulfill the needs of quality assurance and skilled trades students requiring a foundation in metrology.	
PVAA 283 Property Valuation and Assessment Administration III	3	QUAL 118 Metrology II	3
Term Prerequisite: Departmental Approval		Term Prerequisite: QC 120, QC 121	
Semester Prerequisite: PVAA 282/Departmental Approval		Semester Prerequisite: QUAL 115	
Commercial and industrial appraisals are presented. Valuation and auditing procedures relevant to personal property are also explained.		Introduces the student to advanced instrumentation and its applications. The student will learn to utilize the optical comparator, laser micrometer, surface tester, and the coordinate measurement machine to accomplish evaluation of lab projects.	
PVAA 284 Property Valuation and Assessment Administration IV	3	QUAL 121 Introduction to Statistical Process Control	2
Term Prerequisite: Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: PVAA 283/Departmental Approval		Semester Prerequisite: None	
Topics covered include Michigan property tax law, local government financing, assessment/equalization cycle, allocation, and millage rollback computations.		This course provides an introduction to statistical process control (SPC) philosophy and techniques. SPC is a means of controlling and improving processes through the use of data. Students will be introduced to the history of SPC, the Deming philosophy, process variation, techniques including control charts, and process improvement.	
PVAA 286 Applied Appraisal Concepts I	1		
Term Prerequisite: BUS 282/BUS 283/Departmental Approval			
Semester Prerequisite: PVAA 281/PVAA 282/Departmental Approval			
Field inspection and appraisal of residential, commercial and industrial properties. Emphasis is on potential appraisal problems utilizing the cost approach to value.			

<p>QUAL 124 Quality Assurance in Service Organizations 3 Term Prerequisite: None Semester Prerequisite: None This course introduces students to service quality principles that apply to profit and non-profit, for wage and volunteer organizations. Topics include: quality concepts, terms and techniques as a basis for a sound quality program, quality fallacies connected to quality of service, nature and prevention of human error, and customer-focused quality improvement programs.</p>	<p>QUAL 236 Quality Planning 3 Term Prerequisite: Departmental Approval Semester Prerequisite: QUAL 100/Equivalent Identifies custom demands and plans for products and services to satisfy the customer. Topics include understanding your customer, planning the development of products and services, and quality of delivery. Introduces QFD (Quality Function Deployment). Techniques include: seven new quality (management) tools, product and service-specific quality planning, and FMEA techniques.</p>
<p>QUAL 200 Team Problem-Solving 3 Term Prerequisite: None Semester Prerequisite: None This course covers problem-solving models and techniques for quality and productivity improvement with an emphasis on the interpersonal and communication skills. Students will use basic problem-solving methods and techniques, learn team leader and member roles, use effective communication skills, and prepare and present the projects to the class.</p>	<p>QUAL 239 Quality Improvement Projects 3 Term Prerequisite: QC 210 Semester Prerequisite: QUAL 215 This course requires the student to utilize previous knowledge gained in the Quality Assurance curriculum to set up projects, gather data, analyze data, and reach appropriate conclusions and recommendations. Possible project areas may include control charts, hypothesis testing, regression analysis, and experimental design.</p>
<p>QUAL 203 Quality Systems Management 3 Term Prerequisite: None Semester Prerequisite: None This course focuses on developing, managing, and implementing quality assurance systems. Course material and assignments are designed to develop student skills in intracompany, vendor, and customer quality relationships including quality planning, quality manual and procedure development, communication, training for quality certification programs, and continuous improvement.</p>	<p>RDGR 101 Personal Reading I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval May be taken concurrently with other reading courses to provide extra instruction and practice. One-to-one instruction. Requires enrollment in READ 005 (lab). (May repeat for credit three times.)</p>
<p>QUAL 206 Statistical Sampling 2 Term Prerequisite: QC 103 Semester Prerequisite: QUAL 103 This course introduces the student to operational characteristics curves for design and selection of sampling plans using the hypergeometric, binomial, and Poisson distributions for attributes. MIL-STD-105 and Dodge and Romig rectification sampling plans will be introduced.</p>	<p>RDGR 102 Personal Reading II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval May be taken concurrently with other reading courses to provide extra instruction and practice. One-to-one instruction. Requires enrollment in READ 005 (lab). (May repeat for credit three times.)</p>
<p>QUAL 209 Reliability 3 Term Prerequisite: QC 103, ATM 151/Equivalent Semester Prerequisite: QUAL 103, TECH 101 This course introduces the student to definitions and characteristics of reliability. Topics covered include probability density function, reliability function, hazard/failure rate function, life characteristic curve, and reliability modeling for components and systems.</p>	<p>RDGR 103 Personal Reading III 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval May be taken concurrently with other reading courses to provide extra instruction and practice. One-to-one instruction. Requires enrollment in READ 005 (lab). (May repeat for credit three times.)</p>
<p>QUAL 212 Applied Statistics for Quality Assurance 4 Term Prerequisite: ATM 151/Equivalent Semester Prerequisite: QUAL 103 This course covers the topics of hypothesis testing, confidence intervals and sample size determination as applied to various distributions, such as the normal, student T, chi-squared and F. Correlation, and regression will also be covered.</p>	<p>READ 005 Reading Laboratory 0 Term Prerequisite: None Semester Prerequisite: None READ 005 arranges the days and times when students will attend Reading Clinic courses. Students must register for both a Reading Clinic course, such as READ 100, and a section of READ 005.</p>
<p>QUAL 215 Experimental Design in Quality Assurance 4 Term Prerequisite: QC 209 Semester Prerequisite: QUAL 109, QUAL 212 This course covers the concepts of analysis of variance and experimental design. Topics include one and two way ANOVA, various graphical and numerical tests for effects, determination and testing of residuals, and the use of mathematical models.</p>	<p>READ 100 Reading Clinic IA 4 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students whose reading skills range from pre-literate to basic literacy. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>
<p>QUAL 218 Quality Auditing 3 Term Prerequisite: None Semester Prerequisite: None This course prepares the student to plan, develop, review material, and implement quality audits in manufacturing and service organizations. This course may be used as a refresher in preparation for the Certified Quality Auditor (CQA) certification examination through the American Society for Quality control.</p>	<p>READ 101 Reading Clinic IIA 4 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>
<p>QUAL 221 Weibull Analysis 2 Term Prerequisite: QC 202 Semester Prerequisite: QUAL 209 Introduces the student to the Weibull distribution, its parameters, and methods used to calculate and plot data to determine these parameters. The student will learn to use parameter calculations to determine reliability characteristics and analyze Weibull plots.</p>	<p>READ 102 Reading Clinic IB 3 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>
<p>QUAL 224 Manufacturing Supervision 3 Term Prerequisite: None Semester Prerequisite: None This course will help students to develop skills for supervising personnel in a production environment consistent with current quality engineering principles. Topics include customer focus, employee selection and development, task analysis equipment and resource utilization, and continuous improvement of quality and productivity utilizing data and employee involvement.</p>	<p>READ 103 Reading Clinic IIB 3 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>

<p>READ 104 Reading Skills IA 4 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students whose reading skills range from pre-literate to basic literacy. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 251 HP 12C Seminar .5 Term Prerequisite: None Semester Prerequisite: None 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 REAL 273, but it is open to any interested students.</p>
<p>READ 105 Reading Skills IIA 4 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 253 HP 17B Seminar .5 Term Prerequisite: None Semester Prerequisite: None This seminar will acquaint the user of the Hewlett Packard HP-17B calculator with basic functions, financial calculations, and related real estate calculations. It is designed to provide additional practice with the HP-17B for students currently enrolled in REAL 273, but it is open to any interested students.</p>
<p>READ 106 Reading Skills IB 3 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills and also to improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 271 Introduction to Real Estate 2 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>READ 107 Reading Skills IIB 3 Term Prerequisite: None Semester Prerequisite: None Designed to teach fundamental reading skills also improve confidence and self-esteem. Provides a personal program which combines private tutoring with directed practice. For students who have some basic literacy skills. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 273 Real Estate Investment 3 Term Prerequisite: RE 271, RE 274/Departmental Approval Semester Prerequisite: REAL 271/REAL 274/Departmental Approval Emphasis on investment analysis, financing, depreciation, capital gains, exchanging, and federal tax implications of real estate acquisitions, ownership, and disposal.</p>
<p>READ 108 Individualized Reading A 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed for average readers, especially adults in the working community who wish to improve their reading proficiency with one-to-one instruction and directed practice. Students concentrate on areas that need strengthening. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 274 Real Estate License Exam 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>READ 109 Individualized Reading B 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed for average readers, especially adults in the working community who wish to improve their reading proficiency with one-to-one instruction and directed practice. Students concentrate on skill areas that need strengthening. Requires enrollment in READ 005, which arranges times for laboratory attendance. (May repeat for credit three times.)</p>	<p>REAL 275 Real Estate Financing 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>READ 115 Reading Comprehension 4 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test Designed to increase basic comprehension skills, build vocabulary, and prepare students for college-level reading through the exploration of effective study techniques.</p>	<p>REAL 277 Property Management 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>READ 119 Concentrated Speed Reading 1 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test Designed for the average or better-than-average reader. Students improve rate by developing good reading habits, increasing reading flexibility, and practicing efficient reading techniques. Focuses on the aspects of perception and selectivity in rapid information processing.</p>	<p>REAL 278 Real Estate Inspection and Construction 3 Term Prerequisite: None Semester Prerequisite: None A course in basic construction for 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 house, site selection; and building materials.</p>
<p>READ 164 Speed Reading 3 Term Prerequisite: Placement Test Semester 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.</p>	<p>REAL 279 Residential Appraisal 3 Term Prerequisite: None Semester Prerequisite: None Principles, methods, and techniques of residential real estate appraising with application.</p>
<p>READ 174 Critical Reading 3 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test Designed to go beyond reading comprehension at the literal level and to develop in the individual the ability to grasp implied meanings and draw conclusions. The reader must also be able to perceive the structural and developmental pattern in written material and to judge rationally what he/she reads.</p>	<p>REAL 280 Real Estate Law 3 Term Prerequisite: RE 271/RE 274/Departmental Approval Semester Prerequisite: REAL 271/REAL 274/Departmental Approval Topics covered include: land and its elements, land titles, and land interests, abstracts and title insurance, deeds, easements, liens, mortgages, land contracts and foreclosures and landlord-tenant relations; private land-use controls including restrictions; and condominiums and tax policies pertaining to real estate.</p>
	<p>REAL 281 Successful Home Buying Seminar 1 Term Prerequisite: None Semester Prerequisite: None 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.</p>

<p>REAL 283 Property Tax Appeal .5 Term Prerequisite: None Semester Prerequisite: None This course is designed to acquaint the homeowner/taxpayer with the principles behind the computation of Michigan's ad valorem real property tax assessment. Special attention will be paid to real property appraisal and the tax appeal process.</p>	<p>RESP 126 Cardiopulmonary Pharmacology and Metrology 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program A study of general concepts of pharmacology and metrology for use in cardiopulmonary care. Emphasis is placed in pulmonary drugs and cardiovascular drugs. Medically related math skills are developed through example and exercise.</p>
<p>REAL 285 Real Estate Update Seminar .25 Term Prerequisite: None Semester Prerequisite: None A series of topical workshops designed to meet the needs of real estate professionals for continuing education in their industry.</p>	<p>RESP 131 Respiratory Therapy Technology I 4 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Introductory course in professional respiratory care that includes didactic instruction, campus lab and clinical lab experience. The emphasis is placed on infection control, medical gases, aerosol and humidity therapy, physical assessment, and patient care principles. Topics of universal precautions and hygiene for the health-care provider are stressed.</p>
<p>RELG 211 World Religions I 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course surveys the origins and development of Eastern world religions from their early cultural context in Asia to their present forms. The religious beliefs and practices of Hinduism, Jainism, Buddhism, Sikhism, Confucianism, and Taoism are examined in terms of their vital role in the development of modern civilizations.</p>	<p>RESP 132 Respiratory Therapy Technology II 5 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 131 Exploration of theory and techniques in individual respiratory care technique. The areas include medical gas, analyzers and blenders, aerosol therapy, airway management, chest physiotherapy, maximum demand inspiration (M.D.I.), intermittent positive pressure breathing (I.P.P.B.), and continuous mechanical ventilation.</p>
<p>RELG 212 World Religions II 4 Term Prerequisite: WRI 121, HUM 212/HUM 150/HUM 151/PHL 201/PHL 202 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course surveys the origins and development of Western world religions from their early cultural context, including Persian and Hellenistic-Roman influences, to their present forms. The religious beliefs and practices of Judaism, Christianity, and Islam are examined in terms of their vital role in the development of modern civilizations.</p>	<p>RESP 133 Respiratory Therapy Technology III 4 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 132 A continuation of the techniques in RESP 132. Emphasis is placed in the following areas: advanced critical care techniques, pulmonary diagnostics, resuscitation and advanced cardiac life support, rehabilitation and home care, hemodynamic monitoring, chest radiology, neonatology, and pediatrics.</p>
<p>RELG 241 Old Testament Literature 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course surveys the content of Judaism's Bible (Christianity's Old Testament) in its original Hebrew cultural and religious context, using some of the insights of modern critical scholarship. The origins and early development of the Hebrews and their religious beliefs and practices are examined.</p>	<p>RESP 142 Resp Therapy Clinical Practice I 8 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 131 Companion clinical practice course emphasizing the techniques covered in lecture and campus lab in RESP 132.</p>
<p>RELG 242 New Testament Literature 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course surveys the content of Christianity's New Testament in its original Hebraic and Hellenistic-Roman context, using some of the insights of modern critical scholarship. The origins and early development of Christianity and its religious beliefs and practices are examined.</p>	<p>RESP 143 Resp Therapy Clinical Practice II 5 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 132, RESP 142 Companion clinical practice course emphasizing the techniques covered in lecture and campus lab in RESP 133.</p>
<p>RELG 250 Religions of East Asia 4 Term Prerequisite: WRI 121 (ENG/WRI 122 Recommended) Semester Prerequisite: WRIT 121 (ENGL/WRIT 122 Recommended) This course surveys the origins and development of East Asian religions. The religious beliefs and practices of Confucianism, Taoism, Buddhism (Mahayana and Tibetan), and Shinto are examined in terms of their vital role in the development of ancient and modern East Asian civilizations.</p>	<p>RESP 234 Respiratory Therapy Technology IV 3 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 133 Presents advanced concepts and techniques necessary in specialized areas of a respiratory therapy practice with an emphasis on emerging concepts in techniques and care appliances for this decade.</p>
<p>RESP 123 Cardiopulmonary Applied Basic Sciences and Microbiology 4 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program This course explores selected areas of physical and biological sciences as applied to the practice of cardiopulmonary care. Basic physical sciences emphasize the states of matter, gases, fluid, and application laws. Biological science application concerns microbiology of pathogens, infections control, and surveillance in medical practice.</p>	<p>RESP 235 Respiratory Therapy Technology V 3 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 234 A continuation of RESP 234 which presents concepts and techniques necessary in specialized areas of respiratory practice with an emphasis on emerging concepts in techniques and care appliances for this decade.</p>
<p>RESP 125 Cardiopulmonary Anatomy and Medical Terminology 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program The course explores general medical terminology while providing an in-depth study of cardiopulmonary anatomy. An emphasis will be placed on building medical vocabulary and word usage in relation to anatomy and physiology of the respiratory, cardiovascular, and blood and lymph systems.</p>	<p>RESP 244 Advanced Respiratory Clinical Practice III 8 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 143 Designed to provide practice of respiratory care in actual clinical settings for specialized contemporary care. These areas include required areas of adult and pediatric critical care, chronic respiratory care, pulmonary function studies, and neonatal intensive care. Optional areas of study include sleep studies, pulmonary home care, pulmonary rehabilitation, and cardiology.</p>
<p>RESP 126 Cardiopulmonary Physiology and Disease 5 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 123, RESP 125 Explores the physiology and pathophysiology of the cardiopulmonary system. Detailed analysis of pulmonary mechanics and studies, gas transport, circulatory system, acid/base balance, V/Q relationships, control of ventilation, and hypoxia is provided. Emphasis is placed in study of the systems in health and disease.</p>	<p>RESP 245 Advanced Respiratory Clinical Practice IV 8 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 244 As the continuation of RESP 244, it too is designed to provide supervised practice of respiratory care in actual clinical settings for each of the highly specialized contemporary care areas.</p>
	<p>RESP 251 Practice of Pulmonary Medicine 2 Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 133/Departmental Approval Practicing respiratory therapist, pulmonologist and other physicians share theory, techniques, and ethics involved in their practice of pulmonary medicine. Designed to not only shape the roles and practices of new therapist, but to promote understanding among different professionals involved in the practice of pulmonary medicine.</p>

RESP 252 Respiratory Professional Testing and Management 2	ROMS 210 Production Activity Control 3
Term Prerequisite: Departmental Approval Semester Prerequisite: RESP 251/Departmental Approval Examines in detail two vital areas of professional development of the respiratory therapist. The system of professional advancement for therapist is explored; diagnostic and practice professional examination for the certification and registry levels are analyzed closely. Units of instruction in material and personal management for a clinical environment are presented.	Term Prerequisite: None Semester Prerequisite: None This course covers the principles, approaches, and techniques used by managers to plan, schedule, control, and evaluate the effectiveness of shop production operations.
RESP 271 Directed Study in Respiratory Therapy I 1	ROMS 215 Total Productive Maintenance 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed individually to meet specific educational objectives and goals of the student in advanced specialty training in respiratory therapy on a learning contract basis. Projects and objectives are consistent with the contact time as required.	Term Prerequisite: None Semester Prerequisite: None Total Productive Maintenance (TPM) creatively combines preventive and corrective maintenance techniques with principles of design-to-life-cycle-cost to assure reliability in function and ease of maintenance. Students will learn about the principal features of TPM such as total effectiveness, total maintenance systems, and total participation of all employees.
RESP 272 Directed Study in Respiratory Therapy II 2	ROMS 220 Materials Logistics 3
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed individually to meet specific educational objectives and goals of the student in advanced specialty training in respiratory therapy on a learning contract basis. Projects and objectives are consistent with the contact time as required.	Term Prerequisite: None Semester Prerequisite: None This course covers the concepts and techniques for the planning and procurement of materials, inventory control in manufacturing, and the distribution of products to customers. Areas covered: inventory planning and control, procurement, distribution, and the relationship among these areas. Topics include inventory methods, supplier partnerships, sourcing, traffic management, warehousing, and finished goods management.
RESP 273 Directed Study in Respiratory Therapy III 3	ROMS 225 IBM Query 2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed individually to meet specific educational objectives and goals of the student in advanced specialty training in respiratory therapy on a learning contract basis. Projects and objectives are consistent with the contact time as required.	Term Prerequisite: CAS 100 Semester Prerequisite: CIBS 100 IBM Query is a powerful, easy-to-use software package which runs on an IBM AS/400 computer. It is widely used to create display screens, reports, and files by retrieving data from AS/400 files. The student will have extensive hands-on use of Query accessing a complex data base on an AS/400. This course is designed for students with no programming experience.
RESP 274 Directed Study in Respiratory Therapy IV 4	ROMS 230 Electronic Data Interchange 2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Designed individually to meet specific educational objectives and goals of the student in advanced specialty training in respiratory therapy on a learning contract basis. Projects and objectives are consistent with the contact time as required.	Term Prerequisite: CAS 100 Semester Prerequisite: CIBS 100 Electronic Data Interchange (EDI) is the electronic transfer of business data from one company's computer system to another. Automotive suppliers are the principal users of EDI. Students will learn how EDI works, benefits and costs, standards, third party networks, and how to implement EDI. The course will include classroom demonstrations of EDI software use.
RESP 280 Pulmonary Function Diagnostics 3	ROMS 235 Cost Management Systems for Advanced Technology 2
Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Provides an in-depth clinical instruction and practice in pulmonary function testing and other associated areas of pulmonary diagnostics.	Term Prerequisite: Departmental Approval Semester Prerequisite: ROMS 105/ROMS 100 This course covers the cost techniques for a production system transformed from labor intensive to time-based and technology intensive processes. Topics include activity-based analysis, cost drivers, non-financial measurements, and cost-system analysis.
ROMS 100 Introduction to Information Systems and Technology 3	ROMS 240 Bar Code Systems 3
Term Prerequisite: None Semester Prerequisite: None This course introduces the student to resource planning systems including MRP/II and their relationships to marketing, bar code/electronic data interchange, design, quality, manufacturing systems, and technology. The student will learn concepts and techniques relevant to APICS certification.	Term Prerequisite: None Semester Prerequisite: None Course introduces the student to the fundamentals of bar code technology including symbologies, standards, and hardware and software systems. Applications and interfaces covered include data collection systems and electronic data interchange. Students will focus on information processing that targets market strategies and improvement drivers.
ROMS 105 Introduction to Just-In-Time 3	ROMS 245 Managing Productivity 2
Term Prerequisite: None Semester Prerequisite: None This course introduces the student to principles, concepts, and techniques of time-based management strategies. Topics include synchronous manufacturing, process flow, total quality, employee involvement, facilities management, and cost reduction. Emphasis is on synchronous manufacturing techniques.	Term Prerequisite: None Semester Prerequisite: None Course emphasizes current concepts related to productivity and the need to stimulate improvements in organizations. The relationships among elements of change, teamwork, communication, and technology are stressed. Students will learn techniques such as process mapping, best practices, and assessments.
ROMS 200 Master Production Planning 3	ROMS 250 Product Management 2
Term Prerequisite: None Semester Prerequisite: None This course introduces the student to master planning concepts and practices in engineer-to-order, make-to-order, assemble-to-order, and make-to-stock manufacturing environments. Master Production Planning is a primary way to increase customer service and improve utilization of resources in a manufacturing enterprise.	Term Prerequisite: None Semester Prerequisite: None This course introduces students to subjects relating to the design, sale and service of a product, such as product life cycle, identifying and satisfying customer needs, creating products and service, and improvement of products in the field. This course will cover marketing and sales, field service, product design and development, and the relationships among these.
ROMS 205 Material and Capacity Requirements Planning 3	
Term Prerequisite: None Semester Prerequisite: None Material and Capacity Requirements Planning is a time-phased priority planning system which includes MRP that supports the building plan as defined in the master production schedule. Capacity Management is a function of planning, measuring, monitoring, and adjusting levels of capacity sufficient for the execution of the manufacturing system.	

<p>ROMS 255 Integrated Operations Support 3 Term Prerequisite: None Semester Prerequisite: None This course covers the functional responsibilities, direction, strategic issues, and performance measurements for information systems, human resources, total quality management, and finance. Emphasis is placed on the integrated management of resources and the interrelationships of all functional areas throughout an enterprise.</p>	<p>SDEV 121 Exploring Your Potential 2 Term Prerequisite: None Semester Prerequisite: None This course is designed to help each person identify past and present achievements which suggest the presence of strengths and potential. The goal of this class is greater realization of one's potential through self-determination.</p>
<p>ROMS 260 Manufacturing Process Systems 2 Term Prerequisite: None Semester Prerequisite: None This course is a survey of how manufacturing processes work together to make the products designated by the other activities of an integrated manufacturing system. The course includes four major topics: industrial facilities management, process design and development, manufacturing, and their relationships. On-site studies of an area manufacturer will supplement the course.</p>	<p>SDEV 124 Techniques Of Study 2 Term Prerequisite: None Semester Prerequisite: None This course helps students to examine their study habits and work toward practicing skills to enhance classroom performance. Classes include weekly lectures, discussions, and assignments. Skills covered include goal setting, time management, notetaking, reading and memory strategies, library use, and taking exams. A valuable aid for beginning and advanced students.</p>
<p>ROMS 290 ROMS Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Instructor Approval Course content customized to needs and interests of student.</p>	<p>SDEV 125 Career Planning 2 Term Prerequisite: None Semester Prerequisite: None This course is designed to teach students a career planning process. Students will identify their interests, values, and skills through a variety of self-assessment exercises. Students will utilize available resources to research career options and participate in classroom discussions on topics relating to career decision-making.</p>
<p>SAFE 110 Safe Practices and First Aid 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>	<p>SDEV 126 Elimination of Self-Defeating Behavior 2 Term Prerequisite: None Semester Prerequisite: None This course is designed to help people change behaviors. Learning how self-defeating behaviors are started, maintained, and how they can be eliminated is the goal of the course. Behavior change is aimed at teaching people how to live life more fully and happily by identifying and cultivating life-giving behaviors.</p>
<p>SCIS 124 Seminar: Sex Differences in the Human Brain 2 Term Prerequisite: None Semester Prerequisite: None Gender differences in the brain are explored through discussion of current research. Topics include anatomical sex differences in the brains of animals and humans, prenatal and postnatal influence of hormones on brain development, lateralization, and sex differences in sensory perception. Students are required to make an oral presentation.</p>	<p>SDEV 127 Job Search Skills 2 Term Prerequisite: None Semester Prerequisite: None This course aids students in the job search process. Course content covers filling out applications, writing resumes and cover letters, interviews, and other techniques used in seeking employment. Group discussions focus upon personal attitudes toward job hunting.</p>
<p>SCIS 297 Independent Study in Science 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special study in 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 meet with a supervising instructor by arrangement.</p>	<p>SDEV 142 Assertiveness I 2 Term Prerequisite: None Semester Prerequisite: None Assertive behavior is interpersonal behavior in which a person expresses her/his opinions, feelings, beliefs, wants, personal rights, and values in such a way that the rights of others are not violated. Techniques covered teach participants to identify and practice exercising interpersonal rights and assertive skills.</p>
<p>SCIS 298 Independent Study in Science 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special study in 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 meet with a supervising instructor by arrangement.</p>	<p>SDEV 145 Organizing Time 2 Term Prerequisite: None Semester Prerequisite: None This course is designed to assist individuals in making the most effective and efficient use of their time. It will be structured with discussions, audiovisuals, written exercises, and readings dealing with goal setting, getting organized, time and work analysis, procrastination, and other barriers to successful time and task management.</p>
<p>SCIS 299 Independent Study in Science 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special study in 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 meet with a supervising instructor by arrangement.</p>	<p>SDEV 150 Divorce Adjustment 1 Term Prerequisite: None Semester Prerequisite: None This course is designed for those who are experiencing or who have recently completed a divorce. The student-centered atmosphere is supportive and geared toward coping with and finding constructive alternatives to the emotional crisis of divorce.</p>
<p>SDEV 103 Preventing Parent Burnout 1 Term Prerequisite: None Semester Prerequisite: None This course is designed to facilitate an understanding of parent burnout and its impact on mental and physical functions. The class will address causes, stages and symptoms, family and relationship dynamics, and problem-solving. The course will provide multiple skills and mechanisms to cope with stress and prevent parent burnout.</p>	<p>SDEV 156 I'm Ok/You're Ok 2 Term Prerequisite: None Semester Prerequisite: None This course shows the basic concepts related to transactional analysis (T.A.) 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.</p>
<p>SDEV 118 Stretching Your Dollars 2 Term Prerequisite: None Semester Prerequisite: None Assistance is given in very basic money management, budget procedures, record keeping, wise shopping practices, low-cost entertainment and recreation, effective debt payment methods, and financial goal-setting and planning. Consumer awareness and problems in the marketplace will also be addressed.</p>	<p>SDEV 157 Single Parenting 2 Term Prerequisite: None Semester Prerequisite: None This course is designed for those who are raising children in a single-parent family structure. This course includes such topics as communication, discipline, time-structuring, and the unique concerns of adults faced with the responsibilities of single-parenthood.</p>

SDEV 158 Anger Awareness	2	SDEV 220 Parenting Skills	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Based on the objective redefinition of anger, this course offers the opportunity to better understand and express this most troublesome human emotion. Self-exploration exercises, journal writing, group sharing, role-playing, lectures, and reading are parts of the learning process leading to "adaptive anger" skills which enhance self-esteem and relationships.		This course is designed for anyone interested in the development of parenting 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.	
SDEV 169 Women as Winners	1	SDEV 226 Career Planning and Women	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed to offer participants new tools for insight, self-awareness, and understanding so that they can learn to set their own goals, emancipate themselves from the boundaries they have set for themselves, and, therefore, learn to become more authentic and self-actualizing.		This course guides students through the process of career decision-making focusing on self-exploration and career exploration. Discussions and exercises, in a small group setting, help students identify their interests, skills, and values, including women's issues. Concurrently, students explore careers through library research, computerized resources, and information interviews.	
SDEV 171 Rational Living	2	SDEV 237 Black Women's Awareness	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Using the teachings of Rational Emotive Training, a variety of approaches will be used to provide students with insight into the sources of problems. Techniques are offered to avoid frustration when the world is not the way it "should" be and for overcoming difficult situations at school, home, and on the job.		This class is an exploration of concerns and issues confronting the Black 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?	
SDEV 176 Widow(er)hood I	2	SDEV 240 Empathy Training - Listening Skills/Facilitating Decisions	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course explores means of meeting change and crisis in a positive way. It includes examination of possible new directions in life and the exploration of ways to make crisis work for the widowed.		This course will teach the student how to use empathy as a technique to deal with emotions, values, and decision-making in the communication process. The skills will be taught in a small group emphasizing a supportive, experiential atmosphere.	
SDEV 188 Rape Education	1	SDEV 242 Dealing With Stress	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course provides information in the following areas: the social and economic causes of sexual assault, motivations of rapists and the victim selection process, medical treatment needs, the legal definition, the psychological recovery process, resistance strategies, and an introduction to the concept of the basics of self-defense.		This course is designed to facilitate an understanding of stress and how stress 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.	
SDEV 190 Success Group	1	SDEV 244 Widow(er)hood II	2
Term Prerequisite: None		Term Prerequisite: SD 176	
Semester Prerequisite: None		Semester Prerequisite: SDEV 176	
Designed to stress improvement of academic performance, the course provides mutual support and deals directly with the problems of underachievement. Students will learn to set and achieve short-term goals, identify motives, attitudes and study behaviors that lead to success, and those that are related to failure.		This course is an extension of Widow(er)hood I with a focus on growth. Concerns, such as "single-again" issues, single-parenting, balancing new responsibilities, and the emotional adjustment involved, are covered. A supportive environment which enhances the individual potential of each class member is maintained.	
SDEV 195 Building Healthy Relationships	2	SDEV 248 Women's Reentry Seminar	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course is designed for those who wish to take a serious look at "what helps" and "what hurts" in building human relationships. Insights can be applied to any type of relationship and will help participants focus on changes they can/need to make in building a healthier relational life style.		This course is designed for those in transition from a homemaker role to that of student or worker. Adjusting to change, setting personal and career goals, building support and confidence, preparing for academic success, and communication skills are emphasized.	
SDEV 202 Teach Yourself a New Way to Think	2	SDEV 271 Living Alone Creatively	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Sessions are designed to break traditional mind patterns to assist the change process. Students study a variety of thinking strategies and learn new creative thinking techniques. These include imagination, motivation, humor, forced relationships, visualization, and fantasy. This course is general in approach and not specific to any one academic discipline.		This course is designed for both single men and single women and will focus on creative and positive aspects of living alone (or with others). Information will be shared to increase self-awareness, develop skills, and create a support system to further the goal of living alone creatively.	
SDEV 204 Self Defense and Women I	1	SDEV 289 Burnout Prevention Workshop	1
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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. Self-defense techniques taught in this seminar will focus on responses to unarmed attacks.		This course will explore and identify the emotions, behaviors, and physical symptoms that are present in those experiencing burnout. Attention will be given to the causes of burnout associated with interpersonal relations in the workplace and in non-work life. Methods of control of burnout will be reviewed.	
SDEV 205 Self-Defense and Women II	1	SIGN 160 Orientation to Deafness	2
Term Prerequisite: SD 204		Term Prerequisite: None	
Semester Prerequisite: SDEV 204		Semester Prerequisite: None	
This seminar is both a review and expansion of the techniques and skills taught in "Women and Self-Defense I" (SDEV 204). Self-defense techniques taught in this class will focus on "ground defense," responses to armed attacks, multiple attackers, and special assaultive situations.		This course is designed to introduce the student to pathological and cultural perspectives on deafness, and the implications those perspectives have, for persons who are deaf. Topics will be explored through discussions, readings, audiovisual presentations and guest lecturers.	

SIGN 161 American Sign Language I	3	SIGN 261 Principles of Interpreting I	3
Term Prerequisite: SGN 160		Term Prerequisite: ITP Screening	
Semester Prerequisite: SIGN 160/Concurrently		Semester Prerequisite: ITP Screening	
Designed for students who wish to develop basic knowledge of American Sign Language vocabulary and grammar. There is also emphasis in the use of pantomime to explore non-verbal communication and its function within ASL.		Surveys basic interpreting through lecture, role playing, and classroom discussion. Introduces the ethics of interpreting, roles, and responsibilities of the interpreter. Examines the role and necessary skills of the interpreter in various settings: educational, mental health, vocational rehabilitation, legal, religious, phone, television, medical, deaf, blind, and minimal language skills.	
SIGN 162 American Sign Language II	3	SIGN 262 Principles of Interpreting II	3
Term Prerequisite: SGN 161/Departmental Approval		Term Prerequisite: SGN 261	
Semester Prerequisite: SIGN 161/Departmental Approval		Semester Prerequisite: SIGN 261	
Designed to increase students' knowledge and use of American Sign Language vocabulary and grammar, as well as to focus on specific grammatical elements for more in-depth analysis and practice.		This course is designed to provide students with simulated testing interpreter/transliterating settings using interactive videotapes of hearing and deaf individuals with the purpose of developing skills necessary for interpreter evaluation.	
SIGN 163 American Sign Language III	3	SIGN 263 Sign to Voice Interpreting I	3
Term Prerequisite: SGN 162, SGN 164		Term Prerequisite: SGN 165	
Semester Prerequisite: SIGN 162, SIGN 166		Semester Prerequisite: SIGN 167	
Designed to provide additional vocabulary and synthesis of grammatical elements of American Sign Language through expressive and receptive use of conversational sign language.		This course is designed to develop and refine necessary basic skills and fluency in receptive sign language and for voicing all levels of communication of deaf individuals. Techniques taught include interpreter task analysis, listening, attending, internal message formulation, vocabulary search, and monitoring output.	
SIGN 164 American Sign Language IV	3	SIGN 264 Sign to Voice Interpreting II	3
Term Prerequisite: SGN 163/Departmental Approval		Term Prerequisite: SGN 263	
Semester Prerequisite: SIGN 163/Departmental Approval		Semester Prerequisite: SIGN 263	
This course is intended to build conceptual understanding and use of American Sign Language. Students will develop American Sign Language skills by interpreting in ASL paragraphs which are presented in English context.		This course is an advanced class in skill development and fluency in voicing for all communication levels of deaf persons. Techniques taught are voice projection, breathing and relaxation, analysis of sign information, anticipation and prediction, closure, modality switching, correction, image search, de'calage and pacing.	
SIGN 166 Fingerspelling	3	SIGN 265 Advanced Interpreting and Transliterating Techniques	3
Term Prerequisite: SGN 162		Term Prerequisite: SGN 262	
Semester Prerequisite: SIGN 162/Concurrently		Semester Prerequisite: SIGN 262	
Provides the student with concentrated instruction and practice in both expressive and receptive fingerspelling skills.		This course is designed to continue the development of skills necessary for interpreter evaluation/qualification. Students will be provided with simulated testing situations using interactive videotapes of hearing/deaf individuals requiring students to interpret/transliterate.	
SIGN 167 Receptive Manual Communication	3	SIGN 267 Practicum I	3
Term Prerequisite: SGN 163		Term Prerequisite: SGN 261/Departmental Approval	
Semester Prerequisite: SIGN 163/Concurrently		Semester Prerequisite: SIGN 261/Departmental Approval	
Designed to increase the student's receptive skills in conversational sign language focusing on comprehension of the various manual communication systems utilized by deaf persons. Sign-to-voice techniques and practice will be introduced through use of prepared videotapes.		Combines student transliterated lectures and supervised placement in various interpreting settings to allow directed observation and application of practical interpreting skills. Students will spend a total of 32 clock hours in their placement setting.	
SIGN 168 Expressive Manual Communication	3	SIGN 268 Practicum II	3
Term Prerequisite: SGN 163		Term Prerequisite: SGN 267/Departmental Approval	
Semester Prerequisite: SIGN 162		Semester Prerequisite: SIGN 267/Departmental Approval	
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 other settings.		Combines student interpreted lectures and supervised placement in various interpreting settings to allow directed observation and application of practical interpreting skills. Students will spend a total of 32 clock hours in their placement setting.	
SIGN 170 Creative Arts Signing	3	SIGN 269 Practicum III	4
Term Prerequisite: SGN 163/Departmental Approval		Term Prerequisite: SGN 267/Departmental Approval	
Semester Prerequisite: SIGN 162		Semester Prerequisite: SIGN 267/Departmental Approval	
This class explores uses, considerations, and techniques for signing elements of the creative arts including poetry, storytelling, and song.		Combines student interpreted lectures and supervised placement in various interpreting settings to allow directed observation and application of practical interpreting skills. Students will spend a total of 64 clock hours in their placement setting.	
SIGN 250 Deaf Culture and History	3	SIGN 295 Independent Study in Sign Language I	1
Term Prerequisite: SGN 163		Term Prerequisite: Departmental Approval	
Semester Prerequisite: SIGN 163/Concurrently		Semester Prerequisite: Departmental Approval	
This course looks closely at the unique experiences of those in the Deaf community. Examines the history of the deaf community in America and the sociology of the hearing-impaired (both deaf and the hard-of-hearing).		Individual projects in sign language or interpreting. Students will spend at least two hours a week for each credit in independent study.	
SIGN 251 Psychosocial Aspects of Hearing Loss	3	SIGN 296 Independent Study in Sign Language II	2
Term Prerequisite: SGN 163/Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: SIGN 163/Departmental Approval		Semester Prerequisite: Departmental 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.		Individual projects in sign language or interpreting. Students will spend at least two hours a week for each credit in independent study.	
SIGN 260 Linguistic Principles of American Sign Language	3	SOCL 120 Introduction to Sociology	4
Term Prerequisite: SGN 163/Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: SIGN 163/Departmental Approval		Semester Prerequisite: None	
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.		A survey of major theoretical perspectives, concepts, and methods of sociology. Emphasis is given to societal origins, evolution, and organization; culture; socialization; stratification; social institutions; and social change.	

SOCL 185 Seminar: The Africans	2	SOWK 203 Social Work Interviewing: Concepts and Skill Practice	3
Term Prerequisite: None		Term Prerequisite: SW 101/HUS 101	
Semester Prerequisite: None		Semester Prerequisite: SOWK 101/HUSE 100	
A survey of the cultural, social, political, and economic importance of Africa in the modern world. The seminar will include the television series, "The Africans."		This course examines the purposes and basic concepts of the interview relationship with emphasis on the helping interview. It provides instruction in the techniques of interviewing with an opportunity to engage in practice interviews, including videotaping and feedback.	
SOCL 196 Japan Adventure Orientation	1	SOWK 205 Social Welfare	3
Term Prerequisite: None		Term Prerequisite: SW 101	
Semester Prerequisite: None		Semester Prerequisite: SOWK 101/HUSE 100	
This course is designed specifically for the Japan Adventure participants in order to offer them information on the background, nature, activities, and related rules and regulations of the Japan Adventure program.		This course introduces the definition and concept of social welfare, its history, programs, attitudes, values, and philosophy. It emphasizes 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.	
SOCL 254 Marriage and Family	3	SOWK 209 Community Organization	3
Term Prerequisite: SS 101/SA 200/PSY 200		Term Prerequisite: SW 101/HUS 101	
Semester Prerequisite: SOCL 120/PSYC 200		Semester Prerequisite: SOWK 101/HUSE 100	
A study of the changes in society over the past century in terms of their dramatic impact on sexual relationships, marriage, and family life. Topics will include sex and gender roles, sexual behavior, values, psychological needs, divorce, and parenting.		This course introduces 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.	
SOCL 255 Contemporary Social Problems	3	SPAN 101 Elementary Spanish I	4
Term Prerequisite: SS 101/SA 200		Term Prerequisite: None	
Semester Prerequisite: SOCL 120		Semester Prerequisite: None	
Consideration of current social problems, such as family stability, racism, poverty, crime, and urbanization, from a framework of sociological theory and recent empirical studies.		First course of a two-semester sequence in elementary Spanish. Designed for persons with no knowledge of Spanish, who wish to develop basic language skills. Elementary practice in listening comprehension, speaking, reading, and writing. Provides useful information of the Spanish-speaking world. Class taught largely in Spanish.	
SOCL 260 Minority Groups	3	SPAN 102 Elementary Spanish II	4
Term Prerequisite: SS 101/SA 200		Term Prerequisite: SPN 102/Equivalent/3.0 Minimum in SPN 101	
Semester Prerequisite: SOCL 120		Semester Prerequisite: SPAN 101/Equivalent	
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.		Second course of a two-semester sequence in elementary Spanish. Introduces more complex structures while developing a foundation in the essentials of the language. Emphasizes practice in listening comprehension, speaking, reading, and writing. Provides useful information about the Spanish-speaking world. Class taught largely in Spanish.	
SOCL 261 Seminar: America in the Civil Rights Years	3	SPAN 115 Seminar: Conversational Spanish I	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course explores the social, political, and economic aspects of the civil rights movement in the United States from 1954 to 1965. Key concepts, events, and participants in the movement will be studied in order to illuminate how it has affected the course of American politics and society.		First course of a two-semester sequence in conversational Spanish. Designed for persons who have no knowledge of Spanish and who wish to develop basic conversational skills in the language. Course emphasizes pronunciation of Spanish sounds, practical vocabulary, culture, and essential grammar for communication. Class taught largely in Spanish.	
SOCL 288 Third World	3	SPAN 116 Seminar: Conversational Spanish II	3
Term Prerequisite: SS 101/SA 200		Term Prerequisite: SPN 185/Equivalent	
Semester Prerequisite: SOCL 120		Semester Prerequisite: SPAN 115/Equivalent	
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 national sovereignty in an interdependent world. These topics will be explored through an analysis of specific case studies.		Second course of a two-semester sequence in conversational Spanish. Designed for persons who have some knowledge of the language and wish to continue developing basic conversational skills. Course emphasizes practical vocabulary, some aspects of Hispanic cultures, and essential grammar for communication. Class taught largely in Spanish.	
SOCL 295 One Credit Independent Study in Sociology	1	SPAN 201 Intermediate Spanish I	4
Term Prerequisite: Departmental Approval		Term Prerequisite: SPN 103/Equivalent/3.0 Minimum in SPN 102	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: SPAN 102/Equivalent	
Special research projects and/or individual readings in sociology/anthropology. Students will invest no less than 32 hours for each credit earned. Enrollment is usually restricted to students with a grade-point average of at least 3.0 in courses offered by this department.		First course of a two-semester sequence in intermediate Spanish. Begins with intermediate review of grammar, intensive vocabulary building, listening comprehension, and writing compositions. Encourages conversation by introducing discussions about the cultures of the Spanish-speaking world. Class taught entirely in Spanish.	
SOCL 296 Two Credit Independent Study in Sociology	2	SPAN 202 Intermediate Spanish II	4
Term Prerequisite: Departmental Approval		Term Prerequisite: SPN 202/Equivalent/3.0 Minimum in SPN 201	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: SPAN 201/Equivalent	
Special research projects and/or individual readings in sociology/anthropology. Students will invest no less than 32 hours for each credit earned. Enrollment is usually restricted to students with a grade-point average of at least 3.0 in courses offered by this department.		Second course of a two-semester sequence in intermediate Spanish. Continues an intermediate review of grammar, intensifies vocabulary building, strengthens listening comprehension and composition-writing, and improves oral fluency through intense discussions on the cultures of the Spanish-speaking world. Class taught entirely in Spanish.	
SOCL 297 Three Credit Independent Study in Sociology	3	SPAN 295 Independent Study	1
Term Prerequisite: Departmental Approval		Term Prerequisite: Departmental Approval	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: Departmental Approval	
Special research projects and/or individual readings in sociology/anthropology. Students will invest no less than 32 hours for each credit earned. Enrollment is usually restricted to students with a grade-point average of at least 3.0 in courses offered by this department.		Special research projects and/or individual readings in Spanish. Students will invest no less than 32 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.	
SOWK 101 Introduction to Social Work	3		
Term Prerequisite: None			
Semester Prerequisite: None			
This course introduces the principles of social work practice. Emphasis is 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.			

<p>SPAN 296 Independent Study 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Special research projects and/or individual readings in Spanish. Students will invest no less than 32 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.</p>	<p>SPEL 005 Spelling Laboratory 0 Term Prerequisite: None Semester Prerequisite: None SPEL 005 arranges the days and times when students will attend spelling lab courses. Students must register for both a spelling lab course, such as SPEL 109, and a section of SPEL 005.</p>
<p>SPCH 120 Dynamics of Communication 3 Term Prerequisite: None Semester Prerequisite: None Introduction to the theory and practice of speaking and listening effectively in interpersonal, group, and public speaking situations. The course utilizes readings, lectures, discussions, learning activities, and oral and written assignments to help students both understand the communication process and become more skillful interpersonal, group, and public communicators.</p>	<p>SPEL 109 Spelling Development I 2 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test Focuses on basic spelling problems and principles progressing from elementary three-letter words through words frequently used but commonly misspelled. Prepares students for Spelling Development II.</p>
<p>SPCH 130 Fundamentals of Public Speaking 3 Term Prerequisite: None Semester Prerequisite: None Helps beginning speakers develop the skills and confidence needed to speak effectively to audiences in public situations. Through a carefully planned series of speaking assignments, students learn the proper techniques for researching, developing, organizing, outlining, and delivering effective informative and persuasive speeches.</p>	<p>SPEL 110 Spelling Development II 2 Term Prerequisite: SPL 161/Placement Test Semester Prerequisite: SPEL 109/Placement Test Advances from intermediate to college level. Covers words frequently misspelled and misused in general college work and practical adult life situations. Includes meaning, pronunciation, and the most useful spelling principles plus their exceptions.</p>
<p>SPCH 140 Interpersonal Communication 3 Term Prerequisite: None Semester Prerequisite: None Introduction to fundamental principles and skills of interpersonal communication. Students investigate techniques for interacting effectively in family, intercultural, and male/female relationships. Class discussions, learning activities, and assignments assist students in examining the impact of their communication on others and in developing effective interpersonal skills.</p>	<p>SPEL 165 Business Spelling 1 Term Prerequisite: SPL 162/Placement Test Semester Prerequisite: SPEL 110/Placement Test Covers sophisticated and specialized college-level words frequently misspelled and misused in business. Includes general spelling principles and their exceptions, unusual and unexpected spellings in the context of dictation, pronunciation, proofreading, and correct usage.</p>
<p>SPCH 250 Advanced Public Speaking 3 Term Prerequisite: SPH 104 Semester Prerequisite: SPCH 130/Departmental Approval Intended for students seeking advanced instruction in the principles and techniques of public speaking. Students' knowledge of public communication is enhanced through the investigation of rhetorical theories and relevant research findings. Students' performance techniques are strengthened through a series of oral assignments focusing on informative, persuasive, and special-occasion speaking.</p>	<p>STAT 170 Introduction to Statistics 3 Term Prerequisite: 2.0 in MTH 164/Placement Test Semester Prerequisite: 2.0 in MATH 121/Placement Test This is a survey course in statistics for students in social science, psychology, education, and other non-business disciplines. Topics studied include descriptive statistics, probability, random variables, confidence intervals, hypotheses testing, and linear regression. In addition, students will solve applied problems by completing required computer assignments using SPSSX.</p>
<p>SPCH 260 Nonverbal Communication 3 Term Prerequisite: None Semester Prerequisite: None Introduction to the ways people communicate without words. Students investigate nonverbal communication theory and research and learn the messages that gestures, facial expressions, vocal cues, physical appearance, clothing, touch, distance, and time convey in American and foreign cultures. Students' nonverbal communication skills are enhanced through assignments and in-class learning activities.</p>	<p>STAT 215 Introduction to Probability and Statistics for Business 3 Term Prerequisite: 2.0 in MTH 165, 166/Placement Test Semester Prerequisite: 2.0 in MATH 122/MATH 126/MATH 130/Placement Test This is a first course in probability and statistics with emphasis on business applications. Topics studied include descriptive statistics, data analysis, laws of probability, random variables, confidence intervals, and hypothesis testing. In addition, students will solve applied problems by completing required computer assignments using SPSSX.</p>
<p>SPCH 270 Mass Communication 3 Term Prerequisite: None Semester Prerequisite: None Introduction to broadcast, film, and print media and their impact on the individual and society. Students investigate theory and research on topics including values the media convey, media stereotypes, violence, news, advertising, and the role of media in political campaigns. Assignments and observational projects help students become enlightened media consumers.</p>	<p>SURG 100 Fundamental Surgical Technician 3 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Introduction to role and function of surgical technologist as a member of the surgical team. Lectures present all skills, procedures, and protocol necessary to participate in the operating room.</p>
<p>SPCH 280 Intercultural Communication 3 Term Prerequisite: None Semester Prerequisite: None Introduction to intercultural communication theory and skills. Students investigate the concepts of communication and culture and learn how such variables as perception, world view, religion, language, and nonverbal systems influence interactions between people of different cultural backgrounds. Class discussions, learning activities, and assignments help students develop their intercultural communication skills.</p>	<p>SURG 101 The Surgical Patient 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Lectures will present the protocol and procedures directly affecting the care and safety of the patient. This includes the ethical, legal, and moral responsibilities of the technologist, the concepts of patient care, and preoperative routines.</p>
<p>SPCH 295 Independent Study in Speech I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individual projects in speech communication. Students will spend at least two hours a week for each credit in independent study.</p>	<p>SURG 102 Surgical Pharmacology 2 Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program Medications frequently used in the operating room, local and general anesthetics, drugs used for surgical patients, procedures for handling medications in sterile and non-sterile areas, and mixing and measuring medications.</p>
<p>SPCH 296 Independent Study in Speech II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Individual projects in speech communication. Students will spend at least two hours a week for each credit in independent study.</p>	<p>SURG 103 Surgical Asepsis 2 Term Prerequisite: Allied Health Professional Semester Prerequisite: Allied Health Professional Basic course on hospital infections including definitions, pathogenic organisms, bacteria fungi, viruses, protozoa, and transmission of infectious agents. Covers sterilization and disinfection of equipment and supplies in the operating room.</p>
	<p>SURG 104 Operative Procedures 5 Term Prerequisite: ST 101 Semester Prerequisite: SURG 100, 101 Lectures will present indications for surgery, patient preparation, special equipment and supplies, purpose and expected outcome, and possible complications.</p>

SURG 121 Applied Operating Room Techniques I	1	TECH 110 Technical Math	5
Term Prerequisite: Admission to Program Semester Prerequisite: Admission to Program First clinical session at an assigned hospital. Application of theory in the use of surgical supplies and equipment before scrubbing in actual procedures.		Term Prerequisite: Departmental Approval Semester Prerequisite: Placement Test This course applies topics from algebra and trigonometry to architectural, civil, GIS, landscape, electronics, and construction technologies. Covers quadratic equations, trigonometry, vectors, number bases, basic logic, and Boolean algebra.	
SURG 122 Applied Operating Room Techniques II	4	TECH 120 Technical Communications	4
Term Prerequisite: ST 101 Semester Prerequisite: SURG 121 Clinical session at hospital. Students' first experience of application of theory and clinical skills in actual surgical procedures.		Term Prerequisite: None Semester Prerequisite: None This course uses a practical approach to clear communication, including organizational skills, a review of grammar, and skills needed to write and speak effectively on the job. Written assignments include memos and business letters.	
SURG 123 Applied Operating Room Techniques III	8	TECH 124 Technical Report Writing	2
Term Prerequisite: ST 103 Semester Prerequisite: SURG 122 Clinical session at hospital. Continued application of theory and clinical skills in advanced surgical procedures.		Term Prerequisite: TEC 102 Semester Prerequisite: TECH 120 This course 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.	
SURG 124 Applied Operating Room Techniques IV	3	TECH 125 Technical Presentations	2
Term Prerequisite: ST 105 Semester Prerequisite: SURG 123 Clinical session at hospital. Application of theory and clinical skills in advanced surgical procedures and surgical specialty areas.		Term Prerequisite: None Semester Prerequisite: None This course covers the technical knowledge, skills, and techniques for preparing and delivering informative and persuasive speeches to small, technically knowledgeable groups in industrial settings.	
TDTP 110 Truck Train I	3	TECH 130 PC Applications for Technology	3
Term Prerequisite: Program Approval Semester Prerequisite: Program Approval This is the initial course in a sequence of three. This course is intended to prepare the student to pass the State of Michigan CDL written exam. Some vehicle orientation is included.		Term Prerequisite: None Semester Prerequisite: None This course provides students with a basic understanding and skill level in some PC applications used in technology. In addition to DOS, applications covered include a word processor, a spreadsheet, a database manager, and a computer-assisted drafting/design program. This is an introduction to four different applications commonly found on microcomputers used in technology.	
TDTP 111 Truck Train II	3	TECH 132 PC/MS DOS Applications for Technology	2
Term Prerequisite: TDT 110 Semester Prerequisite: TDTP 110 This is the second course in a sequence of three. Students will operate the vehicles on the driving range, developing the skills necessary to interact with highway traffic.		Term Prerequisite: CIM 250 Semester Prerequisite: TECH 130 This course provides intermediate to advanced instruction in the PC-DOS/MS-DOS operating system. Topics include the directory structure, batch files, retrieving lost files, and all major DOS commands. This course is especially valuable for those responsible for installing and maintaining software on PCs, including CAD/CAM systems, and other technology-related applications.	
TDTP 112 Truck Train III	3	TECH 134 Technical Publishing with Ventura	2
Term Prerequisite: TDT 111 Semester Prerequisite: TDTP 111 This is the final course in the Truck Driver Training Program. The students will complete range driving and backing, do local highway driving, and complete an extensive road trip. In the final week, the CDL third-party exam will be administered.		Term Prerequisite: Keyboard Familiarity Semester Prerequisite: Keyboard Familiarity This course is an introduction to Ventura Publisher for preparing technical manuals, brochures, ads, books, flyers, and other publications. Included are page layout strategies, fonts, and preparing images from other applications for use in Ventura. All of Ventura's menus and options are discussed and used in the course.	
TECH 090 Basic Drafting	2	TECH 136 Technical Publishing with Pagemaker	2
Term Prerequisite: None Semester Prerequisite: None This course focuses on basic concepts in orthographic projection, including sketching of both orthographics and pictorials. Lettering techniques are stressed with a brief introduction to dimensioning techniques.		Term Prerequisite: Keyboard Familiarity Semester Prerequisite: Keyboard Familiarity This course is an introduction to PageMaker for the PC for preparing technical manuals, brochures, ads, books, flyers, and other publications. Included are page layout strategies, fonts, and preparing images from other applications for use in PageMaker. All of PageMaker's menus and options are discussed and used in the course.	
TECH 100 Applied Basic Mathematics	4	TECH 139 Survey of Desktop Publishing Systems	5
Term Prerequisite: None Semester Prerequisite: None This reviews basic arithmetic operations: whole numbers, common fractions, decimals, percentage, ratio, and proportion. Introduces some basic algebraic concepts and solutions for practical geometric problems involving areas and volumes. Helps the student understand conversion by using the metric system to solve some of the applied problems.		Term Prerequisite: None Semester Prerequisite: None 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.	
TECH 101 Applied Algebra and Trigonometry	4	TECH 161 Gunsmithing	2
Term Prerequisite: ATM 150 Semester Prerequisite: TECH 100 This course introduces and/or reviews basic algebraic operations with emphasis on those operations essential in solving practical problems encountered in shop and/or field operations. Simple trigonometric functions are introduced for analysis of industrial problems. Calculators are used.		Term Prerequisite: None Semester Prerequisite: None Topics include installation of sights, scopes and rebarrelling actions. Repairing and restocking rifles and shotguns as well as assembling muzzle-loading kits are topics that could be covered.	
TECH 102 Applied Geometry and Trigonometry	4		
Term Prerequisite: ATM 151 Semester Prerequisite: TECH 101 Applications of geometric and basic trigonometric functions in the solution of practical shop and field problems. Provides opportunities to use critical thinking skills in the solution of problems taken directly from industry.			
TECH 103 Compound Angles	4		
Term Prerequisite: ATM 153 Semester Prerequisite: TECH 102 This course combines solid geometry and advanced (solid) trigonometry, enabling students to solve setup problems involving angles and titled work. Emphasis on application of actual tooling setups for complex machining operations are used to make the course relate to real life situations.			

<p>TECH 164 Boat Building 2 Term Prerequisite: None Semester Prerequisite: None The students learn to build a boat with materials and processes using wood and modern adhesives and coatings in a manner suitable for work in a small shop. Subjects covered include boat design, alternate construction methods, materials required, and laying out the hull.</p> <p>TECH 166 Bicycle Repair and Maintenance 2 Term Prerequisite: None Semester Prerequisite: None This course covers basic reconditioning techniques for bicycles, including wheel respoking, truing wheels, and general maintenance.</p> <p>TECH 171 Graphics I 3 Term Prerequisite: None Semester Prerequisite: None This course explores basic printing processes and operations. It covers offset techniques, stripping, layout, and composition processes.</p> <p>TECH 172 Graphics II 3 Term Prerequisite: ATG 176 Semester Prerequisite: TECH 171 This is a further study of individual interest areas: press operations, processes, process camera, halftones, and new techniques and tricks of the trade.</p> <p>TECH 200 Applied Physics 4 Term Prerequisite: ATR 151 Semester Prerequisite: TECH 101 This course includes basic principles of construction, electronics, electrical, civil, hydraulics, metal working, heating and air conditioning technologies as they relate to the physical sciences. Provides basic training in fundamental physical phenomena and simple machines with emphasis put on their application to practical shop and field problems.</p> <p>TECH 210 Technology and Change 3 Term Prerequisite: None Semester Prerequisite: None This course will explore issues surrounding technology and technological change. Topics such as automotive, electronics, aerospace, and service industries, and the loss of opportunity to develop and manufacture technology will be used to examine changes in social, political, and economic order of local and world communities and individual life changes.</p> <p>TECH 299 College Teaching Project 2 Term Prerequisite: Previous/Current Teaching Assignment at the Community College Level. Semester Prerequisite: Previous/Current Teaching Assignment at the Community College Level. It is the purpose of this course to introduce beginning instructors at the community college level to basic principles and processes that will allow for a productive teaching experience and successful student learning. By the end of this course, each participant will have constructed a complete course and will be prepared to start a teaching assignment with confidence.</p> <p>THEA 041 Scene Study Workshop for High School Students 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval The Scene Study Workshop is a course for motivated high school students. Students work on basic acting skills, develop physical and vocal expressiveness, analyze dramatic literature, and present a final classroom performance.</p> <p>THEA 051 Stage Voice for High School Workshops 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students learn the basics of vocal production including posture, breathing, pitch, resonance, articulation, and relaxation. Students will develop their own vocal warm-up exercises.</p> <p>THEA 061 Stage Movement for High School Workshops 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval A survey of the basic elements of movement for the stage. Students develop physical endurance, strength, and flexibility; work with masks to develop physicalization of characters; and study Laban movement.</p> <p>THEA 071 Musical Theatre Workshop for High School Students 6 Term Prerequisite: Approval by Audition Semester Prerequisite: Approval by Audition A workshop which includes class voice, musical theatre dance technique, and basic acting skills. Workshop culminates in a studio performance of a musical revue in which all students must act, sing, and dance.</p>	<p>THEA 081 Theatre Classics Workshop for High School Students 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval High School workshop in which students will analyze classical scripts, scan verse scripts, develop understanding of power of poetry, and work as a choral unit. Students will work with both Shakespeare and Greek scripts. Workshop culminates in a recital performance of scenes.</p> <p>THEA 091 Play Production/Performance Workshop for High School Students 3 Term Prerequisite: Approval by Audition Semester Prerequisite: Approval by Audition Students will perform an entire production of a chosen script. Focus in the workshop will be on basic acting skills, script analysis, script scoring, rehearsal techniques and strategies, and production skills.</p> <p>THEA 110 Introduction to Theatre 3 Term Prerequisite: None Semester Prerequisite: None Introduction to Theatre includes definition and analysis of theatre, art, and theatrical art; script analysis; the relationship between theatre and the culture from which it comes; and the roles of theatre practitioners.</p> <p>THEA 111 Production Practicum I 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Introduction to the 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.</p> <p>THEA 112 Production Practicum II 2.5 Term Prerequisite: THR 212/213 Semester Prerequisite: THEA 111 In-depth study of stage craft for the performing arts. Student must work as crew chief in some technical area on a studio or mainstage production.</p> <p>THEA 116 Design Practicum I 3 Term Prerequisite: None Semester Prerequisite: None 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.</p> <p>THEA 120 Introduction to Acting 2 Term Prerequisite: None Semester Prerequisite: None Explores 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. Students present final short scene.</p> <p>THEA 122 Introduction to Scene Study 1 Term Prerequisite: THR 250 Semester Prerequisite: THEA 120 Students rehearse and perform short scenes from contemporary plays. Course includes scoring and script analysis by beats.</p> <p>THEA 124 Introduction to TV/Film Acting 2 Term Prerequisite: THR 250 Semester Prerequisite: THEA 120 Designed to introduce the acting student to the basic skills needed for working in front of the camera. Activities include scene study, learning basic terminology, and developing energy in front of the camera.</p> <p>THEA 126 Advanced TV/Film Acting 2 Term Prerequisite: THR 246 Semester Prerequisite: THEA 124 Advanced work in front of the camera. Students will perform contemporary scenes from plays, television or film, and perform a short monologue.</p> <p>THEA 131 Studio Theatre Performance I 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Course includes rehearsal, performance, and evaluation of a contemporary script. Focus on an understanding and implementation of skills acquired in THEA 141 and the relationships experienced between actor and director.</p> <p>THEA 132 Studio Theatre Performance II 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Course includes rehearsal, performance, and evaluation of verse script or scenes from Shakespeare or the classical Greeks. Focus on application of skills acquired in THEA 142, and on relationship between actor and director. Majors only.</p>
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THEA 141 Acting I - Contemporary	2.5	THEA 194 Acting Comedy Styles	2
Term Prerequisite: Departmental Approval		Term Prerequisite: THR 250	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: THEA 120	
Fundamentals of acting, including improvisational techniques; mask work; the physical, vocal, and internal development of character; and analysis and scoring by beats of a contemporary script. Majors only.		Designed for non-majors, this course surveys comic material throughout theatrical history, studying the philosophical and psychological theories of comedy. The student will study six different comic styles. THEA 194 is usually offered in an eight-week format.	
THEA 142 Acting II - Classics	2.5	THEA 195 Acting Comedy Styles: Performance	2
Term Prerequisite: Departmental Approval		Term Prerequisite: THR 267	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: THEA 194	
Fundamentals of acting in heightened context. Students will pursue improvisational work, mask work, and scoring. Students will develop an understanding of the power of language through verse scansion and the physical, vocal, and internal development of characters from classical literature. Majors only.		Students will select five of the six comedic styles studied in THEA 194 to rehearse and perform for an invited audience. THEA 195 is usually offered in an eight-week format.	
THEA 153 Stage Voice I	2	THEA 198 The Actor and the Playwright	2
Term Prerequisite: None		Term Prerequisite: THR 250	
Semester Prerequisite: None		Semester Prerequisite: THEA 120	
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.		This course is designed for non-majors and focuses on a different playwright each term. Students will read from the playwright's works, study scenes from his/her works, and analyze the contribution made by the given playwright to the theatre.	
THEA 154 Stage Voice II	2	THEA 199 Performance: The Actor and the Playwright	2
Term Prerequisite: THR 152		Term Prerequisite: THR 268	
Semester Prerequisite: THEA 153		Semester Prerequisite: THEA 198	
Emphasis on more sophisticated style of voice for the stage, involving individual production requirements and the use of dialects.		Students will rehearse and perform scenes and monologues from chosen playwright's work for an invited audience. THEA 199 is usually offered in an eight-week format.	
THEA 171 Dramatic Form and Function I	3	THEA 210 Theatre History	3
Term Prerequisite: Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: None	
An analysis of modern contemporary classics of the theatre. The student will read and analyze a minimum of eight contemporary scripts from Ibsen to Shepard. The student will develop a comprehensive production concept for one of these scripts.		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. Required for all majors.	
THEA 172 Dramatic Form and Function II	3	THEA 213 Stage Management	2
Term Prerequisite: Departmental Approval		Term Prerequisite: None	
Semester Prerequisite: Departmental Approval		Semester Prerequisite: None	
Dramatic Form and Function II focuses on the writings of Shakespeare and the classical Greeks. The student will read a minimum of eight classical scripts, analyze them using Aristotelian analysis, and research one script in terms of production styles through history.		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; and techniques to work up production and rehearsal schedules, contact sheets, scene breakdowns, blocking notations and cueing of show.	
THEA 181 Improvisation	2.5	THEA 216 Design Practicum II	3
Term Prerequisite: THR 250		Term Prerequisite: THR 215	
Semester Prerequisite: THEA 120		Semester Prerequisite: THEA 116	
By using the improvisational techniques of mask work and developmental exercises, this course will train the student in long-term, in-depth character development.		Advanced studies in stage design concepts and practice. The student will learn specialized design and drafting methods as elements in the design process.	
THEA 182 Advanced Improvisation	1	THEA 217 Beginning Lighting Design	2
Term Prerequisite: THR 249		Term Prerequisite: Departmental Approval	
Semester Prerequisite: THEA 181		Semester Prerequisite: Departmental Approval	
Students will develop performance materials for classroom presentation based on current issues of public concern selected by the instructor.		Beginning studies in lighting design concepts and practice. The student will learn: instrumentation; use of color and intensity; history of lighting; and will apply these to a design concept.	
THEA 190 Agitprop Theatre	2	THEA 218 Scene Painting	2
Term Prerequisite: THR 250		Term Prerequisite: None	
Semester Prerequisite: THEA 120		Semester Prerequisite: None	
This course is designed for non-majors and focuses on research and analysis of dramatic material from various cultures used as theatre of social change. THEA 190 is usually offered in an eight-week format.		Designed to teach the basics of scene painting, including instruction in color theory, various brands and types of paint available, and the use of tools and techniques of scene painting.	
THEA 191 Agitprop Performance	2	THEA 219 Advanced Scene Painting	2
Term Prerequisite: Departmental Approval		Term Prerequisite: THR 218	
Semester Prerequisite: THEA 190		Semester Prerequisite: THEA 218	
Students will rehearse and perform selected materials studied in THEA 190 for an invited audience. THEA 191 is usually offered in an eight-week format.		Advanced course designed to study in-depth techniques for scene painting.	
THEA 192 Scene Study	2	THEA 220 Beginning Directing	2
Term Prerequisite: THR 250		Term Prerequisite: Departmental Approval	
Semester Prerequisite: THEA 120		Semester Prerequisite: Departmental Approval	
This course is designed for non-majors and focuses on analysis of contemporary scripts ranging from Ibsen to Shepard and Mamet. Students will study both dramatic and comedic material. THEA 192 is usually offered in an eight-week format.		Student will learn: history of directing; staging; motivational blocking; relationship to actors and design staff, and will apply to staging of short scene or short one-act play.	
THEA 193 Scene Study - Performance	2	THEA 221 Directed Study	1
Term Prerequisite: THR 263		Term Prerequisite: Instructor Approval	
Semester Prerequisite: THEA 192		Semester Prerequisite: Instructor Approval	
Students will rehearse and perform selected comedic and dramatic scenes and present them for an invited audience. THEA 193 is usually offered in an eight-week format.		Course for advanced students working under the guidance of faculty on special projects outside the scope of standard classroom instruction.	

<p>THEA 222 Directed Study 2 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval Directed study for advanced students working under the guidance of faculty on special projects outside the scope of standard classroom instruction.</p>	<p>THEA 271 Dramatic Form and Function III 3 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Student 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. For second-year theater majors.</p>
<p>THEA 223 Directed Study 3 Term Prerequisite: Instructor Approval Semester Prerequisite: Instructor Approval Course for advanced students working under the guidance of faculty on special projects outside the scope of standard classroom instruction.</p>	<p>THEA 281 Advanced Improvisation II 1 Term Prerequisite: THR 258 Semester Prerequisite: THEA 182 Students will continue to edit and polish the scripts and performances created in THEA 182. Students may also work improvisationally with local student groups to develop spontaneity, creativity, and cooperation.</p>
<p>THEA 233 Studio Theatre Performance III 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Studio Theatre Performance III provides rehearsal and performance opportunities in oral interpretation and/or readers theatre presentations. Usually offered in eight-week format. Second-year theatre majors only.</p>	<p>THEA 283 Audition Workshop 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An intense workshop in which participants prepare and polish audition materials suited for a professional audition or audition for advance training. Course usually taught by guest actors, agents, or teachers from larger theatrical or film markets.</p>
<p>THEA 234 Studio Theatre Performance IV 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Studio Theatre Performance IV provides rehearsal and performance opportunities with an emphasis on stage movement for the second-year theatre major. Usually offered in an eight-week format.</p>	<p>THEA 285 Stage Makeup 2 Term Prerequisite: None Semester Prerequisite: None A course 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.</p>
<p>THEA 235 Studio Theatre Performance V 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Studio Theatre Performance V provides the second-year theatre major an opportunity to explore a specific theatrical period or style in both rehearsal and performance.</p>	<p>THEA 295 Acting Styles I 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An elective course for advanced students, this course will give the student an opportunity to explore theatrical styles from musical theater to the Greeks. Style is selected by instructor previous to given term. Usually offered in eight-week format.</p>
<p>THEA 236 Theatre Special Projects 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Student will be given the opportunity to direct, design, produce, or perform in a touring production mounted by the College. Limited to individuals who have been selected as cast members or technical or design staff in scheduled tour.</p>	<p>THEA 296 Acting Styles Performance 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students choose to rehearse and perform an in-class presentation of skills developed in THEA 295. Usually offered in eight-week format.</p>
<p>THEA 237 Theatre Special Projects 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Student will be given the opportunity to direct, design, perform, or produce productions for College functions on the main stage or comparable space. Limited to individuals who have been selected as cast members or technical or design staff in a scheduled LCC performance.</p>	<p>THEA 297 Acting Styles II 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval An elective course for advanced students, this course offers opportunity for students to explore specialized theatrical styles. Topic for study selected by instructor previous to given term. Usually offered in eight-week format.</p>
<p>THEA 238 Theatre Special Projects 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Student will be given the opportunity to direct, design, produce, or perform in College-supported outdoor theatrical events in the amphitheatre or a comparable space. Limited to individuals who have been selected as cast members or technical or design staff for summer season.</p>	<p>THEA 298 Acting Styles II Performance 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Students will rehearse and perform an in-class presentation of skills developed in THEA 297. Usually offered in eight-week format.</p>
<p>THEA 241 Acting III: Creating Theatre 2.5 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Explores acting techniques and styles of different historical periods and/or cultures. Student will survey a cross-section of acting styles and periods then focus on in-depth exploration of particular period or style. Class limited to second-year majors. In-depth area of study selected by instructor.</p>	<p>TRVL 100 Introduction to Travel Agency Operations 3 Term Prerequisite: None Semester Prerequisite: None An introduction to the career opportunities in travel agency, airline, and tour escorting operations. This class is designed to provide an overview of the travel industry—past, present, and anticipated future.</p>
<p>THEA 251 Stage Voice for the Actor 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Course will cover strategies in vocal production and variety and will focus on exercises to develop vocal flexibility from Lessac, Linklater, and/or Berry techniques. The student will develop an understanding and will apply the phonetic alphabet and stage dialects. For second-year theater majors.</p>	<p>TRVL 110 Travel Agency Ticketing Domestic/International 3 Term Prerequisite: TA 100 Recommended Semester Prerequisite: TRVL 100 Recommended The fundamentals of air scheduling, reading and correctly using domestic and international air tariffs, and calculating the correct fares for air itineraries. Learning correct procedures for issuing accountable and non-accountable tickets.</p>
<p>THEA 261 Movement for the Actor 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Course will cover strategies developing student's physical endurance, strength, flexibility, and grace. Student may explore movement to music, stage combat, pantomime, and/or dance styles, and techniques from many world cultures. For second-year theatre majors.</p>	<p>TRVL 120 North American Travel I 3 Term Prerequisite: None Semester Prerequisite: None History and development of the 50 U.S. states, Canada, and Mexico with specific location and identification projects. Major points of tourism interest will be discussed along with climate, ethnic influences, distances, and time zones.</p>
	<p>TRVL 125 Foreign Country Travel II 3 Term Prerequisite: None Semester Prerequisite: None The history and development of Central America, South America, and the Caribbean with specific location and identification projects. These will include countries, capitals, principal cities, rivers, lakes, and mountains. Major points of tourist interest will be discussed along with climate, distances and time zones, passports, visas, and other entry requirements.</p>

TRVL 130 Foreign Country Travel III	3	TRVL 210 Group Travel/Escorting Operations	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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 time zones, passports and visas, and other entry requirements.		An overview of group tours and tour escorting operations, and policies and procedures required by most tour companies. Content includes: how to locate groups, how to organize group travel, how to assemble the group tour package, and how to be an effective tour leader.	
TRVL 131 Foreign Country Travel IV	3	TRVL 220 International Relations	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
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.		Discusses political, social, and economic relationships between countries and their effects on the travel and tourism industry. Defining and discussing cultural differences, introducing foreign currencies, discussing travel tips, and adjusting to intercultural living experience.	
TRVL 135 Airline/Airport Operations	3	TRVL 230 Travel and Tourism Law and Current Events	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
An introduction of tasks performed by airline and airport personnel along with the basic structure and functions of an airport and the airline carriers. Topics to be discussed include ticket counter operation, the gate area, cargo handling and loading, aircraft weight and balance, and various principles of aeronautics.		A course for travel agents and their personnel, as well as individuals interested in travel agency operations. Creates an awareness of the responsibilities and rights which the law imposes upon and grants to the travel agent. The course will also discuss the consequences caused by failure in those responsibilities.	
TRVL 140 Computer Reservation Training	3	TRVL 250 Advanced Computer Ticketing	3
Term Prerequisite: TA 100		Term Prerequisite: TA 110, TA 240	
Semester Prerequisite: TRVL 100/Ability to Type 30 WPM		Semester Prerequisite: TRVL 110, TRVL 140	
This is the first class of a three class course in instruction and use of the American Airlines SABRE airline reservation system. This course is designed to give the student the basic skills required for making airline computer reservations and use of SABREWORKS to create correspondence relating to the travel industry.		The course will begin with review of materials learned in TRVL 140 and progress to pricing and ticketing, followed by fare construction, fare rules, car and hotel reservations. SABREVISION, the hotel display with pictures and maps, will be utilized, and further uses of SABREWORKS will be taught.	
TRVL 145 Introduction to Cruise Sales and Ground Transportation	3	TRVL 255 Advanced Sabre Training	3
Term Prerequisite: None		Term Prerequisite: TA 240, TA 250	
Semester Prerequisite: None		Semester Prerequisite: TRVL 250	
An analysis of cruise, railroads, car rentals, and bus transportation, including how to sell the above. Other information will include costs, selling techniques, and how to select the best transportation for your client using current profiles, listings, and reference materials, for domestic and international destinations.		A course designed to give extended use of the American Airlines SABRE computer. Skills will be taught in the expanded capabilities of the computer in use of international reservations and ticketing, tour bookings, fare storing, and destination information. Skills taught in the use of SABREWORKS, using spreadsheets and database.	
TRVL 146 Seminar at Sea	2	TRVL 260 Travel Agency Accounting	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
A seminar designed to develop a basic understanding of cruise lines and their ships. Students will be able to gain firsthand knowledge of cruise lines and pier/dock facilities and also have dialogue with cruise ship staff members and observe daily cruise activities.		A course designed to explain and describe basic travel agency accounting concepts. Approximately one-half of the course will be dedicated to the compilation and interpretation of financial statements. The other half of the course will discuss how accounting systems should be constructed for the travel agency business.	
TRVL 150 Tourism/Travel Operations	3	VCBL 109 Vocabulary Improvement I	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
An introduction to the principles of tourism, practices, and philosophies and offers a practical and realistic education in the business of tourism.		Knowledge of and extensive practice with word parts (roots, prefixes, and suffixes) are used to develop skills in building vocabulary. Emphasis given to correct oral and written usage, dictionary skills, and mastery of troublesome words.	
TRVL 170 Opening/Operating/Franchising a Travel Agency	3	VCBL 110 Vocabulary Improvement II	2
Term Prerequisite: None		Term Prerequisite: VCB 131/Placement Test	
Semester Prerequisite: None		Semester Prerequisite: VCBL 109/Placement Test	
The description and explanation of the procedures involved in starting a new travel agency or acquiring an existing agency. The advantages and disadvantages of co-ops, consortiums, and franchising will also be discussed. This course will provide insight into travel agency operations from a management perspective.		Builds on skills developed in Vocabulary Improvement I (word memory, detecting word meaning from context, using dictionary, mastery of roots, prefixes, suffixes) by applying previously mastered roots and skills to learning new, advanced, and career words.	
TRVL 180 Your Career/Flight Attendant	3	WELD 100 Combination Welding	4
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
To provide information and practical knowledge of a career as a flight attendant via lectures, discussion, films, and demonstrations both in the classroom and on an aircraft. Information on the duties and responsibilities of the pilot and flight crew will be discussed.		This is a beginning theory and practice course which will introduce the safe operations and applications of oxyacetylene welding, cutting, brazing and shielded metal arc welding. Practice will consist of these methods of joining steel in the horizontal, flat, and vertical positions. Destructive testing will also be provided.	
TRVL 190 Internship and Seminar	3	WELD 101 Advanced Arc Welding	4
Term Prerequisite: Credits in TA Program		Term Prerequisite: WLD 100	
Semester Prerequisite: Credits in TRVL Program		Semester Prerequisite: WELD 100	
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.		Will develop the skills necessary to produce quality multiple pass fillet and groove welds on steel plates. Conventional and low hydrogen electrodes are used in preparation of passing performance tests in all positions. Destructive testing methods, weld profiles, and welding symbols as related to arc welding are introduced.	
TRVL 200 Profitable Travel Sales, Marketing, and Counseling	3		
Term Prerequisite: None			
Semester Prerequisite: None			
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. To accomplish the above, the art of negotiations, role playing, telephone etiquette, and human relations skills will be included in the course content.			

<p>WELD 110 Gas Metal Arc Welding 4 Term Prerequisite: WLD 100 Semester Prerequisite: WELD 100 Provides technical understanding and applications of gas metal arc welding and flux cored arc welding. Fundamentals, safety, equipment adjustments, metal transfers, and shielding gases will be covered. Develops manual skill in all positions on different thicknesses and types of metals, including basic programming of an automated robot cell.</p>	<p>WRIT 112 Fundamentals of Writing 4 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test An individualized course to help students prepare 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 WRIT 005 to schedule lab attendance.</p>
<p>WELD 111 Gas Tungsten Arc Welding 4 Term Prerequisite: WLD 100 Semester Prerequisite: WELD 100 Will develop the skills, principles, and applications of gas tungsten arc welding and plasma arc welding. Welds will be done on different thicknesses of ferrous and non-ferrous metals in all positions. Proper material cleaning, fit up, and safety are also introduced.</p>	<p>WRIT 116 Grammar and Mechanics in Writing 4 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test Designed to help students master, in their own writing, the major grammatical and mechanical skills expected of students doing college-level writing. Also includes work on content development, organization, reading skills, and editing skills.</p>
<p>WELD 120 Structural Fabrication and Inspection 4 Term Prerequisite: WLD 101 Semester Prerequisite: WELD 101 Introduction to steel fabrication in accordance with the American Welding Society Structural Welding Code D1.1 applications and requirements. The student will be introduced to the numerous destructive and non-destructive methods of welding inspections. Satisfactory completion of this course will assist the student in passing a welding certification test.</p>	<p>WRIT 118 Seminar: Personal Writing 3 Term Prerequisite: None Semester Prerequisite: None Explores the various forms of personal writing (diaries, journals, letters, personal narratives, and autobiography) through written exercises and selected readings. The student's observations and life experiences are the focus of written assignments. Emphasizes language, style, and tone appropriate to the different forms of personal writing.</p>
<p>WELD 125 Structural Blueprint Reading for Welders 2 Term Prerequisite: ATM 150 Semester Prerequisite: TECH 100 Blueprint and welding symbols are the universal language of the welding industry. It is developed for students, apprentices, technicians, and others who must develop the ability to read and accurately interpret blueprints. Teaches awareness of the advancement in metallurgy, welding processes, consumables and strict code enforcement used in industry today.</p>	<p>WRIT 119 Business Writing: Grammar and Mechanics 3 Term Prerequisite: Placement Test Semester Prerequisite: 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.</p>
<p>WELD 140 Creative Welding 2.5 Term Prerequisite: WLD 100 Semester Prerequisite: WELD 100 This is a course 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.</p>	<p>WRIT 121 Composition I 4 Term Prerequisite: None Semester Prerequisite: None The study and practice of expository and argumentative discourse to help students write more effectively. Emphasizes content development, organization, and style, and includes instruction in basic library skills. Students will write summaries, reports and analytical expository and argumentative essays. Some sections use word processing.</p>
<p>WELD 194 Welding Project Lab 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental 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.</p>	<p>WRIT 122 Composition II 4 Term Prerequisite: WRI 122/ENG 122 Semester Prerequisite: WRIT 121 Builds upon the writing skills developed in WRIT 121 to help students write argumentative essays which use logical support and appropriate documentation. Emphasizes research techniques and use of sources, and the development, structure, and style of the research paper. Some sections use word processing.</p>
<p>WELD 201 Tool and Die Welding 4 Term Prerequisite: WLD 101, WLD 103, ATR 142 Semester Prerequisite: WELD 101, WELD 110, MACH 135 Theory and practice methods involved in welding various alloyed metals, pre-heating and postheating of metals, recognition of materials, alloying elements, and their effects. Also, the proper usage of air, oil, and water hardening steels.</p>	<p>WRIT 131 Honors Composition I 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Covers the same material as WRIT 121 but with additional work to challenge the superior writer.</p>
<p>WELD 205 Pipe Welding 4 Term Prerequisite: WLD 101, WLD 115 Semester Prerequisite: WELD 101, WELD 120 Theory, cutting, fitup, and practice on different sizes of pipe using shielded metal arc welding. Varied weld and base metal testing methods are used to the strict code requirements. Focus on low hydrogen type electrodes in groove and fillet welds in the 2G, 5G, and 6G positions.</p>	<p>WRIT 132 Honors Composition II 4 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Covers the same material as WRIT 122 but with additional work to challenge the superior writer.</p>
<p>WELD 210 Aircraft Welding 2 Term Prerequisite: Departmental Approval Semester Prerequisite: Departmental Approval Presents welding applications and methods used in repairs and inspection of aircraft structures in accordance with approved aviation maintenance techniques.</p>	<p>WRIT 195 Seminar: Writing User Documentation 3 Term Prerequisite: None Semester Prerequisite: None 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.</p>
<p>WRIT 005 Writing Laboratory 0 Term Prerequisite: None Semester Prerequisite: None WRIT 005 arranges the days and times when students will attend writing lab courses. Students must register for both a writing lab course, such as WRIT 112, and a section of WRIT 005.</p>	<p>WRIT 262 Seminar in Prose Style 3 Term Prerequisite: None Semester Prerequisite: None An advanced study of non-fictional prose writing. Extensive directed practice helps experienced writers make their own writing clear, precise, direct, and graceful. Workshop sessions include a study of the expectations and choices in various types of writing, and of the relationships among purpose, structure, words, sentences, grammar, punctuation, and style.</p>
<p>WRIT 110 Confidence in Writing 4 Term Prerequisite: Placement Test Semester Prerequisite: Placement Test 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.</p>	

WRIT 269 Seminar: Reviewing The Arts 3**Term Prerequisite:** Departmental Approval**Semester Prerequisite:** WRIT 122/ENGL 122/Departmental Approval

Develops criteria for evaluating the visual and performing arts, music, and literature. Sharpens the student's skills as a reviewer of the arts through reading, writing, and viewing mass media presentations, exhibits, and performances on and off campus. Concepts of form, content, style, and medium of expression will be introduced.

WRIT 281 Seminar: Writing For Publication 3**Term Prerequisite:** None**Semester Prerequisite:** None

Study of freelance writing and marketing, with focus on non-fiction. Students review a variety of effective writing techniques, study marketing information for their particular fields such as analyses of potential publishers and query letters, and discuss their writing in a workshop setting. Students prepare manuscripts for submission to editors. Word processing available.

WRIT 282 Seminar: Forum For Authors 3**Term Prerequisite:** None**Semester Prerequisite:** None

An advanced course in freelance writing for authors working on manuscripts. Students meet in a workshop setting to refine ideas, critique writing, solve problems, and develop material for submission to periodical or book editors. Includes advanced study of effective writing techniques and market information. Occasional speakers. Word processing available.

WRIT 285 Creative Writing I 3**Term Prerequisite:** None**Semester Prerequisite:** None

WRIT 285 is 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 students and masters in both fiction and poetry.

WRIT 286 Creative Writing II 3**Term Prerequisite:** WRI 293**Semester Prerequisite:** WRIT 285/Departmental Approval

Emphasizes improving the ability to write effective poems, short stories, and novellas. Students select their own subjects and receive immediate responses through group discussion.

WRIT 287 Writing Workshop 3**Term Prerequisite:** Departmental Approval**Semester Prerequisite:** Departmental Approval

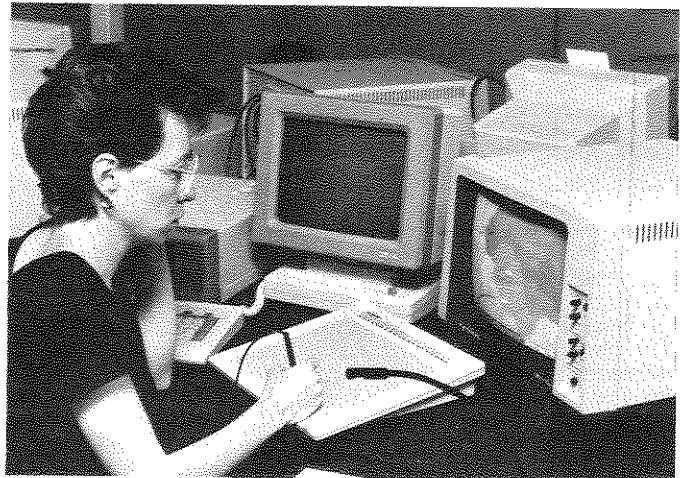
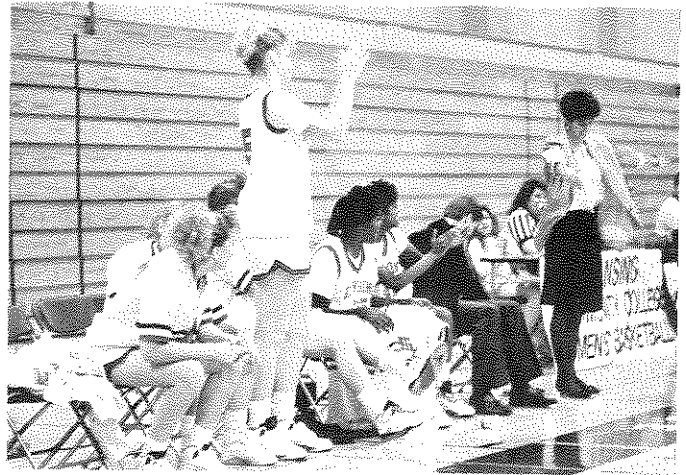
Examines language and style as the most critical choices a creative writer makes in directing the reader's perception of and response to the work. Develops the writer's ability to control tone and style. Manuscripts will be reproduced and discussed in a workshop setting.

WRIT 295 Independent Study in Writing I 1**Term Prerequisite:** Departmental Approval**Semester Prerequisite:** Departmental Approval

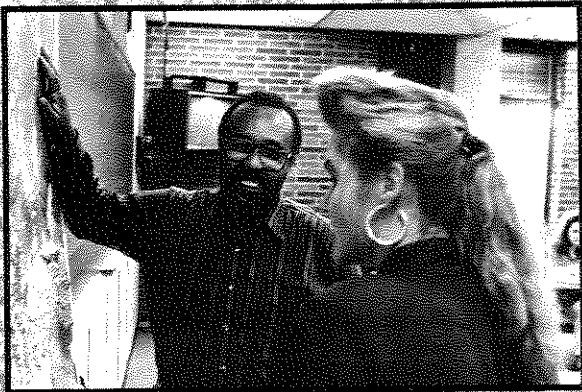
Individual projects in writing or journalism. Students will spend at least two hours a week for each credit in Independent Study.

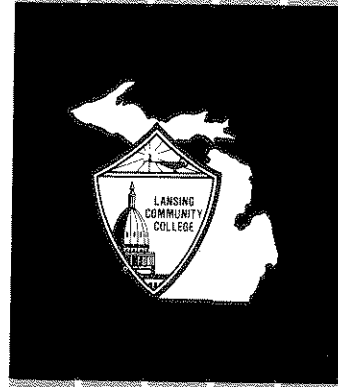
WRIT 296 Independent Study in Writing II 2**Term Prerequisite:** Departmental Approval**Semester Prerequisite:** Departmental Approval

Individual projects in writing or journalism. Students will spend at least two hours a week for each credit in Independent Study.



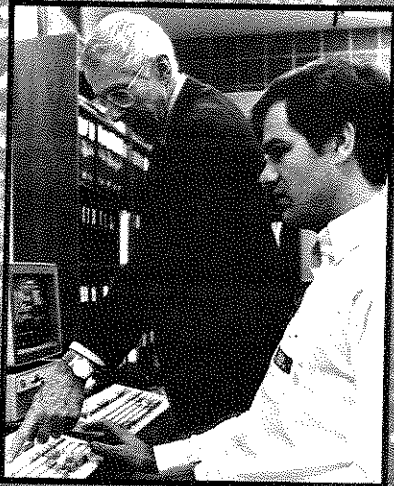
DART AUDITORIUM





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COURSES



The following courses are generally not offered for enrollment by individual students. These courses are designed in cooperation with various organizations such as businesses, governmental agencies, school districts, labor organizations, or other groups to meet their special needs. For additional information, please contact the Community Service and Continuing Education Division.

DESCRIPTIONS

CADD 100 Browse .25
Term Prerequisite: None
Semester Prerequisite: None
 This is an introductory computer graphics course intended for the manager or casual CADAM user. The course is intended to reveal insights regarding contents and access to CADAM files for checking drawings and confirming dimensions.

CADD 105 CADAM Overview 1.5
Term Prerequisite: None
Semester Prerequisite: None
 This is an introductory computer graphics course intended for the manager or casual CADAM user. The course is intended to reveal insights regarding using the files, checking drawings, and confirming dimensions. Emphasis will be placed on using point, line, circle, and spline functions to create an object.

CADD 110 Basic 2-D Update 1
Term Prerequisite: CG 201
Semester Prerequisite: CADD 200
 This course introduces the experienced "2-D Base CADAM" operator to the new version of Update software. The purpose will be to apply new functions and menu options to job-related tasks. New methods and related modules will be explored. Functions such as engineering change mark up, design build manage and kinematics will be exposed.

CADD 115 Basic 3-D Update 1
Term Prerequisite: CG 275
Semester Prerequisite: CADD 110
 This course introduces the experienced "2-D Interactive" operator to the new version Update software. The purpose will be to apply new functions and menu options to job related tasks. New methods and related modules will be explored. Three-dimensional surfaces, intersections, projections, and cross sections will be used to develop engineering drawings.

CADD 130 AutoCAD: Basic 2.5
Term Prerequisite: Drafting Experience
Semester Prerequisite: Drafting Experience
 Introduction to AutoCAD software. Creation of 2-D multiview mechanical drawings with dimensions and notes will be the main focus. Use of AutoCAD's layer, block, plot commands, and isometric views will also be covered in this course.

CADD 135 AutoCAD Advanced 2.5
Term Prerequisite: Drafting Knowledge
Semester Prerequisite: Drafting Knowledge
 A computer graphics course designed to teach 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.

CADD 140 AutoCAD 3-D 2.5
Term Prerequisite: CG 351
Semester Prerequisite: CADD 135
 A computer graphics course designed to teach 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.

CADD 150 Basic IBM CAD Seminar .5
Term Prerequisite: None
Semester Prerequisite: None
 This is a one-day computer graphics seminar which introduces IBM CAD. Covered are the IBM CAD command structure, creating and modifying geometry, both 2-D and 3-D, and images and raster conversion.

CADD 180 Basic Unigraphics 2.5
Term Prerequisite: Drafting Experience
Semester Prerequisite: Drafting Experience
 This is an introductory course covering the fundamentals of interactive graphics and precedes all other Unigraphics training. Basic 2-D concepts and functions of the system are covered in depth, with an introduction to 3-D development principles and concepts.

CADD 181 Unigraphics 3-D Design 2.5
Term Prerequisite: CG 180
Semester Prerequisite: CADD 180
 This course provides users with an intensive background covering the fundamentals of 3-D models. Students will be provided with the analysis, development, and implementation of 3-D modeling techniques for design, drafting, and machining as appropriate.

CADD 182 Unigraphics Assembly and Components 2
Term Prerequisite: CG 180
Semester Prerequisite: CADD 180
 The assembly and components feature of Unigraphics provides the users with the ability to manage and organize several different part files which share common data of components, sub-assemblies, and assemblies. The student will understand the concepts and application of the assembly and components module to the management and sharing of common component part files across several assembly models from both the top-down and bottom-up modeling approaches.

CADD 183 Unigraphics Advanced Surfacing 2
Term Prerequisite: CG 180
Semester Prerequisite: CADD 180
 The advanced surfacing features of Unigraphics provides the user with the ability to model complex free-formed surfaced parts typically used within the automotive industry for sheet metal applications, component designs, engine designs, and die designs. This advanced course provides the user with an in-depth background in the topics of B-spline creation and editing, B-surface construction and manipulation, surface trimming, deviation checking, and curvature analysis.

CADD 184 Unigraphics Comprehensive CAD Design 2.5
Term Prerequisite: CG 180, 3-D Design Experience
Semester Prerequisite: CADD 180, 3-D Design
 This course provides users that have previous three-dimensional modeling experience an intensive course covering the Unigraphics fundamentals of 3-D modeling and drafting techniques. The course is designed to provide an overview of all facets of the Unigraphics CAD Applications.

CADD 185 Unigraphics Drafting 2.5
Term Prerequisite: CG 180
Semester Prerequisite: CADD 180
 This course provides users with an intensive background covering the fundamentals of 3-D drafting, geometric dimensions and tolerances, and drawing control. Students such as designers, detailers, checkers, drafting persons, and engineers will be provided with the knowledge required to produce and plot quality drawings using Unigraphics.

CADD 188 Unigraphics 3-D Workshop 2
Term Prerequisite: CG 180
Semester Prerequisite: CADD 180
 This course provides users with an increased understanding of 3-D geometric modeling and surfacing techniques. Students will be provided with productivity tips such as macros and the opportunity to review development and implementation of 3-D dimensional modeling.

CADD 200 Drafter 2.5
Term Prerequisite: CG 150
Semester Prerequisite: CADD 105
 This is an informative computer graphics course intended for the potential CADAM user. Emphasis will be placed on using basic functions to develop or work with production drawings. The operator will be exposed to multi-view orthographic projection, placement, and miscellaneous items, oblique projections, isometric projections, and detail pages.

CADD 205 Advanced Drafter 2.5
Term Prerequisite: CG 301
Semester Prerequisite: CADD 200
 This course is a continuation of CADAM Basic and covers advanced CADAM functions. Also, analysis techniques and on-the-job training applications are taught.

CADD 210 Designer 2.5
Term Prerequisite: None
Semester Prerequisite: None
 Designer is structured for engineers, designers, and draftspersons to acquaint them with CADAM 3-D interactive, CADEX, and AEC applications.

CADD 215 3-D Interactive 2
Term Prerequisite: CG 201
Semester Prerequisite: CADD 200
 This course is intended to introduce the experienced CADAM operator to the 3-D Interactive module. The purpose will be to design components from 2-D, and also generate 2-D from 3-D models. The model will contain wireframe geometry as well as surfaces. Intersections and projection sections will be utilized to create shop drawings.

CADD 220 Advanced 3-D	2	CIVL 129 Survey Refresher	5
Term Prerequisite: CG 271		Term Prerequisite: None	
Semester Prerequisite: CADD 215		Semester Prerequisite: None	
This course is intended to provide the experienced CADAM operator with techniques used in applying 3-D Interactive. Students will be required to supply a sample 3-D drawing. The purpose is to provide the student with an approach to solve any 3-D design or manufacturing job-related project.		This course provides survey training for recently graduated civil engineers. Emphasis is on practical application and use of equipment.	
CADD 225 Interactive Solids Design	2	CIVL 130 Highway Concrete Inspection	5
Term Prerequisite: CG 201		Term Prerequisite: None	
Semester Prerequisite: CADD 200		Semester Prerequisite: None	
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 solid will include all views, sections, partial views, projections, intersections, and script files.		This course covers the determination of properties of density, concrete, and bituminous materials. Methods of sampling and testing bituminous concrete mixes and the density of various materials are taught. Introduces mix designs and concrete/bituminous designs.	
CADD 230 AEC Design Base	2.5	CIVL 180 Concrete Technician	3
Term Prerequisite: CG 201		Term Prerequisite: Instructor Approval	
Semester Prerequisite: CADD 200		Semester Prerequisite: Instructor Approval	
This course will introduce the student to CADAM's powerful AEC design system product which offers a competitive edge by saving time and money throughout the life cycle of a project from design, to maintenance, to expansion. The material will be presented through lecture, demonstration, and practice exercises.		This course is sponsored by the Michigan Ready Mix Concrete Association and the Portland Cement Association to train students to receive certification as a concrete technician—Michigan Level I, Concrete Field Testing Technician, and Michigan Level II, Concrete Technician. Both Level I and Level II are ACI approved programs.	
CADD 235 Facilities Layout and Design	2.5	CIVL 181 Concrete Technician Level I	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Architecture/Engineering/Construction (AEC) and Facilities Management (FM) functions on the CADAM system are covered. Lectures, demonstrations, discussions, and terminal exercises will be used.		This course is sponsored by the Michigan Concrete Association and the Portland Cement Association to train students to receive certification as a concrete technician—Michigan Level I, Concrete Field Testing Technician. Level I is an ACI approved program.	
CADD 240 3-D Piping	2	CIVL 189 Concrete Paving	2
Term Prerequisite: CG 312		Term Prerequisite: On-the-job Construction Experience/Appropriate Technical Training	
Semester Prerequisite: CADD 230		Semester Prerequisite: On-the-job Construction Experience/Appropriate Technical Training	
CADAM AEC Design Base/3-D Piping is a comprehensive design system that provides piping designers and drafters with the tools necessary for piping design work. The CADAM AEC 3-D Piping course introduces students to the application and functionality of the system software.		This is a course on the practical aspects of inspection and quality control of Portland Cement concrete paving projects.	
CADD 245 CADEX	2	CIVL 250 Interactive Graphics Road Design System I (IGRDS I)	3
Term Prerequisite: CG 201		Term Prerequisite: LAT 203	
Semester Prerequisite: CADD 200		Semester Prerequisite: GRET 203	
This course is intended to introduce the experienced CADAM operator to CADAM electrical schematic capture. The purpose will be to design and utilize functions and menu items related to automotive applications to create shop drawings.		Interactive Graphics Road Design System I is a comprehensive set of computer processes for roadway design. The capabilities provided by these processes help the designer to establish horizontal and vertical alignments, enter terrain data from a digital terrain model, and display existing ground profiles.	
CADD 250 CADEX Mechanical Applications	1	CIVL 255 Interactive Graphics Road Design System II (IGRDS II)	3
Term Prerequisite: CG 201		Term Prerequisite: CT 250	
Semester Prerequisite: CADD 200		Semester Prerequisite: CIVL 250	
This course combines lectures and discussions with mechanical assemblies or libraries, using hands-on practices. Topics covered in the course include attributing CADAM geometry, creating part data base libraries, developing component sets, and producing reports such as wire to-from lists and Bills of Materials.		Interactive Graphics Road Design System II is a comprehensive set of computer processes for roadway design. Capabilities provided by these processes help the designer to define the roadway template, sideslope, and median dimensions; develop and modify design cross sections, and compute earthwork quantities. Generate contour and perspective views.	
CADD 255 Basic NC	2	ENGL 099 Seminar: Life in Literature	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Introductory course in adding numerical control data to the CADAM model geometry. Cutter diameter, path, feed rates, spindle speeds, etc., will be developed for three-axis milling machines and lathes. Procedures for producing the NC program will be discussed.		Students will look at life in literature. Students will read selected literary works in order to understand the craft of the writer revealing life through literature.	
CADD 260 Advanced Numerical Control	2	FIRE 281 Fire Science Project Lab	1
Term Prerequisite: CG 361		Term Prerequisite: Approval	
Semester Prerequisite: CADD 255		Semester Prerequisite: Coordinator Approval	
Continuation of CADAM Basic NC with emphasis on developing skill in manual programming of two and three-axis, point-to-point positioning, and numerically controlled machine tools.		This course is designed to undertake and complete an independent study or project under direct supervision.	
CADD 265 Lathe	2	FIRE 282 Fire Science Project Lab	2
Term Prerequisite: None		Term Prerequisite: Approval	
Semester Prerequisite: None		Semester Prerequisite: Coordinator Approval	
The CADAM Lathe course provides automatic generation of tool-path data for a wide variety of lathe operations, including roughing, drilling, boring, finishing, and threading.		This course is designed to undertake and complete an independent study or project under direct supervision.	
CIVL 100 Technical Orientation	1	FIRE 283 Fire Science Project Lab	3
Term Prerequisite: None		Term Prerequisite: Approval	
Semester Prerequisite: None		Semester Prerequisite: Coordinator Approval	
Introduction to the Michigan Department of Transportation: defining the role of the department, functions of the various divisions, and how they relate to each other. Designed to acquaint the student with the nature of work performed by technicians.		This course is designed to undertake and complete an independent study or project under direct supervision.	
		FIRE 284 Fire Science Project Lab	4
		Term Prerequisite: Approval	
		Semester Prerequisite: Coordinator Approval	
		This course is designed to undertake and complete an independent study or project under direct supervision.	

<p>FIRE 290 Fire Officer Seminars 1 Term Prerequisite: Departmental Approval Semester Prerequisite: Certified Michigan Firefighter This seminar consists of eighteen individual weekend seminars leading to certification as Fire Officer I, II, III. These courses are presented by the National Fire Academy through the auspices of the Michigan Fire Fighter's Training Council.</p>	<p>HMFS 179 Practicum in Japanese Culture 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Introducing the principles and philosophy of Japanese calligraphy and the use of abacus and understanding of various types of Japanese traditional dresses. Practical training in calligraphy and abacus.</p>
<p>GRET 216 Introduction to Microstation Workshop 2 Term Prerequisite: None Semester Prerequisite: None This is a workshop 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 personal computer setup or the INFOMIX-SQLnd Base II Plus database packages. The workshop is designed for Intergraph Workstation lab use, as well as the Microstation PC.</p>	<p>HMFS 180 JA Internship 2 Term Prerequisite: None Semester Prerequisite: None Attend morning meeting each working day. Perform work duties as assigned by the student supervisor(s) and the host company.</p> <p>HMFS 181 JA Internship 2 Term Prerequisite: None Semester Prerequisite: None Attend morning meeting each working day. Perform work duties as assigned by the student supervisor(s) and the host company.</p>
<p>GRET 218 GIS Design Workshop 5 Term Prerequisite: None Semester Prerequisite: None Data base design entails identification of relevant data sources, applying cartographic standards, and managing a tabular data base scheme that will relate to cartographic layers in the GIS. Tools and techniques for data identification and composition are presented in the context of an example design for a municipal GIS, with emphasis on geodetic reference frame, base map, and cadastral overlay.</p>	<p>HMFS 182 JA Internship 2 Term Prerequisite: None Semester Prerequisite: None Attend morning meeting each working day. Perform work duties as assigned by the student supervisor(s) and the host company.</p> <p>HMFS 183 Practicum in Japanese Culture 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Introducing the principles and philosophy of Japanese calligraphy and the use of abacus and understanding of various types of Japanese traditional dresses. Practical training in calligraphy and abacus.</p>
<p>GRET 219 Data Sets for GIS Workshop .5 Term Prerequisite: None Semester Prerequisite: None This workshop focuses on available commercial and public domain data sets for GIS. Three data sets are completely described and documented according to cartographic characteristics and attribution. GIS systems are provided to participants for their exploration of data sets. Applications developed using the data sets are demonstrated.</p>	<p>HMFS 184 Practicum in Japanese Culture 2 Term Prerequisite: None Semester Prerequisite: None Introducing the philosophies of different schools of flower arrangement. Learning the basic skills in flower arrangements.</p> <p>HMFS 185 Practicum in Japanese Culture 4 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval Introducing the principles and philosophy of Japanese calligraphy and the use of abacus and understanding of various types of Japanese traditional dresses. Practical training in calligraphy and abacus.</p>
<p>GRET 254 Orientation to ARC/INFO 1.5 Term Prerequisite: LAT 282/Equivalent Computer Course Semester Prerequisite: LAND 282/Equivalent Computer Course This course is an introduction to the use of the ARC/INFO software. ARC/INFO is a leading product used in the design of Geographic Information Systems. Basic product use and modeling will be demonstrated. There will be hands-on experience in the lab.</p>	<p>HMFS 186 Japan Adventure Orientation 2 Term Prerequisite: Program Approval Semester Prerequisite: Program Approval An orientation into Japan as a society and people designed to acquaint the Japan Adventure students to their new environment.</p> <p>HMFS 187 Japan Horizon Internship 2 Term Prerequisite: None Semester Prerequisite: None Attend morning meetings each working day. Perform work duties as assigned by the student supervisor(s) and the host company.</p>
<p>HMFS 160 Hotel/Motel Internship 3 Term Prerequisite: None Semester Prerequisite: None A seminar class for hotel-restaurant management students who are participating in Program Hermandad and have completed or are approaching 200 hours of work experience in the hospitality industry.</p>	<p>HMFS 188 Japan Horizon Internship 2 Term Prerequisite: None Semester Prerequisite: None Attend morning meeting each working day. Perform work duties as assigned by the student supervisor(s) and the host company.</p> <p>HMFS 189 HT/MT Internship 3 Term Prerequisite: None Semester Prerequisite: None A seminar class for Hotel-Restaurant management students who are participating in Program Hermandad and have completed or are approaching 200 hours of work experience in the hospitality industry.</p>
<p>HMFS 170 Menu Design and Layout 3 Term Prerequisite: None Semester Prerequisite: None This course includes the basics in menu planning, analysis, and pricing. Menu layout and design fundamentals are covered; the integration of the menu into the operational aspects of purchasing, production, and service is explored. Project required.</p>	<p>HSAB 009 Auto Body 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This is a fee-for-service program developed for Eaton Intermediate School District. Enrollment is limited to their students only.</p>
<p>HMFS 177 Introduction to Hotel and Food Service Operations 1 Term Prerequisite: None Semester Prerequisite: None An introduction to the Hotel-Motel-Food service industry, its management departments, and responsibilities, designed specifically for Japan Adventure/Horizon students.</p>	<p>HSAH 101 Pre-Allied Health Careers 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student Designed to explore and present the basic applied concepts of biological sciences, physical science, and human interaction fundamentals necessary to pursue training as a health-care professional.</p>
<p>HMFS 178 Practicum in Japanese Culture 2 Term Prerequisite: None Semester Prerequisite: None Introducing the principles and philosophy of Japanese calligraphy, the use of abacus, and the understanding of various types of Japanese traditional dresses. Practical training in calligraphy and abacus.</p>	

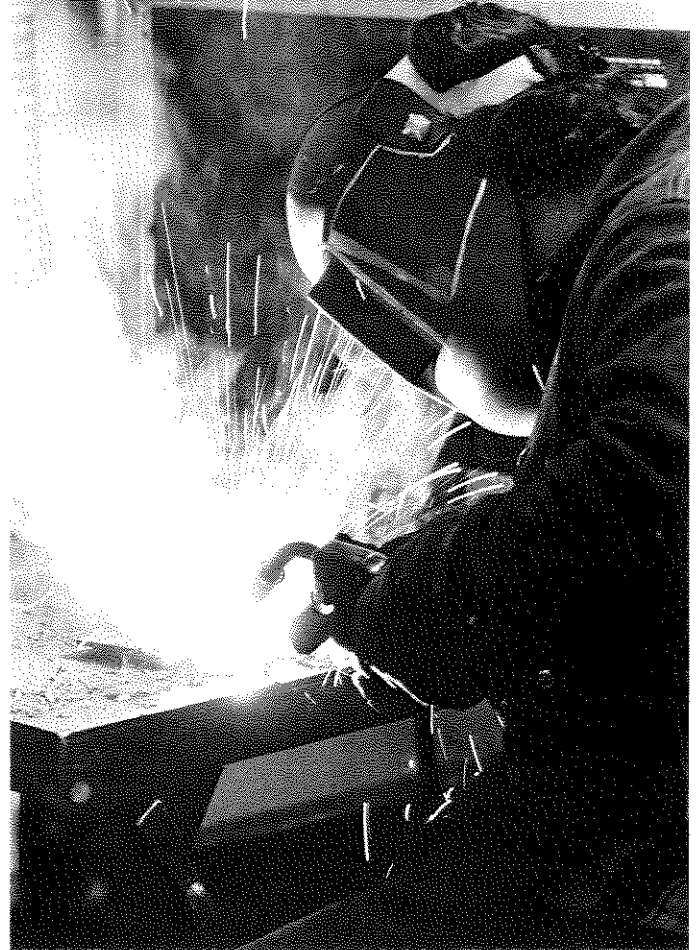
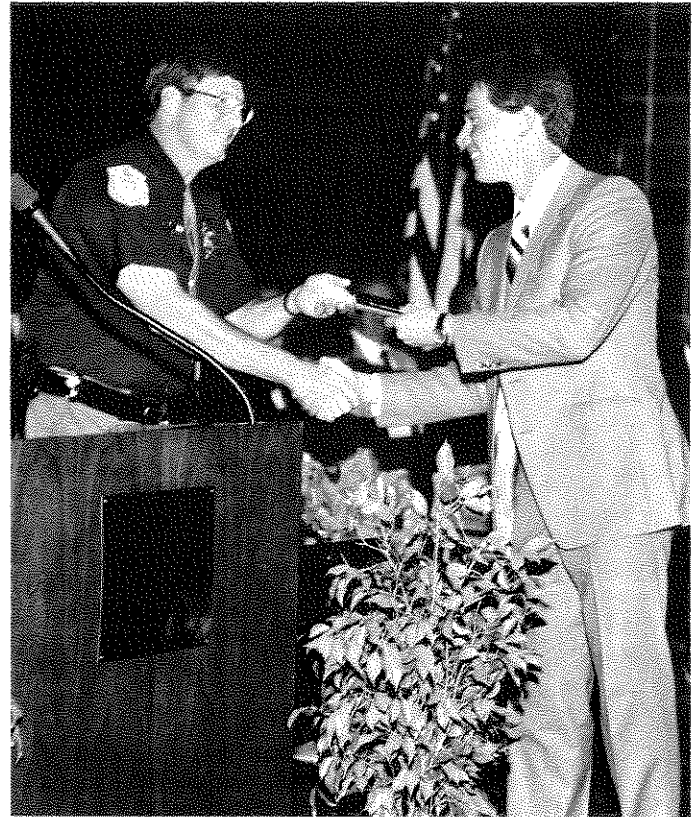
<p>HSAM 010 Auto Mechanics 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This is a fee-for-service program developed for Eaton Intermediate School District. Enrollment is limited to their students only.</p>	<p>HSHF 084 Food Services I 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student The study of sanitation, employee responsibility, and training as related to restaurants. Proper food purchasing, receiving, storing, preparation, and serving are heavily emphasized.</p>
<p>HSAT 040 Architectural Drafting 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This is a one-year continuous course of instruction for EISD students. This course is initially centered around basic concepts of orthographic projection, sketching, lettering techniques, and dimensioning. Emphasis will shift to identifying component parts and correctly drawing various building details. Basic model building using various materials to construct architectural study models will be taught.</p>	<p>HSHF 092 Food Services II 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student A review of all areas of study included in Food Services I. In addition, responsibility for setting up and costing menus, menu and production planning, short order restaurant service, and guest check and cash register controls are emphasized. A total restaurant operation is experienced.</p>
<p>HSBK 015 Banking Operations 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student An introductory course in banking covering the following topics: data processing for bankers, principles of banking, marketing for bankers, and customer relations.</p>	<p>HSIA 017 Automation Principles I 7.5 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student Provides hands-on experience in current manufacturing technology, social ramifications of its use, and basic employability skills. Students will learn to use the industrial personal computer, software, and a multitasking operating system. Students will learn the basic process of manufacturing, including hands-on experience with production inventory management, computer-aided design, industrial fluid power, and statistical process control.</p>
<p>HSBK 016 Banking Operations 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student An introductory course in banking covering the following topics: consumer lending, Lotus 1-2-3, and teller training.</p>	<p>HSIA 018 Automation Principles II 7.5 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student Continuation of HSIA 017 providing experience in relay logic, programmable logic controllers, machine vision, discrete electronic components, and the integration of processes. Integration of processes stress the use of standard industrial computer application software to bridge between operations.</p>
<p>HSCA 105 EISD Commercial Art I 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student HSCA 105 and HSCA 106 form a one year non-articulated program for high school students. Commercial art techniques for graphic arts pre-press production emphasizing studio skills, lettering, typography, and layout design.</p>	<p>HSMK 020 Marketing/Retailing/Small Business 8 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This course covers topics in retailing, marketing, small business management, and employability skills. Students will gain a basic understanding of the principles of marketing and retailing. Students will complete a business plan on a business of their choice and a personal resume.</p>
<p>HSCA 106 EISD Commercial Art II 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student HSCA 105 and HSCA 106 form a one year non-articulated program for high school students. Commercial art techniques for graphic arts pre-press production emphasizing studio skills, lettering, typography, and layout design.</p>	<p>HSMK 021 Business Management/Current Issues in Business 6 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student A general study of all elements involved in operating a business of your own. The course considers the steps in planning, making decisions, and developing solutions to the problems facing the small-business person. The course also enhances the value of our business programs by contributing to the student's occupational preparedness.</p>
<p>HSCS 101 Computer Information Systems First Semester for Eaton ISD 6 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This course provides high school vocational students an opportunity to earn college credit for Introduction to Computer Information Systems (CISB 100) and Introduction to DOS (CISB 104).</p>	<p>HSMK 022 Sales 3 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This course covers the fundamentals and role of sales in the marketing mix. Student 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 are all discussed.</p>
<p>HSCS 102 Computer Information Systems Second Semester for Eaton ISD 6 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This course provides high school vocational students an opportunity to earn college credit for Advanced Microcomputer Applications (CISB 105) and dBASE Programming (CISB 210).</p>	<p>HSWT 015 Welding and Cutting 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This is a course for high school students interested in the industrial trades. Students will learn the basics of welding through lectures and hands-on experience.</p>
<p>HSDT 030 Industrial Drafting 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This is a one-year continuous course of instruction for EISD students. This course is initially centered around basic concepts of orthographic projection, sketching, lettering techniques, and dimensioning. Emphasis will shift to more detailed work with orthographic projection, sections, and auxiliary views. More advanced techniques will be introduced, along with preparation of welding or fabrication type drawings.</p>	<p>HVAC 184 Heating, Ventilating and Air Conditioning Seminar 4 Term Prerequisite: None Semester Prerequisite: None Seminar may cover any or all of the following topics: cooling, heating, humidifying, filtering, servicing, and/or ventilating, etc. For individuals already in the Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) field or anyone interested in these areas.</p>
<p>HSEC 010 EISD Electronics I 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student An introduction to DC and AC theory is presented. Students cover the same material as ELCT 111. Emphasis is placed on hands-on learning through the use of laboratory exercises.</p>	<p>IASM 001 Industrial Automation Seminar 1 Term Prerequisite: None Semester Prerequisite: None Seminar content is dependent upon course requirement.</p>
<p>HSEC 020 EISD Electronics II 7 Term Prerequisite: EISD Student Semester Prerequisite: EISD Student This course continues the electronic fundamentals begun in HSEC 010. Students cover the same material as ELCT 112 and ELCT 131 (transistors and digital basics). Emphasis is placed in learning through the use of lab exercises.</p>	<p>IASM 002 Industrial Automation Seminar II 2 Term Prerequisite: None Semester Prerequisite: None Seminar content is dependent upon course requirement.</p>

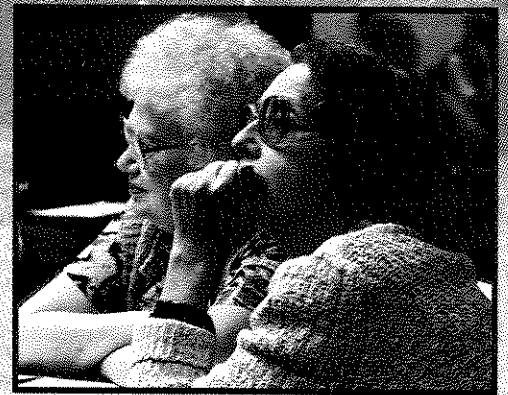
IASM 003 Industrial Automation Seminar III	3	MDCR 264 Leading Effective Meetings	.25
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Seminar content is dependent upon class requirement.		The purpose of this seminar is to help participants develop the skills necessary for leading effective meetings. These include many facets of planning and preparing for a meeting, conducting a meeting, and following up on a meeting.	
IASM 004 Industrial Automation Seminar IV	4	MDCR 275 Establishing Dynamic Leadership	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Seminar content is dependent upon course requirement.		Dynamic leaders create visions and translate those 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.	
LAND 290 Exploring the World of Computers	1	MDCR 276 Building High Performance Teams	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This course will familiarize the green industry professional with an overview of available hardware and software systems and the configurations for a landscape or nursery operation. There will be experimentation with different software packages such as LandCADD, CAPS, LAND Design Ware, and JACKSCOM as well as related landscape design, site planning, management scheduling, and cost estimating areas.		Dynamic leaders develop dynamic teams. They need followers, but followers who can function independently and cooperatively in the organizational endeavor. This course instructs participants in practical strategies for creating dynamic teams.	
LAND 298 Pesticide Applicator Certification	2	MDCR 277 Facilitating Group Decision-Making	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
The purpose of this course is to prepare the student for certification as a commercial applicator of pesticides for turfgrass and ornamental plants. Under the Michigan Pesticide Control Act, individuals applying pesticides for hire must be certified or be supervised by a certified applicator. Course topics include IPM techniques, turfgrass and ornamental pest identification, and proper pesticide handling and application.		In order for groups to work together, leaders must be skilled in people 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 seminar will train participants in the skills of leading and the processes of decision-making.	
LAND 299 LandCADD Training	2	MDCR 278 Developing Strategic Plans	.5
Term Prerequisite: CG 351		Term Prerequisite: None	
Semester Prerequisite: CADD 135		Semester Prerequisite: None	
A program for the individual with basic computer and AutoCADD exposure interested in learning more about computer-aided design using the LandCADD software package. The LandCADD site planning package will be explained fully along with some additional modules like E-Z estimate (cost estimating) package, plant materials data base, simulated plant growth, and quadrangles (land form).		Effective strategic planning is essential for longterm success in the work market. It focuses on doing the right thing, on being effective. This seminar teaches a team approach to strategic planning.	
MDCR 201 Assertive Training	.5	MDCR 279 Communicating Thoughts Orally	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This oneday seminar is designed to introduce participants to some of the principles and dynamics of assertive behavior. It will help participants identify and accept their basic interpersonal rights while respecting the rights of others.		Collecting one's thought and speaking extemporaneously to present one's reaction, viewpoint, or pertinent information is a vital ability for leaders. This workshop will instruct participants in the strategies for gathering one's thoughts and presenting them clearly and logically.	
MDCR 224 Introduction to Negotiating Skills	.5	MDCR 280 Strengthening Interpersonal Relationships	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Certain basic negotiating skills can be applied to a number of different situations both business and personal. This training will focus on strategies for conducting negotiation sessions with employees, customers, and suppliers. It will not cover strategies for negotiating union contracts.		Good interpersonal skills are essential for productive working relationships and for maintaining an efficient working environment. This seminar provides training to managers on techniques for strengthening interpersonal skills for improved working relationships.	
MDCR 227 Effective Board Training	2.5	MDCR 281 Dealing With Difficult People	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
The purpose of this seminar is to provide participants with knowledge, skills, and attitudes for serving in voluntary, elected, or appointed positions on boards, committees, and commissions in government, business, and human service.		Difficult people create problems! In this practical seminar participants will observe and practice effective strategies for handling difficult people. Participants will be able to reduce the problems difficult people create.	
MDCR 242 Consultative Selling	1.5	MDCR 282 Analyzing and Solving Performance Problems	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This seminar is based on a combination of education, experience and application. It is a comprehensive and in-depth look at the tools and techniques available to expand current sales knowledge and develop new sales skills for the sales professionals.		A primary element for solving performance problems is creating and sustaining a supportive work environment. This seminar provides training to supervisors and managers that will help identify and solve work problems and encourage peak employee activity.	
MDCR 245 Customer Service	1.25	POLS 280 Politics and Government of Japan	3
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
All employees have the potential for creating good customer relations and improving the image of the organization. The critical factors include increased motivation through a positive mental attitude, effective communication with different types of customer personalities, sensitive handling of customer complaints, and successful strategies for meeting needs to satisfy customers.		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.	
MDCR 252 Supervisory Skills Training	.5	QSEM 005 Quality Assurance Seminar	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
This seminar is an 8-hour program that will address the basic concepts and skills for new supervisors in addition to providing some self-assessment.		Seminar content is dependent upon course requirement.	

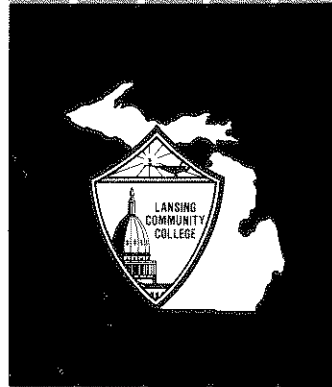
QSEM 110 Quality Assurance Seminar	1	SPAN 189 Seminar: Spanish for Hermandad	3
Term Prerequisite: None		Term Prerequisite: SPN 185/186/Successful Score on Spanish Assessment Test	
Semester Prerequisite: None		Semester Prerequisite: SPAN 116/Successful Score on Spanish Placement Test	
Seminar content is dependent upon course requirement.		Designed for persons who have knowledge of Spanish and 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.	
QSEM 115 Quality Assurance Seminar	1.5	USMT 100 U.S. Military Rigging	2
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Seminar content is dependent upon course requirement.		Covers uses and strengths of ropes, chains, block, and tackles, and the construction and erection of gin poles, with 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 will be covered.	
QSEM 120 Quality Assurance Seminar	2	USMT 101 U.S. Military Machine Tool Survey I	.5
Term Prerequisite: None		Term Prerequisite: USM 101	
Semester Prerequisite: None		Semester Prerequisite: USMT 101	
Seminar content is dependent upon course requirement.		Covers machine and hand tools used by an industrial machinist. Lab offers a variety of hands-on experiences.	
QSEM 125 Quality Assurance Seminar	2.5	USMT 102 U.S. Military Machine Tool Survey II	.5
Term Prerequisite: None		Term Prerequisite: USM 101	
Semester Prerequisite: None		Semester Prerequisite: USMT 101	
Seminar content is dependent upon course requirement.		Covers advanced procedures begun in USMT 101. Emphasis on a variety of functions done on a lathe.	
QSEM 130 Quality Assurance Seminar	3	USMT 103 U.S. Military Machine Tool Survey III	.5
Term Prerequisite: None		Term Prerequisite: USM 102	
Semester Prerequisite: None		Semester Prerequisite: USMT 102	
Seminar content is dependent upon course requirement.		Covers the tools and methods used to cut threads on a machine lathe.	
QSEM 135 Quality Assurance Seminar	3.5	USMT 104 U.S. Military Machine Tool Survey IV	.5
Term Prerequisite: None		Term Prerequisite: USM 103	
Semester Prerequisite: None		Semester Prerequisite: USMT 103	
Seminar content is dependent upon course requirement.		Covers the tools and methods used to set up and machine a horizontal and vertical mill and a surface grinder.	
QSEM 140 Quality Assurance Seminar	4	USMT 106 U.S. Military Hydraulics I	.5
Term Prerequisite: None		Term Prerequisite: None	
Semester Prerequisite: None		Semester Prerequisite: None	
Seminar content is dependent upon course requirement.		Introduces theory of fluid power and basic circuits, using cylinders, valves, accumulators, filters, pumps, motors, etc., as they are used in current industrial applications. Hands-on experience will be given using cutaways, standard components, and test stands.	
QSEM 145 Quality Assurance Seminar	4.5	USMT 107 U.S. Military Hydraulics II	5
Term Prerequisite: None		Term Prerequisite: USM 106	
Semester Prerequisite: None		Semester Prerequisite: USMT 106	
Seminar content is dependent upon course requirement.		Continuation of USMT 106. Advanced techniques in the use of hydraulics and pneumatics with emphasis on valves and cylinders.	
QSEM 150 Quality Assurance Seminar	5	USMT 108 U.S. Military Hydraulics III	.5
Term Prerequisite: None		Term Prerequisite: USM 107	
Semester Prerequisite: None		Semester Prerequisite: USMT 107	
Seminar content is dependent upon course requirement.		Introduces the theory of practical application of fluid power, air power, and vacuum involving training benches and component parts. A broad overview covering principles, components, and basic circuitry, troubleshooting, and where this power is used in modern industry.	
RSEM 005 Resource and Operations Management Systems Seminar	.5	USMT 130 AC/DC Circuits	1
Term Prerequisite: None		Term Prerequisite: U.S. Military	
Semester Prerequisite: None		Semester Prerequisite: U.S. Military	
Course content varies with the seminar.		Covers theory of operation and use of electronic communications equipment, common electronic test instruments, radio communication system diagnostic practices, general electrical safety, technical administration report completion, repair parts logistics support, and on-the-job training (OJT) development.	
RSEM 110 Resource and Operations Management Systems Seminar	1	USMT 131 Navy Electronics I	.5
Term Prerequisite: None		Term Prerequisite: U.S. Military	
Semester Prerequisite: None		Semester Prerequisite: U.S. Military	
Course content varies with the seminar.		Covers the fundamental concepts of electricity to electronic amplification using transistors. Emphasis is on laboratory work.	
RSEM 115 Resource and Operations Management Systems Seminar	1.5	USMT 132 Navy Electronics II	.5
Term Prerequisite: None		Term Prerequisite: U.S. Military	
Semester Prerequisite: None		Semester Prerequisite: U.S. Military	
Course content varies with the seminar.		Covers the fundamentals of electricity to electronic amplification using transistors. Emphasis is on laboratory work.	
RSEM 120 Resource and Operations Management Systems Seminar	2		
Term Prerequisite: None			
Semester Prerequisite: None			
Course content varies with the seminar.			
RSEM 125 Resource and Operations Management Systems	2.5		
Term Prerequisite: None			
Semester Prerequisite: None			
Course content varies with the seminar.			
RSEM 130 Resource and Operations Management Systems	3		
Term Prerequisite: None			
Semester Prerequisite: None			
Course content varies with the seminar.			
SOCL 280 Introduction to Japanese Culture	3		
Term Prerequisite: None			
Semester Prerequisite: None			
An introduction to contemporary Japan in its cultural context. Emphasis is on the unique features of the Japanese way of life in terms of Japanese values, social system, and cultural background.			

<p>USMT 133 Electrical Circuits I .5 Term Prerequisite: U.S. Military Semester Prerequisite: U.S. Military Covers basic electrical safety practices in an industrial setting and introduces the student to electricity on a practical level.</p>	<p>USMT 163 U.S. Military Air Conditioning IV .5 Term Prerequisite: USM 164 Semester Prerequisite: USMT 164 The fundamentals of air conditioning servicing: the testing, repairing, and troubleshooting of a variety of residential and commercial systems.</p>
<p>USMT 134 Electrical Circuits II .5 Term Prerequisite: U.S. Military Semester Prerequisite: U.S. Military Covers the fundamental concepts of electricity to electronic amplification using transistors. Emphasis is on laboratory work.</p>	<p>USMT 164 U.S. Military Electrical .5 Term Prerequisite: None Semester Prerequisite: None The student will learn to use meters to measure electrical quantities, do basic circuit calculations, read household and commercial wiring drawings, review national electrical codes and standards, and will practice the installation of non-metallic sheathed cable, flexible metal clad cable, electrical metallic tubing, and rigid conduit.</p>
<p>USMT 135 Electrical Circuits III .5 Term Prerequisite: U.S. Military Semester Prerequisite: U.S. Military Covers advanced concepts of electricity to electronic amplification using transistors. Emphasis is on laboratory work.</p>	<p>USMT 165 U.S. Military Fundamentals of Refrigeration .5 Term Prerequisite: None Semester Prerequisite: None The refrigeration system operations as well as the function of its individual components, such as compressor, evaporator, condenser, and metering device are covered in detail. Symbols, wiring diagrams, circuits, meters, and motors are discussed and worked on.</p>
<p>USMT 136 Transistors .5 Term Prerequisite: U.S. Military Semester Prerequisite: U.S. Military Covers advanced concepts of electricity to electronic amplification using transistors. Emphasis is on laboratory hands-on work using oscilloscopes, ohmmeters, and voltmeters.</p>	<p>USMT 166 U.S. Military Refrigeration .5 Term Prerequisite: None Semester Prerequisite: None The fundamentals of light commercial and commercial refrigeration units are covered. Component identification and operation as well as a thorough working knowledge of the sequence of operations of commercial units such as reach-ins, walk-ins, display cases, and ice makers are demonstrated.</p>
<p>USMT 150 U.S. Military Welding I .5 Term Prerequisite: None Semester Prerequisite: None Introduces and uses basic principles, safe operation, and application of oxy-acetylene welding and cutting. Each process consists of beading, butt, lap, and corner joints in the flat and horizontal positions.</p>	<p>USMT 169 U.S. Military Sewage Disposal and Field Sanitation .5 Term Prerequisite: None Semester Prerequisite: None Introductory course in sewage disposal and field sanitation. Will cover the installation, operation, and maintenance of various water and sewage treatment equipment.</p>
<p>USMT 151 U.S. Military Welding II .5 Term Prerequisite: None Semester Prerequisite: None Introduces basic principles, safe operation, and application of the electric arc processes. The process consists of beading, butt, lap, and corner joints in the flat and horizontal positions.</p>	<p>USMT 200 U.S. Military Pump Repair I .5 Term Prerequisite: None Semester Prerequisite: None Fundamentals and operating principles of pumps and pump controls, applications of pump equipment in industry, along with installation, alignment, operation, and maintenance procedures.</p>
<p>USMT 152 U.S. Military TIG Welding .5 Term Prerequisite: USM 151 Semester Prerequisite: USMT 151 Study of the principles and fundamentals of Tungsten Inert Gas (TIG) welding in different positions on steel and aluminum.</p>	<p>USMT 201 U.S. Military Pump Repair II .5 Term Prerequisite: USM 200 Semester Prerequisite: USMT 200 Course covers the safe practices, troubleshooting, dismantling, and rebuilding of equipment. Special emphasis is placed on bearings, valves, and couplings.</p>
<p>USMT 153 U.S. Military Welding Inspection .25 Term Prerequisite: None Semester Prerequisite: None This course provides the fundamental principles of weld testing and inspection. Proper procedures of destructive and nondestructive testing of welds along with a knowledge of codes, standards, and procedures will be stressed.</p>	<p>USMT 202 U.S. Military Pump Repair III .5 Term Prerequisite: USM 201 Semester Prerequisite: USMT 201 This course will cover valves, steamtraps, pipe fittings, and pipings as they are used inside of pumps.</p>
<p>USMT 154 U.S. Military Structural Fabrication .25 Term Prerequisite: None Semester Prerequisite: None This course will give the student a basic understanding of how to repair existing parts to make new parts and to replace worn or damaged parts.</p>	<p>USMT 203 U.S. Military Canvas Repair .5 Term Prerequisite: None Semester Prerequisite: None This course covers the specific uses and special care and handling of canvas and canvas equipment.</p>
<p>USMT 160 U.S. Military Air Conditioning I .5 Term Prerequisite: None Semester Prerequisite: None Fundamentals and principles of air conditioning systems, repair, maintenance, and servicing residential units.</p>	<p>USMT 211 Military Concrete Layout .5 Term Prerequisite: U. S. Military Semester Prerequisite: U. S. Military In this course the students will learn layout and forming for concrete pours.</p>
<p>USMT 161 U.S. Military Air Conditioning II .5 Term Prerequisite: USM 160 Semester Prerequisite: USMT 160 An introduction to the mechanical refrigeration cycle as it applies to residential and light commercial refrigeration and air conditioning equipment. The refrigeration system operation as well as the function of its individual components, such as compressor, evaporator, condenser, and metering device are covered in detail.</p>	<p>USMT 212 Military Concrete Finishing .5 Term Prerequisite: U. S. Military Semester Prerequisite: U. S. Military This course will teach the student to: mix, place, and finish concrete; maintain tools and equipment; operate concrete machines, perform operator's maintenance on concrete machines, and proper proportion of materials for standard mix concrete.</p>
<p>USMT 162 U.S. Military Air Conditioning III .5 Term Prerequisite: USM 161 Semester Prerequisite: USMT 161 Covers the complete set-up and testing of the variety of components used in residential and light commercial air conditioning. A major emphasis will be placed on "fine tuning" and troubleshooting an air conditioning system.</p>	<p>USMT 213 Military Masonry Helper .5 Term Prerequisite: U. S. Military Semester Prerequisite: U. S. Military In this course the students will learn to perform as a mason's helper, lay concrete masonry units, and lay out various masonry bonds.</p>

- USMT 214 Military Framing** .5
Term Prerequisite: U. S. Military
Semester Prerequisite: U. S. Military
 In this course students will learn to lay out, cut, assemble, and erect wood frame structures and all types of rafters.
- USMT 260 U.S. Military Sheet Metal** .5
Term Prerequisite: None
Semester Prerequisite: None
 Covered will be sheet metal layout, identification of sheet metal fittings, various types of venting, fiberglass and insulated duct, and general furnace installation procedures.
- USMT 262 U.S. Military Plumbing** 1
Term Prerequisite: None
Semester Prerequisite: None
 Fundamentals and principles of plumbing systems, fixtures, and appliances including installation, maintenance, and servicing.
- WELD 181 Welding Seminar** 1
Term Prerequisite: None
Semester Prerequisite: None
 Seminar may cover a variety of topics including maintenance welding, production welding, resistance welding, and/or tool and die welding, etc. For people interested in the welding field or who need welding skills as part of their job duties.
- WELD 182 Welding Seminar** 2
Term Prerequisite: None
Semester Prerequisite: None
 Seminar may cover a variety of topics including maintenance welding, production welding, resistance welding, and/or tool and die welding, etc. For people interested in the welding field or who need welding skills as part of their job duties.
- WELD 183 Welding Seminar** 3
Term Prerequisite: None
Semester Prerequisite: None
 Seminar may cover a variety of topics including maintenance welding, production welding, resistance welding, and/or tool and die welding, etc. For people interested in the welding field or who need welding skills as part of their job duties.
- WELD 184 Welding Seminar** 4
Term Prerequisite: None
Semester Prerequisite: None
 Seminar may cover a variety of topics including maintenance welding, production welding, resistance welding, and/or tool and die welding, etc. For people interested in the welding field or who need welding skills as part of their job duties.





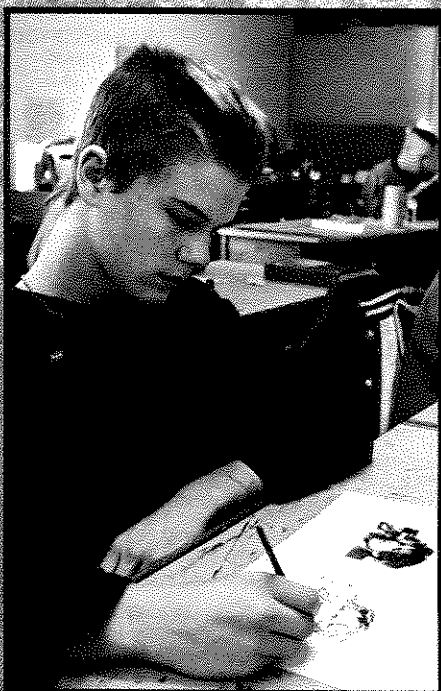


L A N S I N G
C O M M U N I T Y
C O L L E G E

*Faculty
& Staff*

Index

Maps



FACULTY AND STAFF DIRECTORY

Due to reorganization, the titles listed in the Faculty and Staff Directory may not be the most current available. Please contact the department for more information. See the Directory of Departments at the front of the General Information section for appropriate telephone numbers.

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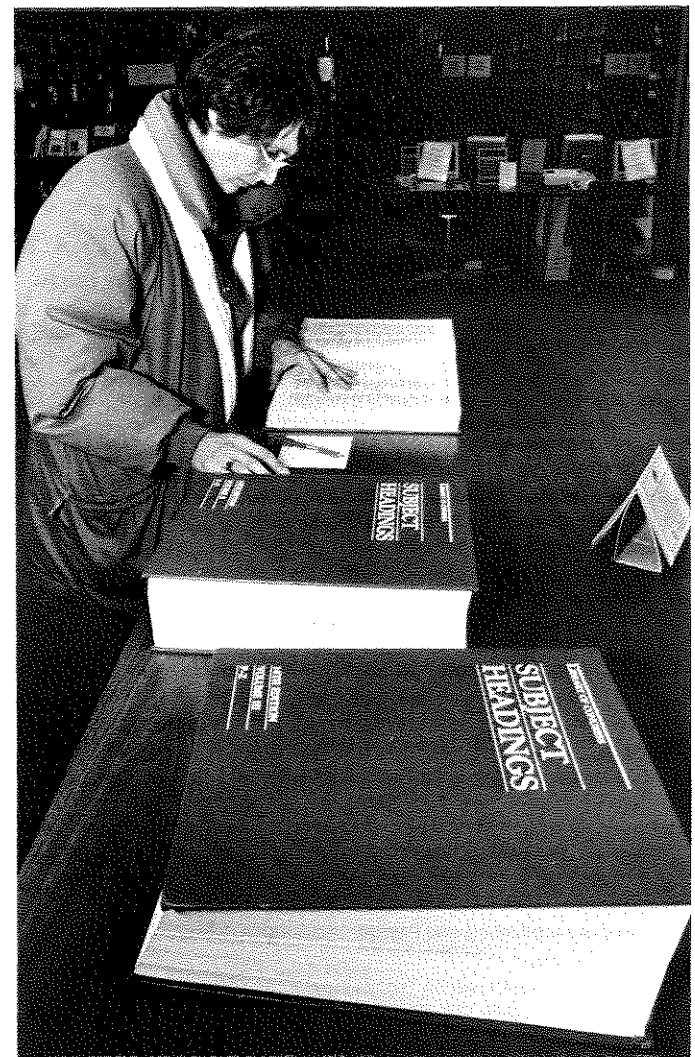
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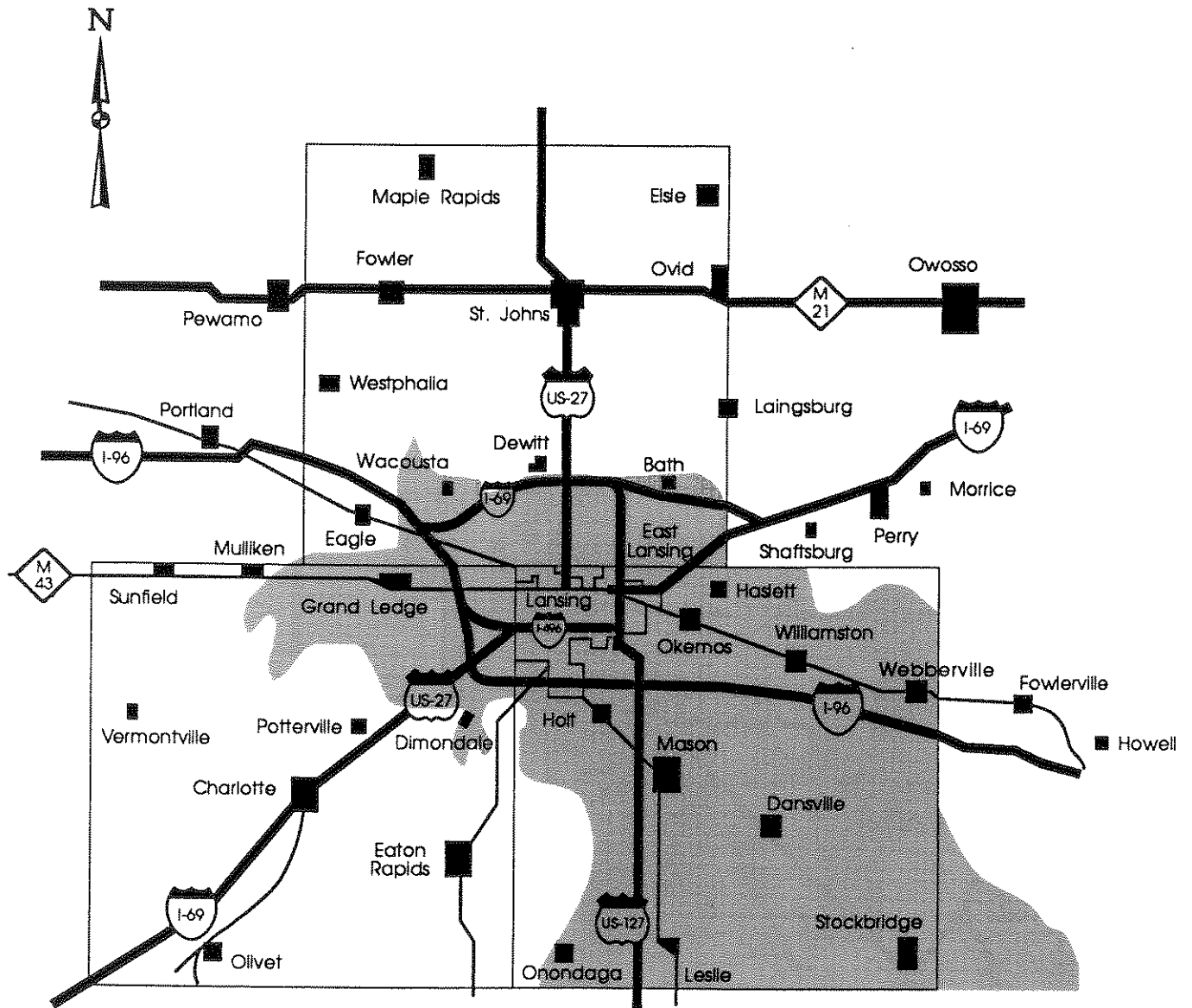
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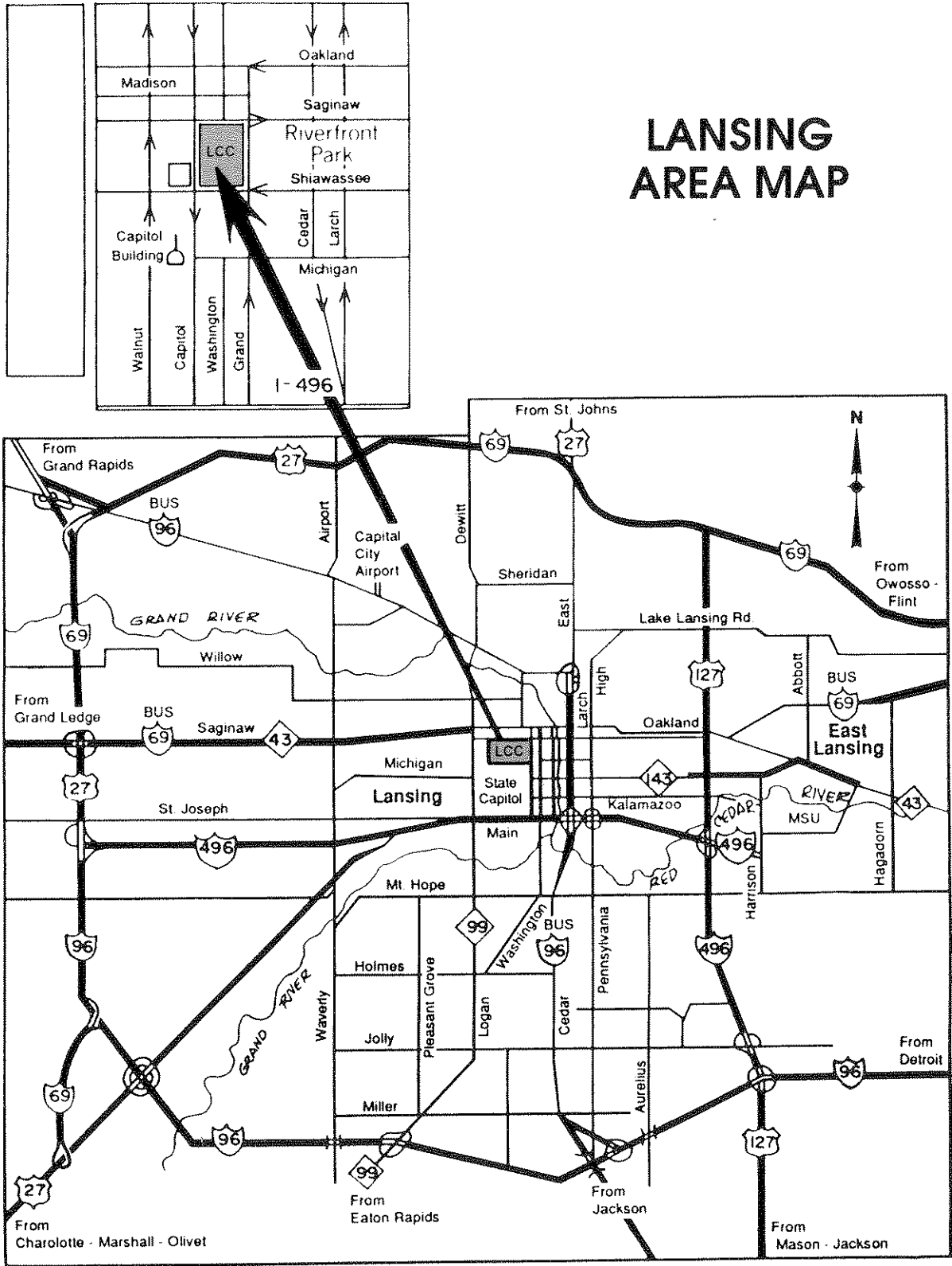
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SERVICE AREA MAP



The following School Districts constitute the LCC Resident District

LANSING AREA MAP



VISITORS TO LANSING COMMUNITY COLLEGE

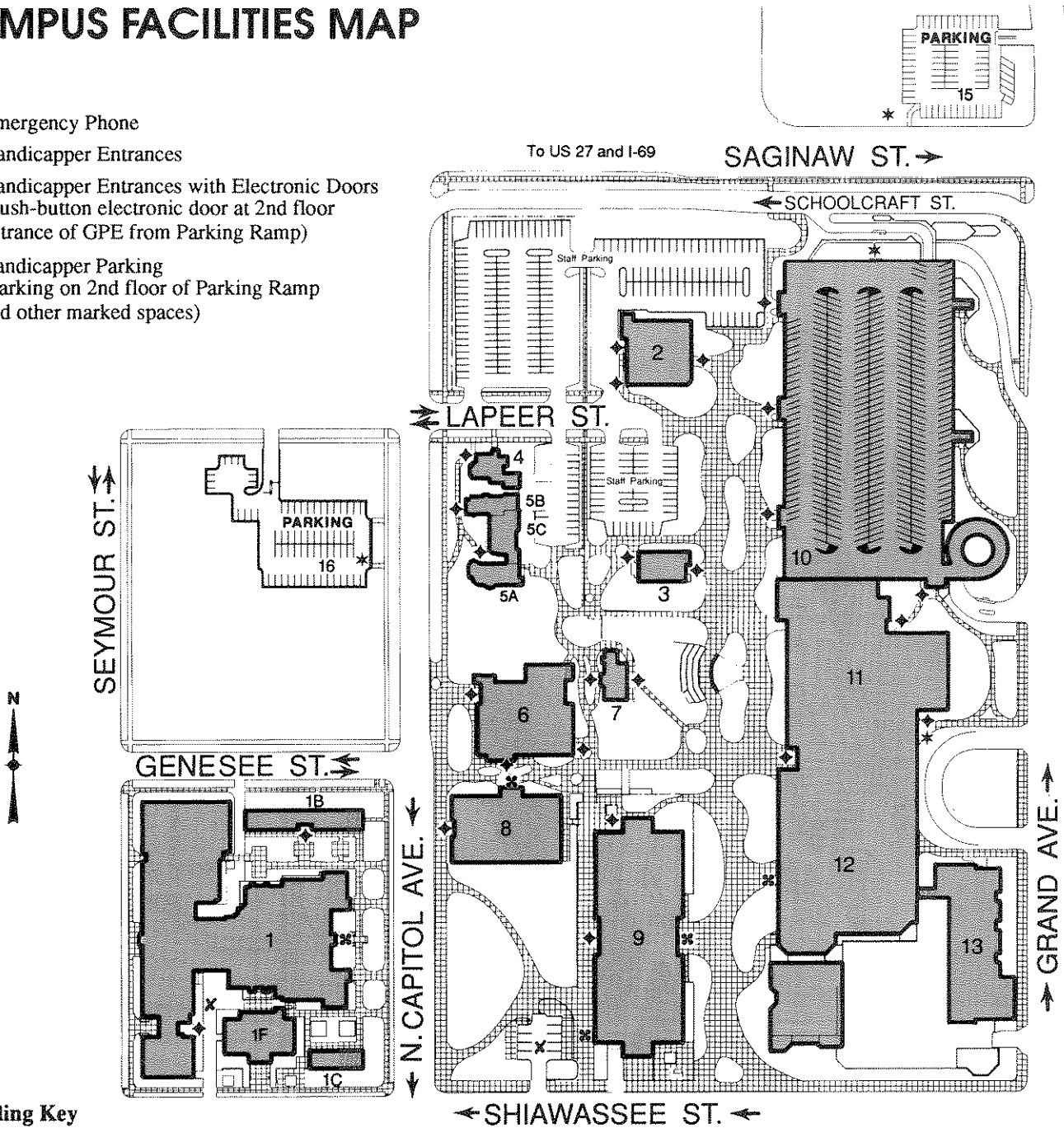
The LCC Visitor Parking Area is located in the AutoCenter Courtyard in the 400 block of North Grand Avenue.

ENTERING THE LOT

1. Traveling north on Grand Avenue, the AutoCenter Courtyard is located just past the intersection of Grand Avenue and Shiawassee Street.
2. Visitor parking is located along the south wall of the Courtyard (on your left as you drive in). All visitor spaces are posted with signs.
3. Attach your visitor parking permit (using the sticky tape) to the left rear window (not the side window) so the permit is visible from the rear of the car.
4. Throw away your visitor parking permit (after the expiration date) when use is completed.

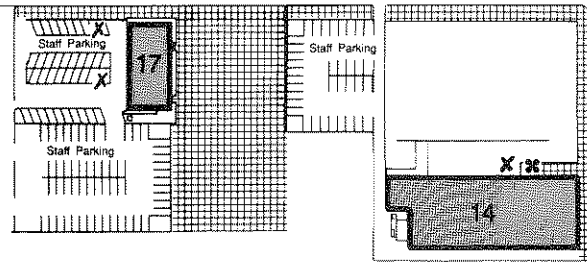
CAMPUS FACILITIES MAP

- * Emergency Phone
- ◆ Handicapper Entrances
- ❖ Handicapper Entrances with Electronic Doors (Push-button electronic door at 2nd floor entrance of GPE from Parking Ramp)
- ✕ Handicapper Parking (Parking on 2nd floor of Parking Ramp and other marked spaces)

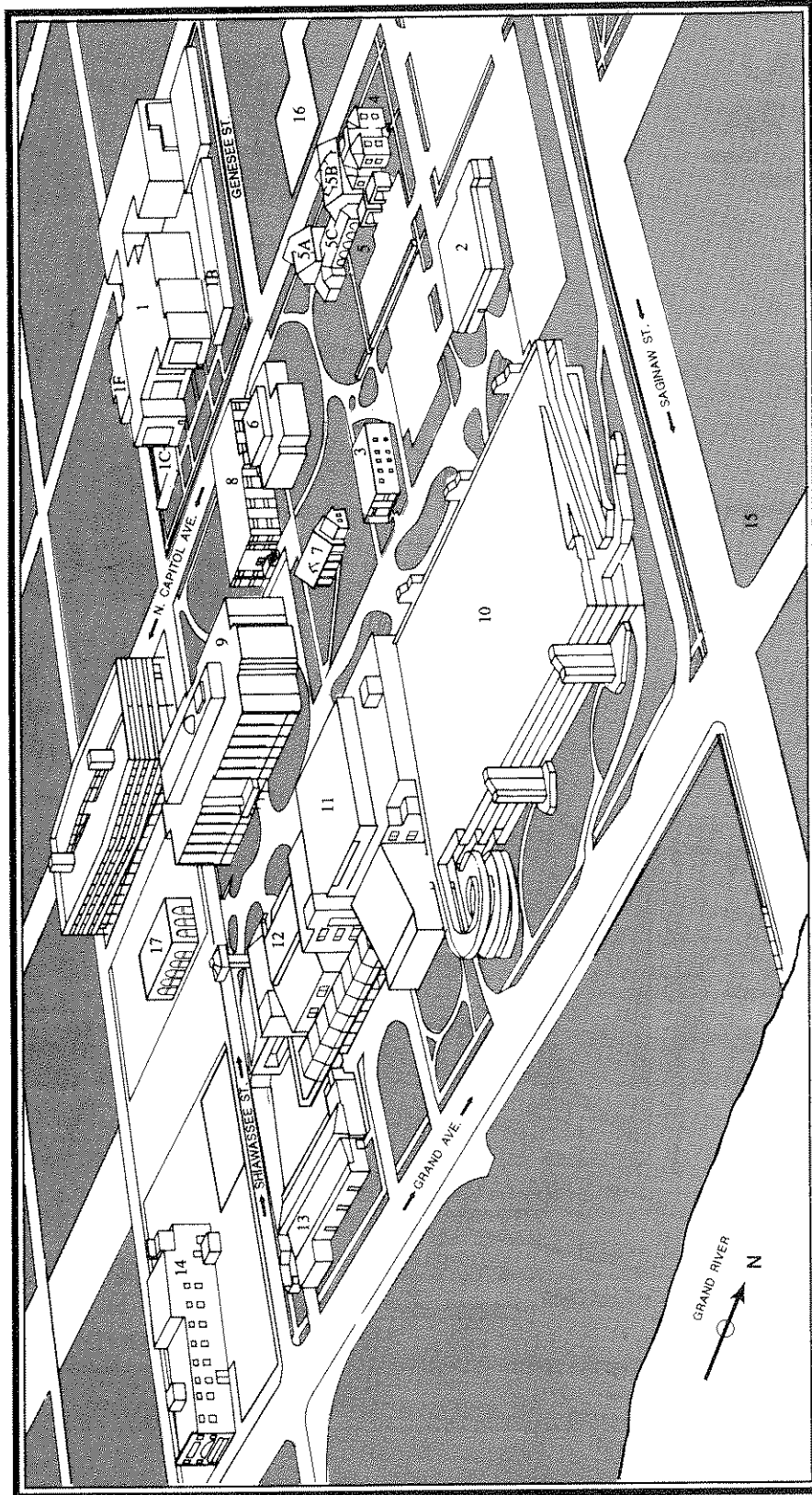


Building Key

- | | |
|--|--|
| 1B. Office Unit B (OUB) | 7. Turner House (TH) |
| 1C. Office Unit C (OUC) | 8. Student Personnel Services (SPS) |
| 1F. Office Unit F (OUF) | 9. Arts & Sciences (A&S) |
| 1. Old Central (OC) | 10. Parking Ramp (Quick Card and Cash) |
| 2. Photography Center (PC) | 11. Gannon Health Careers/
Physical Education (GPE) |
| 3. Administration (ADM) | 12. Gannon Vocational/Technical (GVT) |
| 4. North House (NH)
Herrmann Conference Center
Complex | 13. Voc-Tech Automotive Center |
| 5A. Herrmann Conference Center | 14. Academic & Office Facility (AOF) |
| 5B. Rogers-Carrier House | 15. Parking Lot (Quick Card Only) |
| 5C. LCC Board Room | 16. Parking Lot (Quick Card Only) |
| 6. Dart Auditorium (DRT) | 17. Community Services and
Continuing Education |



CAMPUS MAP



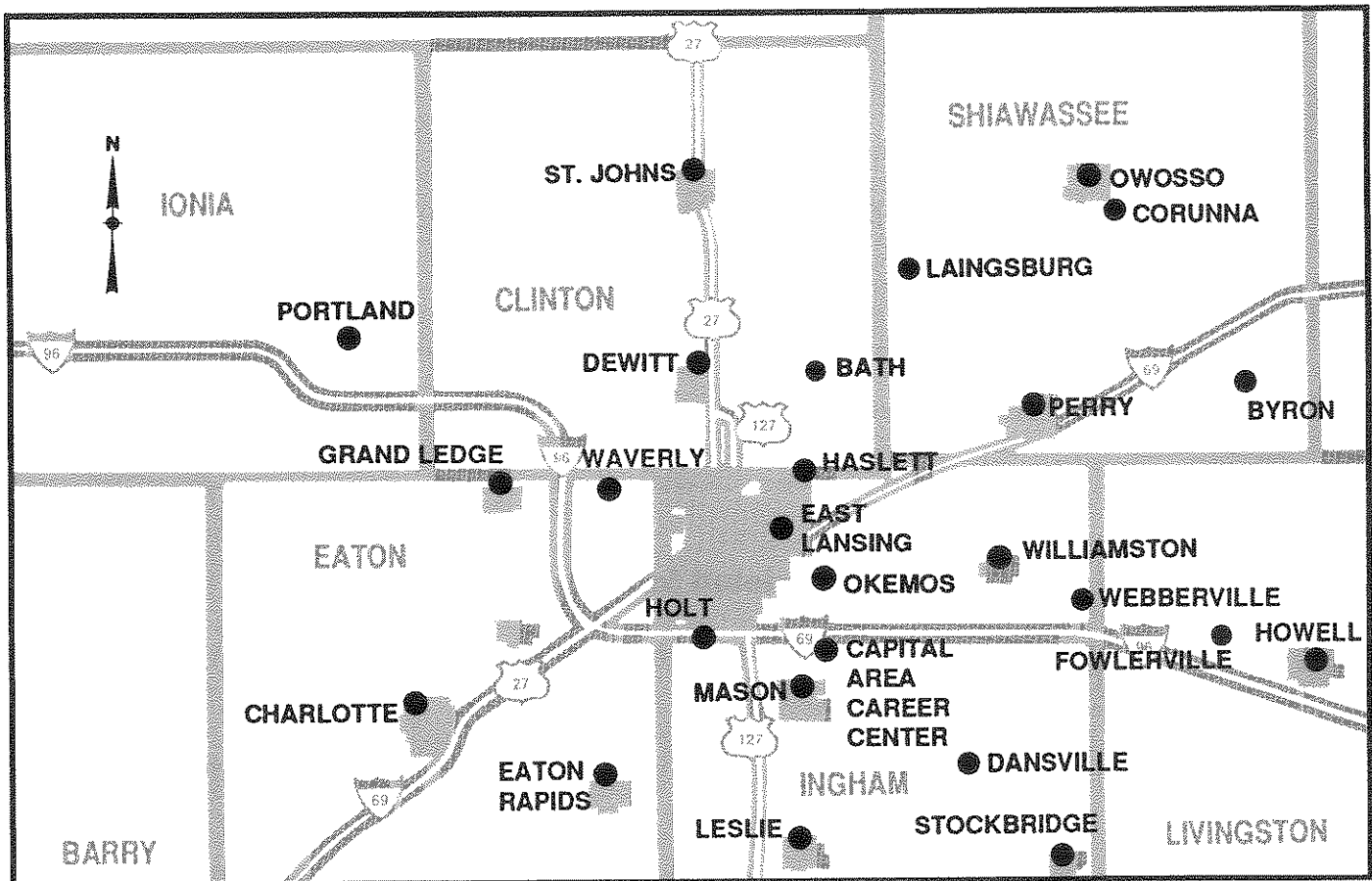
Building Key

- | | | |
|---------------------------------------|--|--|
| 1B. Office Unit B (OUB) | 5A. Herrmann Conference Center | 11. Gannon Health Careers/
Physical Education (GPE) |
| 1C. Office Unit C (OUC) | 5B. Rogers-Carrier House | 12. Gannon Vocational/Technical (GVT) |
| 1F. Office Unit F (OUF) | 5C. LCC Board Room | 13. Voc-Tech Automotive Center |
| 1. Old Central (OC) | 6. Dart Auditorium (DRT) | 14. Academic & Office Facility (AOF) |
| 2. Photography Center (PC) | 7. Turner House (TH) | 15. Parking Lot (Quick Card Only) |
| 3. Administration (ADM) | 8. Student Personnel Services (SPS) | 16. Parking Lot (Quick Card Only) |
| 4. North House (NH) | 9. Arts & Sciences (A&S) | 17. Community Services and Continuing Education |
| 5. Herrmann Conference Center Complex | 10. Parking Ramp (Quick Card and Cash) | |

LEARNING CENTER LOCATIONS EXTENSION AND COMMUNITY EDUCATION

Learning Center Locations

Bath Bath High School	Eaton Rapids King Street School	Laingsburg Laingsburg High School	Perry Perry High School
Byron Byron High School	Fowlerville Fowlerville High School Fowlerville Middle School	Lansing Catholic Central High School Cristo Rey Community Center Lansing Mall	Portland Portland High School
Charlotte Charlotte High School	Grand Ledge Grand Ledge High School	Leslie Leslie High School	St. Johns St. Johns High School
Corunna Shiawassee Intermediate School District	Haslett Haslett High School	Mason Capital Area Career Center Mason High School	Stockbridge Stockbridge Middle School
Dansville Dansville High School	Holt Holt High School Holt Junior High School Hope Middle	Okemos Okemos Community Education Center Okemos High School Wardcliffe Elementary	Waverly Waverly High School Waverly Middle School
DeWitt DeWitt High School Fuerstenau Elementary School	Howell Challenger Elementary School Howell High School	Owosso Lincoln School Owosso High School	Webberville Webberville High School
East Lansing Bailey Community Center East Lansing High School			Williamston Williamston Community Center Williamston Elementary School



● LCC classes are held at local schools in partnership with Community Education Offices in these locations.