2003–2004

SCHOOLCRAFT COLLEGE

CATALOG

New Student Checklist

❑ Visit our campus. Call 734-462-4426 to schedule a guided campus tour.

❑ Apply for admission. Complete the application on the last page of this catalog.

❑ Request that your high school transcript or GED scores, ACT scores and college transcripts be sent to the Office of Admissions.

❑ Apply for financial aid. Call 734-462-4433 for the Financial Aid Application packet.

❑ Check the list of available scholarships in the Scholarship Book in the Office of Financial Aid.

❑ Take a free assessment test. Testing is on a walk-in basis. Call 734-462-4806 for Assessment Center hours. You do not need to take an assessment test if you have a recent ACT score.

❑ Attend an orientation session and learn helpful tips for succeeding at Schoolcraft. Call 734-462-4429 to make a reservation.

❑ Meet with a counselor. Call 734-462-4429 to schedule an appointment.

❑ Register and pay for your classes using telephone, online, or walk-in registration options.

❑ Explore the Bradner Library, computer labs, the Learning Assistance Center, the Career Planning and Placement Center and other student services available to help you succeed.

❑ Meet new people. Get involved. The College offers a variety of clubs, organizations and events to expand your college experience.

❑ Enjoy your classes and have fun!

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ACCREDITATION

Schoolcraft College is accredited by The Higher Learning Commission of the North Central Association, 30 North LaSalle, Suite 2400, Chicago, IL 60602-2504; phone 800-621-7440; fax 312-263-0456 or access the Commissions' Website at www.ncahigherlearningcommission.org.

Schoolcraft has the following programs that have state and national approval and accreditation:

- The Children's Center is accredited by the National Association for the Education of Young Children (NAEYC). For more information call 800-424-2460.

- The Correctional Science Associate Degree program is certified by the Michigan Correctional Officers' Training Council (MCOTC). For more information call 517-334-6573.

- The Criminal Justice Police Academy Associate Degree program is certified by the Michigan Commission on Law Enforcement Standards (MCOLES). For more information call 517-322-1417.

- The Health Information Technology Associate Degree program is accredited by the Commission on the Accreditation of Allied Health Educational Programs (CAAHEP), in association with the American Health Information Management Association. For more information call 312-233-1100.

- The Medical Assisting Certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (AAMAE). For more information call 312-899-1500.

- The Nursing Associate Degree and Practical programs are approved by the Michigan Board of Nursing. For more information call 517-373-4674 or 517-373-6873.

- The Occupational Therapy Assistant Associate Degree program, currently inactive, is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA). For more information call 301-652-2682.

BOARD OF TRUSTEES

The Board of Trustees is a group of seven members, elected by the voters of Schoolcraft Community College District to serve for six-year terms. The authority of the Board of Trustees is established by the state legislature through the Community College Act. The Board is the policy-making body for the College.

WELCOME TO SCHOOLCRAFT COLLEGE

You have selected one of the finest colleges in the Midwest.

The College was established more than forty years ago by the people of five contiguous communities to create an opportunity for you to grow intellectually and to strengthen your economic independence. We share a common goal; we want you to succeed.

Schoolcraft continues to be an inviting environment. We believe that it would be difficult to find faculty and staff more willing to assist you, an array of services more comprehensive, or a more technologically equipped college anywhere. The totality of the experience creates your best opportunity for success.

This is the place to develop, refine, and utilize the tools of knowledge. This is a place to learn and enjoy the experience.

Sincerely,

Conway A. Jeffress
President

Foundation Board of Governors

The Schoolcraft College Foundation is a non-profit corporation dedicated to raising funds to support Schoolcraft, students with financial needs, and College projects beyond general fund resources. The Schoolcraft College Foundation is led by the Board of Governors comprised of 21 civic, business, and community leaders drawn from the Schoolcraft Community College District.

Back row from left to right: Thomas Marek, President Elect; Marc Israel, Member; John Allie, Member; George Grafe, Member; Gregory J. Stempien, Ex-officio Member; John J. Walsh, Ex-officio Member; Conway A. Jeffress, Ex-officio Member; John N. Santeiu, Jr., Honorary Member

Front row from left to right: James Jabara, Member; Margaret Slezak, Treasurer; Jane Thomas, President; Suzanne Thomas-Hughes, Member; Charlie McIlhargey, Vice President

Not pictured: Karl Zimmermann, Secretary; Members: John Bowen, Phillip Damaska, Robert Farris, Maureen Foley, Colleen Pobur, Christian Royal, Fr. George Shalhoub, Edwin A. Schulz, and Donn Woody.

Schoolcraft Development Authority

The Schoolcraft Development Authority was established by Schoolcraft College to direct College land development activities. The Board of Directors is composed of nine members.

William Brunton	
Richard J. DeVries	SC Board of Trustees
Ronald Griffith	
James B. McKeon	
Robert R. Nix II	Vice President
Jill F. O'Sullivan	President
Lita Masini Popke	
Mary Jo Rief	Recording Secretary
Patricia Watson	SC Board of Trustees
John J. Walsh	Secretary/Treasurer
Conway A. Jeffress	Ex-Officio

Schoolcraft College

The College

The College

Mission

Schoolcraft is a comprehensive, open door, community-based College. The mission of the College is to provide a transformational learning experience designed to increase the capacity of individuals and groups to achieve intellectual, social and economic goals.

Quality Assurance

Schoolcraft College is committed to preparing highly skilled graduates, capable of performing effectively in their major field of study and meeting the College's general degree requirements. The College assures its students, their prospective employers or the institutions to which they transfer, that individuals who have earned Schoolcraft degrees or certificates with a 2.0 or higher grade-point average are fully capable of competent performance.

Any Schoolcraft student who transfers to a new institution after meeting our academic criteria should perform at a level equal to or higher than students who began their academic career at the new institution. If the receiving institution believes the transferring student is unprepared in specific areas, Schoolcraft will permit the student to retake relevant courses without tuition charges.

Schoolcraft has articulation agreements with a number of Michigan institutions guaranteeing that our students' associate degrees and specific courses transfer. Students who follow the advice of College counselors will find the maximum number of earned credits will transfer to the receiving institution.

Students in a career program earning a degree or certificate with a 2.0 or higher grade-point average can be expected to perform competently in their area of specialization. Any employer who believes a Schoolcraft graduate does not possess adequate entry-level skills and can specify deficiencies may request remediation. Schoolcraft will permit the student to retake relevant courses without tuition charges.

These assurances are made for individuals who transfer to another academic institution or gain employment within one year of receiving a Schoolcraft degree or certificate.

The Livonia Campus

The Livonia campus houses administrative offices, three classroom buildings, the VisTaTech Center, the Waterman Wing of VisTaTech, the Continuing Education Center, physical education facilities and the main College Bookstore.

Student services are concentrated in the McDowell Center, making it easy for students to register, see a counselor, take assessment tests, get help with classes, pay fees, find employment and use a computer lab. Programs offered on campus include the College's highly acclaimed culinary arts curriculum, computer technology, childcare and development with the Children's Center as a laboratory setting, music and theatre facilities, computer graphics technology and metallurgy and materials science.

Radcliff Center in Garden City

Students may take general education courses or specific career programs at the Radcliff Center in Garden City, located on Radcliff Street one block south of Ford Road, between Merriman and Wayne Roads. The Center is an extension of the College's Livonia campus, established to provide convenient accessibility for students, serve the local community, and provide opportunities for students to pursue quality education. The Center houses 34 classrooms, offices, a state-of-the-art biology classroom and lab, nine Internet stations in the Library and a medical assisting mock office for the medical assisting program. Many student services are available at the Center to assist students. The Center specializes in career programs in allied health and public safety, including correctional science, criminal justice, emergency medical technology and fire technology.

Schoolcraft College

Admissions and Financial Information
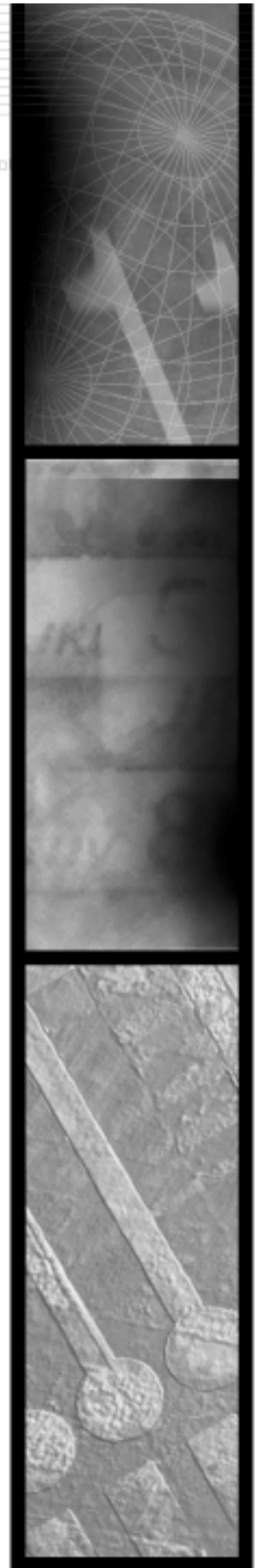
Admissions

Office of Admissions
McDowell Center Room 260
734-462-4426

Schoolcraft College provides a friendly and supportive environment where you can prepare for your future and meet a diverse group of people. Schoolcraft College's open door policy supports our primary purpose of making higher education available to individuals interested in, and capable of, extending their education beyond high school. There is no charge to apply for admission to the College.

General Admission Criteria

- High school graduates and applicants who present a high school equivalency are considered for admission.
- Non-high school graduates at least 18 years old may be admitted if their high school class has graduated. These students may be asked to take the General Education Development (GED) Test or meet other requirements based on individual needs.
- Non-high school graduates less than 18 years old will be considered for admission based on assessment testing, recommendations from their high school principal and interviewing with the Associate Dean of Enrollment Management and/or the Director of Student Advisement Services.
- Students still attending high school or home-schooled students may take College classes at the same time if they present a recommendation from their high school counselor or principal. See High School Dual Enrollment and Special High School Enrollment.

Admission to the College does not guarantee admission to all courses and programs of study. Special admission requirements must be met before a student is accepted into any limited enrollment program.

Admissions Process

Students seeking admission are requested to submit the following to the Office of Admissions:

- Completed Schoolcraft College Application for Admission.
- Official high school transcript(s).
- Official college transcript(s), if applicable.

Transcripts are valuable assessment and course placement tools. Credit for courses taken at other colleges and prerequisite waivers can be determined by providing official high school and college transcripts.

All applicants will receive materials describing their admission status. Admitted students will receive information on assessment testing, orientation, academic counseling and registration requirements and procedures.

Assessment

The goal of Schoolcraft College is to place students in courses that will maximize their academic success. All students who plan to enroll in credit courses participate in assessment testing for English, math and reading to assess their appropriate course level. To satisfy the assessment testing requirement, applicants may submit ACT scores that are not more than three years old to the Office of Admissions. Students who have not taken the ACT may take alternative assessment tests given by the College.

Core Foundation Courses

Students who score below the collegiate level on English, math or reading assessment tests, or who require instruction in basic skills to meet prerequisites for their selected curriculum, are required to complete all basic courses within their first year of study. Core foundation courses also may be taken by students who wish to review and strengthen their skills. Descriptions of the following core foundation courses are listed in the catalog.

BIOLOGY 050	MATH 045
	MATH 047
ENGLISH 050	MATH 053
ENGLISH 052	MATH 055
ENGLISH 055	
	PHYSICS 051
CHEMISTRY 051	
COLLEGIATE SKILLS 050	COLLEGIATE SKILLS 053
COLLEGIATE SKILLS 055	

High School Enrollment Options

Schoolcraft College offers high school students opportunities to attend college while still in high school. Two options are High School Dual Enrollment and High School Special Enrollment.

High School Dual Enrollment

Public high school students who have completed at least 10th grade may apply for dual enrollment at Schoolcraft College under the Postsecondary Enrollment Options Act of the State School Aid Act. Students must have completed the Michigan Education Assessment Program (MEAP) High School Test, earning an endorsement in the subject area, or must enroll in courses that do not require an endorsement. Dual enrollment applications are valid one semester at a time and only during fall, winter or spring semesters. Applications are available at the student's high school or from the College. To be processed, the application must have a list of approved courses and signatures of the student, parent and school principal. In addition, a College counseling appointment is required. Schoolcraft College will bill the school district for tuition and fees. Students are responsible for the portion of charges not covered by their school district. Additional requirements are specified on the Schoolcraft College high school dual enrollment application. Requirements are subject to change in accordance with state legislation.

Special High School Enrollment

Public or private high school students who have completed at least 9th grade, or home schooled students who have completed the equivalent of 9th grade, must work together with their counselor to identify a course they want to take for high school and/or college credit. These students may apply to Schoolcraft College as special high school applicants. Students are admitted for one semester at a time under special high school enrollment. Applications are available at the student's high school or from the College. To be processed, the application must have a list of approved courses and signatures of the student, parent and high school counselor. In addition, a College counseling appointment is required. Students are responsible for all tuition and fees.

Readmission of Former Students

Former students, in good academic standing, should make an appointment to see an academic counselor. During this appointment, students can revise their educational plans and discuss current course offerings. If it has been longer than one year since the student last attended the College, he or she is asked to complete a free Application for Admission and Readmission before registration.

Former students who were academically dismissed from the College must petition the Vice President for Instruction for readmission. See the Academic Policies section of this catalog for details.

Guest Students at Schoolcraft College

Students attending another college may enroll at Schoolcraft as guest students. Guest students may register for a course(s) without taking assessment tests or meeting with a counselor, unless they so choose. Students attending another Michigan college or university must submit a completed Michigan Uniform Guest Application. Out-of-state guest students must submit an Application for Admission, and a letter approving their guest status bearing their college's institutional seal and Registrar's signature designating the course(s) they plan to take at Schoolcraft College. The application is valid only in the semester for which it is authorized. Guest students pay all tuition and fees, as applicable, and are not eligible for financial aid funds. Students not submitting a Michigan Uniform Guest Application or an Application for Admission with a verification letter may not be exempt from Schoolcraft College admission or enrollment requirements.

Guest Students from Schoolcraft College

Students in good standing (minimum 2.0 GPA) currently attending Schoolcraft College may request a Michigan Uniform Guest Application from the Registrar's Office to attend another college. The Schoolcraft College Registrar must approve courses taken at another college.

International Students Including Commuting Canadians and Non-Native English Speakers

For admission to Schoolcraft College, an international student must submit the following:

1. A completed, signed Application for Admission.
2. Official school transcripts.

To be issued the necessary visa documents, an international student including commuting Canadians must:

1. Submit a completed international student packet.
2. Demonstrate a sufficient level of financial support with documentation verifying the availability of funds.
3. Provide a copy of a valid passport identification page.
4. All applicants whose native language is not English must demonstrate adequate knowledge of written English. A minimum Test of English as a Foreign Language (TOEFL) score of 500 on the paper test, 173 on the computer-based test or 70 on the Michigan English Language Assessment Battery (MELAB) is currently considered proof of English proficiency.

International students should contact the Office of Admissions at 734-462-4426, the Counseling Center at 734-462-4429, or visit the Website to obtain an international student packet and Application for Admission.

F-1 visa students must maintain full-time enrollment to fulfill Immigration and Naturalization Services (INS) requirements. All new students must follow College assessment testing and counseling requirements and attend International Student Orientation. Students are admitted for fall, winter, spring and summer terms.

Obtaining and maintaining your visa status is your responsibility. Schoolcraft College is authorized to issue visa documents for foreign nationals to obtain F-1 student status either by changing their current visa status if they are in the U.S. or by obtaining an F-1 visa through a U.S. consul outside of the U.S. If you are in the U.S. with another visa status, you must be sure that your current status allows for full-time study. For example, a visitor status (B-2, B-1, WT or WB) does not allow for full-time study. Also, someone in a visitor status who applies to change to a student status while in the U.S. is not allowed to begin full-time study until a change of status to the F-1 is approved by the U.S. government, usually a two to three month process. Please consult with our International Information Specialist in the Counseling Center at the earliest opportunity to determine what steps you need to take to maintain a valid visa status during your studies at Schoolcraft.

Non-Native English Speaking Students

All students whose native language is not English will be required to take assessment testing.

Campus Tours

A campus tour provides an excellent opportunity to learn about our academic programs, faculty and see our facilities. Campus tours are offered at both the Livonia campus and the Radcliff Center in Garden City. Contact the Office of Admissions at 734-462-4426 to schedule your visit.

Financial Information

Tuition and Fees

Students wishing to register should carefully check class schedules for current tuition and fees. Class schedules are available at www.schoolcraft.edu. Students who wish to receive a mailed schedule may request one from the Office of Admissions by calling 734-462-4426.

All tuition and fees are due at registration. Payments can be made with cash or checks payable to Schoolcraft College, or MasterCard, VISA and Discover credit cards. Tuition and fees are subject to change. Students with questions about payments should contact the Cashier's Office at 734-462-4449.

Resident and Nonresident Status

Residency status determines the tuition rate students are charged.

- A resident student is one whose legal residence is within the College District. The College District includes the public school districts of Clarenceville, Garden City, Livonia, Northville, Plymouth-Canton and part of Novi. Students may be asked to certify residence status at any time while attending the College. Students are charged tuition based on the address on record in the Registrar's Office. Students who move and change their residency status, but do not report the change, will be charged the appropriate tuition rate. Resident status is determined at the beginning of each semester.

- A nonresident student is one who resides outside the College District.

- An out-of-state student is one whose legal residence is beyond the boundaries of the State of Michigan.

- International students (F-1 or other immigrant visas) who are admitted to the College are considered out-of-state residents for tuition rates, regardless of length of residency within the district or state.

- Visa holders who are resident homeowners and long-term residents may be eligible for a residency status review. Information on residency status reviews for visa holders is available by contacting the Registrar.

- The legal residence of unmarried students under 18 years of age is that of their parents or guardian, regardless of where the student may reside. For those older than 18, the legal residence is that city in which residence is permanently maintained.

- The Registrar will review questions about resident and nonresident status. Students who change their legal residence must complete a Change of Address Form in the Registrar's Office. Students may be asked to provide two or more of the following items as proof of resident status:
  - Valid driver's license.
  - Copy of a lease.
  - Property tax receipt.
  - Other proof the College finds acceptable.

Course Fees

Schoolcraft College requires students to pay course fees to cover the cost of special materials, equipment or other specialized support. The course fees are listed in the current credit class schedule and are in addition to other fees, including the registration fee. Generally, course fees range from $10 to $45 per course, but a few, such as music and culinary arts, are higher.

Company Paid Tuition and Fees

The College will invoice companies for students' tuition, fees, books and supplies if the companies authorize the College to do so in a purchase order or authorization letter. Authorizations are required each semester. Contact Student Accounts, 734-462-4400, ext. 5362, for additional information.

Senior Adults Tuition Waiver

Students 60 years and older may take credit classes at Schoolcraft College at 50 percent of the resident tuition rate. Refer to the Tuition Rates & Fees table in the current semester credit schedule. For Continuing Education Services (CES) classes, a reduced course fee is specified for each course and is listed in CES schedules and brochures.

To qualify for a tuition discount, proof of senior status is required. Before registering, students must verify senior status with the Registrar's Office or CES Office on the Livonia campus, or the Radcliff Center office, to receive the senior adult identification card. The College accepts a birth certificate, driver's license or the Michigan State Identification Card, available from the Secretary of State.

Refund Policy

Refund dates for credit classes appear in the current semester class schedule. Before the beginning of each term and until the end of schedule adjustment, students receive 100 percent refund of tuition and selected fees. The registration fee is nonrefundable. After the end of the schedule adjustment period, there are no refunds. Refunds to students who drop credit courses or withdraw completely from the College are made in accordance with the current credit class schedule. Refundable fees include the Course Fees, Instructional Equipment Fee, the Applied Music Fee, the Physical Education Fee and the Registration Fee for the Children's Center. Refunds for payments made with Visa, MasterCard or Discover are made by check, rather than as charge-card credits. Allow three to four weeks for refund processing. Refund checks are mailed directly to students.

Refunds are made by the Office of Finance and Business Services only after students drop the class(es) and complete the Request for Refund Form. Students whose classes are canceled by the College may receive a 100 percent tuition refund or select another open section paying any added fees. Consult the Registrar's Office for the refund period for classes that do not start at the beginning of a semester. Classes meeting 7 or 12 weeks have a shorter refund period.

Normally, there are no exceptions to the refund procedure. However, if the Vice President for Enrollment Management or his/her designee determine that extenuating circumstances exist, such requests will be handled on an individual basis.

Financial Aid

Office of Financial Aid
McDowell Center Room 260
734-462-4433

A college education is one of the most important investments anyone can make. Schoolcraft College understands that students often need help to finance their education. Financial aid programs can provide students with options that may assist them in meeting educational expenses and achieving their educational goals. There are two basic categories of financial assistance: need-based and non-need-based aid. Need-based aid uses a formula to determine a family's financial strength and eligibility for a program. Non-need-based aid does not use the financial strength of the family but may take into consideration other factors such as grade-point average. All programs, criteria and funding are subject to change without notice.

Additional information on financial aid may be found on the following Websites:

ed.gov	U.S. Department of Education (Student Guide, FAFSA)
fastweb.com	Scholarship Search
wiredscholar.com	Scholarship Search
students.gov	Gateway to the Federal Government
nasfaa.org	National Association of Student Financial Aid Administrators
finaid.org	Financial Aid Information Page (includes scholarship searches)
mapping-your-future.org	A guide to careers, schools, financial aid and entrance and exit loan counseling
michigan.gov/mistudentaid	Michigan Department of Treasury Student Financial Aid
salliemae.com	SallieMae home page (student loan information)
collegeispossible.org	A resource guide for parents and students

Financial Aid Programs

The following section provides brief descriptions of the financial aid programs available at Schoolcraft College. Enrollment requirements vary by program, and can range from less than half-time to full-time enrollment each semester. Awards are made based on meeting eligibility criteria, satisfactory academic progress and the availability of funding.

Scholarships

Scholarships do not have to be repaid and are primarily based on academic achievement. Students should consult the Scholarship Book in the Office of Financial Aid, Student Activities or the Radcliff Center main office. The Scholarship Book contains the current scholarship offerings, criteria and deadline dates for each semester. In addition to those listed in the book, the following scholarships are available.

Michigan Competitive Scholarship

This state scholarship provides up to $1,300 per academic year to students who achieve required scores on the ACT exam, demonstrate financial need, and enroll in an eligible Michigan college or university. Applicants must be U.S. citizens or permanent residents and must have been continuous residents of Michigan for 12 months. The Michigan Department of Treasury determines the eligibility and award amount.

Michigan Merit Award

This state scholarship provides a $2,500 award, $1,250 awarded in each of two years, to graduating high school seniors who meet Michigan Education Assessment Program (MEAP) High School Testing (HST) scores and other criteria as determined by the Michigan Merit Award Board.

Schoolcraft College Athletic Scholarship

Contact the Athletic Department at 734-462-4400, ext. 5564 for information.

Schoolcraft College Institutional Scholarships

The Office of Financial Aid awards a limited number of scholarships each academic year to students who demonstrate financial need. Awards are made on a case-by-case basis and no application is required.

Schoolcraft College Trustee Award

This scholarship program is available to entering fall semester first-year students who graduated the previous June from select area high schools. By the deadline date, students must submit a Trustee Scholarship Application, seventh-semester high school transcript reflecting a minimum 3.0 grade-point average, ACT scores or Schoolcraft College assessment test results, and a completed essay on a selected topic.

Students must register for at least 12 credit hours each semester and the scholarship is renewable for the second year of study.

Schoolcraft College Foundation Scholarships

Through generous public and private scholarship donations, the Schoolcraft College Foundation helps students reach their educational goals. Community members and organizations are encouraged to establish scholarships and endowments honoring special persons or groups while assisting Schoolcraft College students. In general, most scholarships require a 3.0 cumulative grade-point average and enrollment in at least six credit hours. Eligibility criteria, award amounts and deadline dates vary.

Schoolcraft College Faculty Academic Scholarships

This scholarship is available to students who have earned 12 credit hours at Schoolcraft College, have a minimum 3.0 grade-point average and meet individual departmental scholarship criteria. Faculty committees establish scholarship requirements and select the recipients of these awards. Students must enroll in at least six credit hours.

Women's Resource Center (WRC) Scholarships

Women's Resource Center scholarships are available to those who may or may not qualify for federal or state financial aid. The WRC works vigorously to ensure scholarship opportunities are available for all women, with a special emphasis on adult women returning to school. Scholarship information is available at the WRC.

Grant Programs

Grants do not have to be repaid and are based primarily on demonstrated financial need.

Federal Pell Grant (FPELL)

This is a federal grant program for students without a bachelor's degree in an undergraduate program who demonstrate exceptional financial need. The federal government each academic year determines award eligibility and amount. The current range is $400-$4,050. Enrollment requirements range from less than half-time to full-time depending on individual eligibility.

Federal Supplemental Educational Opportunity Grant (FSEOG)

This is a federal grant program for students without a bachelor's degree in an undergraduate program who demonstrate exceptional financial need. The award is determined by the College and is based on funds available each year. Enrollment requirements range from less than half-time to full-time depending on individual eligibility.

Michigan Educational Opportunity Grant (MEOG)

This state grant program provides up to $1,000 per academic year to students with demonstrated exceptional financial need. Students must enroll in at least six credit hours per semester and must have been continuous residents of Michigan for 12 months.

Michigan Adult Part-Time Grant (APTG)

This state grant program provides up to $600 per academic year to students with financial need who enroll for three to eleven credit hours per semester, are U.S. citizens or permanent residents, are considered independent students according to federal guidelines, have been out of high school at least two years (other than GED) and have been continuous residents of Michigan for 12 months. The award is determined by the College and is based on funds available each year.

Post-secondary Access Student Scholarship (PASS)

This state program provides funding for tuition and fees for Michigan residents who are U.S. citizens, permanent residents or eligible non-citizens. Students must be pursuing an associate degree at an eligible Michigan community college. Students must enroll in at least six credit hours each semester, be eligible for a Pell Grant, have completed the MEAP tests, must not be TIP recipients and have not earned a bachelor's degree. The Michigan Department of Treasury determines eligibility and award amount.

Michigan Native American Tuition Waiver

Michigan residents who are native North Americans and are certified one-quarter blood quantum by their tribal association may be eligible for tuition assistance funds. Information and requirements are available through the Office of Financial Aid. The Office of Financial Aid determines eligibility.

Tuition Incentive Program (TIP)

This state grant program provides funding for tuition and mandatory fees to students who are under age 20, U.S. citizens or permanent residents, are high school graduates or have earned a GED. The Michigan Department of Treasury through Family Independence Agency Medicaid records certifies eligibility for each recipient. TIP only pays for tuition and fees at the resident college rates. Students must enroll in at least six credit hours per semester.

Women's Resource Center (WRC) Special Populations Program

The Special Populations Program, administered through the Women's Resource Center, has funds available for single parents, displaced homemakers and persons in programs considered nontraditional for their genders. This assistance is granted for tuition, textbooks and child care. Contact the WRC at 734-462-4443 or visit the office in the McDowell Center.

Student Employment

Student employment requires the student to work to earn the award. Work-study students are placed in jobs on campus, and their wages are paid in part by the work-study program. Student employment under these programs is limited to 25 hours a week. To be eligible, students must demonstrate financial need and register for at least six credit hours per semester.

Federal Work-Study (FWS)

This federal work-study program provides funds for part-time employment on campus.

Michigan Work-Study (MWS)

This state work-study program provides funds for part-time employment on campus. Students must, in addition to previously stated requirements, be U.S. citizens or permanent residents, and must have been continuous residents of Michigan for 12 months.

Student Loans

Student loans are borrowed money and require repayment. Because these loans are a form of financial aid, students are required to apply for financial aid (Free Application for Federal Student Aid or FAFSA) before a loan request can be considered. Loan request forms are available online or from the Office of Financial Aid. Schoolcraft College recommends students request loan amounts they will realistically be able to repay. The approved loan amount is determined by the student's financial need, other financial aid and outside resources, program limits and loan amount requested.

The school, not the lender, determines student eligibility for a federal student loan. If reasons are documented and explained to students in writing, the Office of Financial Aid may decline to certify an otherwise eligible loan application. In addition, a loan may be certified for an amount less than that for which the student would otherwise be eligible.

To be eligible for a student loan, students must enroll in at least six credit hours each semester. In addition, students need to make satisfactory academic progress at Schoolcraft College and therefore, loans may not be approved for students on Financial Aid Probation. Interest rates, repayment terms and borrowing limits vary with each loan program. Repayment on these low interest educational loans begins after a student stops attending school on at least a half-time basis. Entrance counseling is required before processing a student loan request. In addition, all students must participate in exit counseling when their enrollment falls below half-time status.

Federal Stafford Loan

These low interest loans are made by a bank, credit union or other lender. To receive a Subsidized Stafford Loan, the student must demonstrate financial need. Subsidized loans are exempt from interest accrual until six months after the student ceases attending on at least a half-time basis. Unsubsidized Stafford Loans have the same terms as a Subsidized Stafford, except borrowers are responsible for interest that accrues while they are in school, and the loan is not based on demonstrated financial need. Interest rates on both these loans are set annually and currently capped at 8.25 percent.

Federal PLUS Loan

Federal PLUS Loans are for parents who want to borrow money to help pay for their dependent children's education. PLUS loans are not based on demonstrated financial need; however, the student must first apply for need-based aid before applying for a PLUS loan. The interest rate is variable, determined annually and currently capped at 9 percent. Parents who have no adverse credit history may apply for PLUS Loans.

Michigan (MI) Alternative Student Loan

The MI-Loan Program is not based on demonstrated financial need; however, a student first must apply for need-based aid before applying for this loan. Loans range from $500 up to the full cost of attendance. Information and applications are available by contacting the Michigan Higher Education Student Loan Authority online at **www.michigan.gov/mistudentaid** or by calling 1-888-643-7521.

Schoolcraft College Short-Term Loans

Short-term loans are available during walk-in registration. Information and applications are available in the Student Accounts Office.

Veterans
Veterans Affairs Office
McDowell Center Room 275
734-462-4400, ext. 5213

Students attending college under the provisions of the G.I. Bill (Chapters 30, 32, 35, 106, Title 38) are entitled to all privileges and are responsible for all Schoolcraft College regulations. All financial obligations, including payment of tuition and fees, must be paid on the scheduled dates.

An advance payment program to help defray the cost of registration is available to eligible students who apply at least six weeks before the beginning of the semester.

Approved veterans who are attending under Chapter 31 (Vocational Rehabilitation) are not required to pay tuition and fees at the time of registration. Veterans under this program are required to contact the Schoolcraft College Veterans Liaison in the Counseling Center before registering.

The Veterans Liaison helps students apply for VA educational benefits and operates as a contact person between the student and the Veterans Administration.

In compliance with the Department of Veterans Affairs, Circular 20-76-84, the College has developed the following standards for progress. Each student must conform to these standards to be eligible for Veterans Administration Educational Benefit Certification:

- All students receiving various educational benefits must have their class schedules approved by a counselor or Veterans Liaison.
- A Request for Certification must be filed with the Schoolcraft College Veterans Liaison each semester.
- All changes of address, curriculum and withdrawal from courses shall be reported immediately to the Veterans Liaison.

All veterans have the same rights and responsibilities regarding conduct and disciplinary action as other students.

Veterans and veteran dependents are encouraged to contact the Veterans Liaison in the Counseling Center in the McDowell Center for information about VA educational benefits.

Financial Aid Application Process

Students should apply for financial aid each academic year they wish to be considered for aid. Applications are processed year round, but students are advised to file applications as early as possible to receive notification of eligibility before tuition payments are due. This usually means filing in the early spring for the upcoming academic year. The Free Application for Federal Student Aid (FAFSA) is available on January 1 for the next academic year. For the 2003–2004 academic year, apply on or after January 1, 2003 for: summer 2003, fall 2003, winter 2004 and spring 2004.

Applying for Financial Aid

1. Complete and submit the *Schoolcraft College Application for Admission.* The application is available online or from the Office of Admissions. While you do not have to be admitted to Schoolcraft College to apply for financial assistance, aid is not awarded until you have been admitted to the College and have a student number.

2. Complete and submit the *FAFSA* or *Renewal FAFSA*
   - Online at **www.fafsa.ed.gov.** If you are unable to access the Internet, you may request a paper application from the Office of Financial Aid.
   - Indicate Schoolcraft College's code (**002315**) on your FAFSA. This permits the Office of Financial Aid to access your financial aid results electronically. If you are thinking about transferring mid-year, indicate your transfer institution first, then Schoolcraft College.

3. Approximately one week (Web application) to four weeks (paper application) after you submit your FAFSA, you will receive a Student Aid Report (SAR). The SAR recaps the information you submitted on your FAFSA.
   - Read the Information Summary, review your SAR for accuracy and submit any changes to the Office of Financial Aid. If Schoolcraft College is not listed, you may add it online or submit the SAR to the Office of Financial Aid.
   - If you provide an e-mail address, the Federal Processor will communicate with you via e-mail. Otherwise, correspondence will be by mail.

4. Schoolcraft College will request additional documents, if necessary.
   - If selected for verification, you will be required to submit income documentation and a verification worksheet. Your SAR will alert you if you have been selected for verification.
   - Other information may be requested as determined by the Office of Financial Aid.
   - Respond immediately to all requested information.

5. Once the requested information is submitted and your file is complete, your file will be reviewed and your eligibility determined. You will be notified in writing of your eligibility. Files are reviewed in the order completed. During registration periods, allow at least two weeks from your file completion date until you receive notice of eligibility.

6. Inform the Office of Financial Aid of changes in financial or family circumstances, such as loss of employment, death or disability of a family wage earner, divorce or separation. You may qualify for a re-evaluation of your financial aid information.

7. Keep your demographic information current with the Registrar and the Federal Processor.

Financial Aid General Information

Rights and Responsibilities

All financial aid applicants are expected to review and follow the policies and procedures established by the Office of Financial Aid, the College and the financial aid programs. These guidelines, rules, requirements and consumer disclosures are located in the following areas: the College Website under the Financial Aid link and under the Publications/Catalog link; the College Catalog; the Financial Aid Handbook; and the Award Letter Information Sheet. Requirements also come to students in correspondence from the Office of Financial Aid or their service providers. All award and eligibility requirements are subject to change without notice.

Eligibility for Financial Aid

Eligibility requirements vary from program to program. Financial aid program awards are determined and disbursed in compliance with established federal, state and institutional requirements and guidelines. In addition to meeting program eligibility requirements, students must adhere to College policies and procedures.

Financial Need

Financial aid programs were developed on the premise that the student and spouse, if married, or the student's family, have the primary responsibility for financing a college education. Financial aid is available to supplement the student's and family's resources.

Most aid dollars are awarded on the basis of a federal need analysis formula established by the U.S. Congress. The formula measures each family's ability to pay for college expenses and is calculated using all the questions and answers on the Free Application for Federal Student Aid (FAFSA). The result is the student's Expected Family Contribution (EFC).

The following formula is used to determine an individual student's need for financial aid: **Cost of Attendance – Expected Family Contribution = Financial Need.** Students may be awarded up to their total need from various financial aid programs. Depending on eligibility, an award package can be any combination of grants, scholarships, work-study and loans. The student can accept or reject all or any part of the award package.

Selection of Recipients

In addition to program eligibility requirements and financial need, students are selected to receive financial aid based on deadlines and maintaining satisfactory academic progress. Schoolcraft College awards financial aid in the following order, depending on the student qualifications: 1) grants 2) scholarships 3) work-study 4) student loans.

The Office of Financial Aid determines the type and amount of each award. The type and amount of award are based on a variety of factors including financial need, outside resources, class attendance, enrollment status, dependency status, program limitations and the availability of funds. When funds are limited, awards may be granted to applicants who meet all requirements and have a complete financial aid file.

Cost of Attendance for Financial Aid

Using rules established by the U.S. Congress, the College sets cost of attendance allowances. These reflect modest book, travel, room, board and miscellaneous allowances as well as average tuition and fee charges. In certain circumstances, if applicable, it may reflect costs related to dependent care, a disability and loan fees.

Typical cost of attendance for a full-time student:

	Resident	Non-Resident
Tuition and fees	$ 1,584	$2,312
Books and supplies	$ 680	$ 680
Transportation	$ 1,159	$1,159
Miscellaneous	$ 648	$ 648
Room and board	$ 4,920	$4,920
Total	**$ 8,991**	**$9,719**

Figures are based on 2002–2003 academic year costs and subject to adjustment due to changes in law and College Board of Trustee policy. Actual costs will vary from student to student.

Transferring to Another College

Students planning to transfer to a four-year institution should contact that institution's Financial Aid Office for financial aid requirements, deadline dates and application procedures. Students usually begin the application process in January or February for the following September. Students who transfer from one institution to another within the same academic year will have their aid prorated based on use at the first institution attended. Financial aid is generally not transferable from one institution to another.

Transfer Scholarships

Senior colleges and universities award many scholarships to graduates of Schoolcraft College who plan to transfer to their institutions. Scholarships are awarded on the basis of academic achievement, financial need or other specified criteria. Contact the college to which you plan to transfer or the Schoolcraft College Counseling Center for information on transfer scholarships.

Attendance at Multiple Institutions

Students may not receive financial aid at another institution and Schoolcraft College concurrently. Students will be responsible for any overawards and will not be eligible for further aid until the funds are repaid.

Study Abroad

Students may be eligible for federal assistance for attending a study abroad program that is approved for credit by Schoolcraft College. Contact the Office of Financial Aid to determine individual eligibility.

Class Attendance

Students need to attend their class(es) to establish and maintain financial aid eligibility. Instructors record the attendance of all students each week. The Office of Financial Aid is notified of the financial aid students who never attend or stop attending classes. Not attending a class(es) affects the amount of aid a student is receiving now and in the future. This usually results in the student owing money to the College.

Withdrawals and Refunds

The College's tuition and fee refund policy is 100 percent refund through the end of the schedule adjustment period for each semester. The registration fee is non-refundable. See the Schedule of Classes each semester for specific refund dates. Students initiate a refund by completing the Refund Request Form available in the Registrar's Office. Students who drop classes and receive a 100 percent refund will have their financial aid adjusted and may owe money to the College.

After the refund period has ended, the College allows students to withdraw from class(es) through the tenth week of the fall or winter semester, and through the fifth week of the spring or summer sessions. See the Schedule of Classes each semester for specific withdrawal dates. Students initiate a withdrawal by completing the Drop Form available in the Registrar's Office. Students who withdraw from class(es) receive a W grade. The grade of W does not adversely affect the student's grade-point average. However, a W is considered attempted and not completed and does adversely affect the student's completion rate. See the complete Academic Progress Policy.

Complete Withdrawal
(Return of Title IV Funds and Unearned Financial Aid)

When a student completely withdraws or walks away from his/her classes before completing at least 60 percent of the semester, federal law requires the College and sometimes the student to return a percentage of the Title IV funds received by the student. Title IV program funds include Federal Pell Grants, Federal Supplemental Educational Opportunity Grants and Federal Stafford Loans.

The number of days students have attended during the semester determines the amount of the students' unearned Federal Title IV funds. Earned Title IV financial aid may be used to pay for institutional charges of tuition and fees or used toward non-institutional expenses such as room and board, books, supplies and transportation.

Unearned Title IV funds must be returned to the federal government. The College must return a portion of the students' unearned aid. Students will owe the College for any resulting unpaid institutional charges (tuition and fees). In addition, students must return to the federal government a portion of unearned funds received in excess of tuition and fees.

Students will be ineligible for future financial aid at any college or university if the unearned funds are not repaid to the U.S. Department of Education.

Contact the Office of Financial Aid for current Return to Title IV Funds schedules and examples.

Taxes and Financial Aid

Taxability: Generally, grants and scholarships are tax free if they are used for qualifying tuition and course-related expenses. Course-related expenses, such as fees, books, supplies and equipment, must be required of all students in a course of instruction to be used as a qualifying expense. Questions regarding tax issues should be directed to the IRS or your tax preparer.

Tax Credits: The 1997 Taxpayer Relief Act created two tax credit programs for college students. The Internal Revenue Service provides the requirements for the Hope Tax Credit and the Lifetime Learning Credit programs. Questions regarding tax issues should be directed to the IRS or your tax preparer.

Individual Retirement Accounts: The Taxpayer Relief Act allows early withdrawals from IRAs to pay for qualified higher education expenses. It also establishes the nondeductible Education IRA. Consult the Internal Revenue guidelines or your tax advisor to determine eligibility for these programs. Questions regarding tax issues should be directed to the IRS or your tax preparer.

Financial Aid Academic Progress Policy

Schoolcraft College Academic Progress Policy

In addition to meeting individual financial aid program requirements, students have to make satisfactory academic progress toward completing a degree or certificate program to receive aid.

The Schoolcraft College Academic Progress Policy applies to all students who receive financial aid from any program we administer. Federal regulations require that the policy include reviewing enrollment periods in which students did not receive aid, as well as the semesters students did receive aid.

The following guidelines describe the requirements necessary to maintain financial aid eligibility at Schoolcraft College.

1. Eligibility Requirements—A student must:

- Have successfully completed at least 67 percent of all Schoolcraft College credit hours attempted or be a first-time student at Schoolcraft College, and
- Have a cumulative Schoolcraft College grade-point average of at least 2.0, and
- Along with transfer credits, not have attempted more than 90 credit hours or 150 percent of the student's official Schoolcraft College academic program requirements.

2. Evaluation of Eligibility

Eligibility is determined when a student applies for financial aid each academic year and/or upon student request. Applicants who have not made satisfactory academic progress are notified by mail.

3. Probation

Financial aid applicants who do not meet the eligibility requirements will be granted an academic year of probationary financial aid to move toward acceptable GPA or completion rates. Students who fail to make satisfactory academic progress after the probationary period will have their financial aid withdrawn until they meet the standard or have an acceptable appeal. Loans are not awarded to students on probation.

4. Appeals

A student whose financial aid has been terminated may appeal in writing. All appeals should include appropriate documentation. Extenuating circumstances considered for appeals include personal illness or accident, serious illness or death of an immediate family member, or other circumstances beyond the reasonable control of the student. Students in extended credit hour programs and/or second degree programs may submit appeals.

Acceptable documentation includes letters from a physician, attorney, social service agency, parole officer, or an obituary notice, divorce decree and/or academic records. The student will be notified of the appeal results in writing. Appeals can result in a) denial of reinstatement b) reinstatement of the student's eligibility or c) a probationary period.

5. Reinstatement

A student may be reinstated after meeting one of the following conditions. Classes taken at institutions other than Schoolcraft College are not considered for reinstatement purposes.

- The student has taken, without funding from the Office of Financial Aid, at least six credit hours and has passed those six credit hours. The student will be given probationary aid for the balance of the academic year.
- The student has taken, without funding from the Office of Financial Aid, enough credit hours to meet the GPA and completion rate requirements. The student will be reinstated without probation.
- The student meets the GPA and completion rate requirements after the probationary period. The student will be reinstated without probation.

6. Grades and Successful Completion

Credit hours attempted include all grades recorded on the transcript of 4.0 through 0.0, NC, W, and I. Repeated courses are identified as NC on the transcript and are considered as credit hours attempted. Successful grades are 1.0 through 4.0. Unsuccessful grades are 0.0, W, NC, and I. Unsuccessful grades are considered attempted and not passed for purposes of determining satisfactory academic progress.

7. Audits and Credit by Exam

Classes taken for audit or credits earned by exam are not considered when determining financial aid eligibility.

Schoolcraft College

Academic Support Services

Academic Support Services

Career Planning and Placement Center—CPPC

McDowell Center Room 235
734-462-4421

Students are invited to visit the Career Planning and Placement Center (CPPC) for career and employment information. CPPC staff is always ready and willing to help students in these areas:

Career Counseling

- Decision Making.
- Career Choices.
- Interest Inventories.
- Skills Identification.
- Values Clarification.
- Choosing a Major.

Students can stop by or call to make an appointment with a career counselor.

Career and Employment Guidance

- Assistance with locating career information.
- Salary information.
- Future employment trends.
- Resume development.
- Effective interviewing skills.
- Job seeking skills.
- Computerized research using MOIS, Discover, Open Options and the Internet.

Employment Services

- Career and employment fairs.
- Job listings database: on-campus, off-campus.
- Internet-based employment searches.

Assistance is available on a walk-in basis for most services.

Counseling Center

McDowell Center Room 275
734-462-4429

The Counseling Center provides quality services and professional staff to assist students in developing meaningful educational, career and personal plans that are compatible with their life goals. Some areas in which counselors can be of assistance include:

- Deciding on a major.
- Discussing curriculum.
- Transfer planning.
- Helping with personal issues and referral information.
- Time management.
- Educational planning.
- Course scheduling.
- Clarifying career goals.
- Graduation audits.

The Counseling Center houses transfer information, including transfer scholarships. Counselors and staff meet regularly with senior colleges and universities to establish and maintain transfer agreements that will assist students in making a seamless transition to the senior institutions. Information on career certificate and associate degree programs also is available in the Counseling Center.

Student Orientation

Student orientation programs are designed to provide essential information and help ease the transition to college for entering students. The Counseling Department offers several half-day orientations during the spring and summer and condensed versions before classes begin. All entering students must attend one of these sessions before registering for classes.

Educational Planning

Students who work closely with a counselor for educational planning are more likely to succeed in college and achieve their educational goals. Counselors can be seen by appointment except during the Walk-in Registration period before classes begin. Schedule early for best results.

Career Development

The counseling staff offers a two-credit career development class, HDS 110, Career Decision Making. This course is very helpful for clarifying important decisions about career planning.

Registrar's Office

McDowell Center Room 255
734-462-4430

The Registrar's Office provides registration services to students for traditional and continuing education programs. Registration occurs at various times throughout the year and is available by telephone, online and in person. Current semester schedules contain appropriate registration information.

The Registrar's Office is responsible for maintaining all student academic records. Other office services include enrollment verifications, student loan deferment processing, transfer course evaluations and guest application processing.

Learning Assistance Center

McDowell Center Room 210
734-462-4436

Radcliff Center Room 120
734-462-4400, ext. 6021

Academic and Assessment Services' (Assessment Center, Learning Assistance Center [LAC], and Collegiate Skills) primary function is to provide learning opportunities and services that enable students to be as successful as possible in educational, occupational and personal endeavors. Emphasis is placed on the student becoming an active learner. Academic and Assessment Services is committed to helping students succeed.

Free Tutoring

The College provides free peer tutoring through the LAC for many courses. Drop-in tutoring enables students to meet with tutors at conveniently scheduled times. Schedules are available on Student Activities bulletin boards across campus and at the LAC. Students who would benefit from more extensive tutoring may meet with a Faculty Facilitator at the LAC to evaluate other tutoring options. Students also are encouraged to take advantage of Final Math Reviews sponsored by the LAC near the end of fall, winter and spring semesters. The review sessions provide excellent preparation for math final exams using instructor-designed review packets.

Peer-Assisted Learning (PAL)

The Peer-Assisted Learning Program links participating instructors with their top former students (PALs) who provide academic support to current students. Under the direction of the instructor, PALs meet students outside of class to discuss course material, work on assignments and prepare for exams. Contact the LAC for information on courses using PALs.

Writing Fellows

The Writing Fellows program provides free technical help to students for all phases of composition. Writing Fellows are Schoolcraft students who are trained to help organize, edit, evaluate and provide constructive feedback on writing assignments for any course. Writing Fellows are available at the LAC on a drop-in basis and through e-mail at fellows@schoolcraft.edu. Contact the LAC for the Writing Fellows schedule and further information.

Math Videos

The LAC provides instructional videos, which complement current textbooks for Math 45, 47, 53, 113, 119, 128 and 129. Videos may be checked out for two days.

LAC Learning Lab

The Learning Lab provides computer programs designed to increase reading speed and comprehension and to improve math, writing and test-taking skills. Contact the LAC for available lab hours and further information.

Study Skills Enhancement

Students who want to improve their textbook reading, note taking, memory retention, time management or test-taking skills may consult with a Faculty Facilitator at the LAC. The Facilitator will help the students evaluate their learning skills, identify the appropriate courses and find resources for skill enhancement. In addition, a variety of handouts and Web resources are available to students seeking to improve their study skills.

Disability Services

Schoolcraft College provides appropriate accommodations for students with documented physical, learning and emotional disabilities. Arrangements are designed to meet individual needs and are facilitated through an Equal Access Counselor at the LAC. Services include, but are not limited to, specialized counseling, application assistance, referrals, adaptive equipment, textbooks on tape, testing accommodations, interpreters, note takers, tutoring, faculty liaison and modifications of computer and classroom facilities. Also available is a two-credit Collegiate Skills 110 – Learning Skills LD, designed specifically for students with learning disabilities as they make the transition from high school to college. Contact the LAC at 734-462-4436 for accommodations or further information.

English Language Proficiency

A lack of English language proficiency does not prevent admission to Schoolcraft College; however, most college courses require basic proficiency in English. Non-native English speakers who want to develop their English skills can enroll in English 052, Basic Grammar for Second Language Students. The LAC provides additional opportunities for English language development through an English Language Institute with continuing education workshops, an International Student Relations Club where individuals may practice spoken English and share experiences, and interactive computer programs in the LAC Learning Lab. See page 8 for International Student Guidelines.

Test Preparation

The LAC provides test preparation workshops that emphasize test taking strategies and alleviating test anxiety. Workshops are available for Schoolcraft placement tests and standardized national tests such as SAT, ACT, PSAT, GRE, GMAT, LSAT, TOEFL and GED.

Academic Skills Workshops for College Students

The LAC offers reading comprehension, speed-reading, math refresher and test taking improvement workshops to enhance basic skills that are vital to college success.

Assessment Center (Testing Services)

McDowell Center Room 220
734-462-4806

The Schoolcraft College Assessment Center offers the following comprehensive testing services for students, faculty, community members and business and industry.

Assessment/Placement Testing

Successful course selection begins with an accurate assessment of each student's ability in reading, writing and mathematics. The Assessment Center offers free walk-in placement testing using a timed ASSET test of basic skills or an untimed Computerized Placement Test (CPT). No appointment is necessary. As an alternative to placement testing, students may submit ACT scores from tests taken within the last three years.

Make-up and Distance and Distributed Learning Tests

When a test is missed because of illness or extenuating circumstances, instructors who permit students to make up missed tests may arrange for a make-up test to be taken at the Assessment Center. Students taking Distance and Distributed Learning courses also may take their exams on a drop-in basis at the Assessment Center as scheduled by their instructors.

College-Level Examination Program (CLEP)

CLEP is a national credit-by-exam computerized program from The College Board that provides exams in more than 30 subject areas. CLEP exams are offered monthly by the Assessment Center for students and members of the community. To obtain college credit for work experience and skills, individuals must achieve the minimum scaled score recommended by the American Council on Education. Preregistration is required. Contact the Assessment Center for information and a registration packet.

DANTES Subject Standardized Tests (DSST)

DSST is a nationally recognized testing program that affords individuals the opportunity to receive college credit for learning acquired outside the traditional college classroom. More than 30 test titles in the areas of social science, business, mathematics, applied technology, humanities and physical science are available. To obtain credit, individuals must achieve the minimum scaled score recommended by the American Council on Education. DSST exams are offered by the Assessment Center and require preregistration. Contact the Assessment Center for information and registration materials.

General Educational Development Tests (GED)

The GED is a series of tests that measure knowledge and skills in reading, writing, mathematics, social studies and science. The tests are taken in a two-day sequence, and candidates either must be at least 18 years old or their high school class must have graduated. GED testing takes place on the third Wednesday and Thursday of each month, excluding December. Preregistration is required. Contact the Assessment Center for information and a registration brochure.

Test Proctoring Site

The Assessment Center is available as a community proctoring site for exams from other colleges and educational programs. Virtual Learning Collaborative (VLC) students may have their tests proctored in the Assessment Center by making prior arrangements. Contact the Assessment Center to schedule test proctoring.

Business and Industry Assessment Services

The Assessment Center offers proficiency testing of groups or individuals for purposes such as pre-employment, determining basic skills, entry level skills or promotional eligibility. A variety of test instruments are available. Businesses are encouraged to visit or call for additional information.

College Libraries
Bradner Library, Livonia Campus
734-462-4440

Radcliff Library Room 355
734-462-4400, ext. 6020

The College libraries support the curricular and personal enrichment needs of Schoolcraft's students, faculty and staff. Bradner Library on the Livonia campus and the Radcliff Library in Garden City house more than 85,000 books; subscribe to more than 700 magazines, many of which are retained for years in microformats; and offer access to U.S. government-deposited publications. Both libraries provide electronic access to varied resources, including an online catalog of Schoolcraft-owned books. They offer various periodical databases online, some of which are partial or full text, most of which may be searched from home. The libraries also provide access to the World Wide Web for research purposes.

Schoolcraft students, faculty and staff may use and borrow books in both libraries. Community members may inquire about their eligibility to borrow under the statewide MichiCard borrowing program. Librarians are available to assist users in locating books, journal articles, pamphlets, U.S. government publications and Internet-based resources. They also offer library tours and introductions to using the Internet by class request. Contact either library for more information.

During the fall and winter terms, the Bradner and Radcliff library hours are:

BRADNER LIBRARY		RADCLIFF LIBRARY	
Mon.–Thurs.	8 A.M.–9 P.M.	Mon.–Thurs.	8:30 A.M.–9 P.M.
Friday	8 A.M.–4 P.M.	Friday	8:30 A.M.–12:30 P.M. and 5 P.M.–9 P.M.
Saturday	Noon–5 P.M.	Saturday	8:30 A.M.–2 P.M.
Sunday	Noon–5 P.M.	Sunday	Closed

Contact either library for hours of operation during break weeks, holiday periods and spring and summer terms.

College Archives
Bradner Library Room 180
734-462-4400, ext. 5313

The Archives collects, preserves and makes accessible Schoolcraft's historical records and memorabilia. The collections are available to faculty, staff, students and other researchers who wish to study the College's history. Included in the collections are early 1960s documents about the founding of the College, Board of Trustees' minutes, *Staff Weekly* newsletters and the student newspaper from the *Commuter* to the *Connection*, plus many brochures, pamphlets and photographs. The Archives houses the Sam Hudson Collection, which deals with the early history of Plymouth, Michigan. Hours of operation are Monday–Thursday, 11 A.M. to 4:30 P.M. and Friday 9:30 A.M. to 3:30 P.M., or by appointment.

Academic Computer Use
McDowell Center Room 100
Radcliff Center Room 415

Computer Lab Hot Line Numbers:
734-462-4400, ext. 5521 for Livonia Campus
734-462-4400, ext. 6012 for Radcliff Center

Schoolcraft College offers its students access to more than 30 computer labs with almost 800 personal computers. We constantly update our software and purchase new hardware in an on-going effort to keep our students equipped with the latest technology.

Schoolcraft College Academic Computing Lab Use Policy states that students:

- Must be enrolled currently at Schoolcraft College and present proper identification when using the computer lab.
- Are restricted to using only the software that is available on the lab computers.
- Must use the computer for Schoolcraft College course assignments only.
- Must follow College policy by strictly adhering to legal use of copyrighted software.
- Must be certified to use the College's computers during open lab hours at the McDowell Center, Room 100, or Radcliff Center.

Certification may be obtained by:

- Successfully completing a computer orientation course.
- Successfully completing a computer course.
- Successfully completing an equivalency test for the computer orientation course, which is available in the LAC – the McDowell Center, Room 210.

For online classes, students must have a working knowledge of computers, and will need a computer with modem and 4-speed CD-ROM; an Internet Service Provider (ISP); Windows 95 or higher; professional version of Office 95 or higher; and Netscape 3.0 or higher, or Internet Explorer 4.1 or higher.

For online classes, Windows 95 meets the minimum requirements. Windows 98 is recommended. For CIS 120, MS Office 97 is required.

Women's Resource Center
McDowell Center Room 225
734-462-4443

Radcliff Center Room 120
734-462-4400, ext. 6051

Introduction
The Women's Resource Center (WRC) at Schoolcraft College provides the atmosphere and support for exploring educational, financial, professional and personal plans for members of the community and campus.

Appointments are not required. For more information, stop in.

Volunteer peer counselors are available at the McDowell Center office Mondays through Fridays from 9 A.M. until 4:30 P.M. throughout the year. They are also available on Monday evenings until 7:30 P.M. during the fall and winter semesters. They have been specially trained in listening skills and can assist walk-in or telephone clients who wish to:

- Enter or re-enter college.
- Research new career possibilities.
- Find referrals for services or information.
- Talk through a difficult situation.

Many free pamphlets, brochures and articles are available at the WRC.

Special WRC Programs and Services

From Chocolate Chips to Micro Chips to Blue Chips (The Chips Program):

A Program for Women in Transition

The full name of the program is **From Chocolate Chips to Micro Chips to Blue Chips**, although it is commonly referred to as the Chips Program. The aim of the program is to do exactly as the name suggests: take the participant from working inside the home, to working outside the home, to making sound personal financial decisions.

The Chips Program has two parts. Depending on your needs, you can complete one or both of the program parts.

The first part, CHIPS, is a 15-week, 6-college-credit course and includes:

- Assertiveness training.
- Identification of job-related skills.
- Educational counseling.
- Assistance in applying for school-related financial aid.
- Computer orientation.
- Time and project management.
- Guided career exploration.
- Interviewing techniques.
- Support group with other women.
- Job placement guidance.
- Keyboarding.
- Physical conditioning.
- Free business clothing.

The second part, CHIPS TOO, is a 15-week, 6-college-credit course consisting of Microsoft Word for Windows (OIS 165) and Personal Finance (BUS 204). The program also includes:

- Physical conditioning.
- Educational counseling.
- Assistance in applying for school-related financial aid.
- Job placement assistance.
- Free business clothing.
- Support groups for studying.

Divorce Support Group

A divorce support group is open to anyone contemplating, in the process of or having difficulty adjusting to divorce. The group meets the second and fourth Tuesday of each month from September to April. The first meeting of the month is a group discussion. Speakers are scheduled for the second meeting of the month. A schedule of speakers is available.

The first Monday of each month, a Certified Divorce Planner is available free of charge. On the third Monday of each month, a lawyer is available for free consultations. These consultations are scheduled from 5 P.M. to 7 P.M. on a first-come, first-served basis October through May. Call for more information.

Special Populations Program

This program, administered through the WRC, provides tuition assistance, support services and/or programs for single parents, displaced homemakers, those with limited English proficiency, academically disadvantaged, economically disadvantaged, individuals with a disability and nontraditional job seekers. Contact the Women's Resource Center at 734-462-4443 for more details.

WRC Scholarships

Women's Resource Center scholarships are available to women who may or may not qualify for federal or state financial aid. The WRC works vigorously to ensure scholarship opportunities are available for all women, with a special emphasis on adult women returning to school. Scholarship information is available at the WRC.

Luncheon Series

The WRC sponsors six luncheons each year, featuring speakers on a variety of topics. Call for a current schedule.

Instructional Support Services

The Doc-U-Center and Media Services combine to form the Instructional Support Services Department, which performs a multitude of enhanced document, media and technical services. While primarily an internal service that supports instructional technology and print materials for the classroom, both areas also support special on- and off-campus events.

Doc-U-Center
Liberal Arts Room 120
734-462-4400, ext. 5304

Instructional and presentation materials, produced by the Doc-U-Center, are created using sophisticated desktop publishing and design software and are printed on high-speed, networked printers and copiers. Copiers are maintained in instructional buildings for convenient access by faculty and staff.

Media Services
Bradner Library Room 500
734-462-4400, ext. 5330

Instructional technology, available in classrooms, is installed and maintained by Media Services. Media technicians support special presentations requiring media equipment both on and off campus. Multimedia production and format conversions, videoconferencing, the interactive video classroom and multimedia presentation services are available.
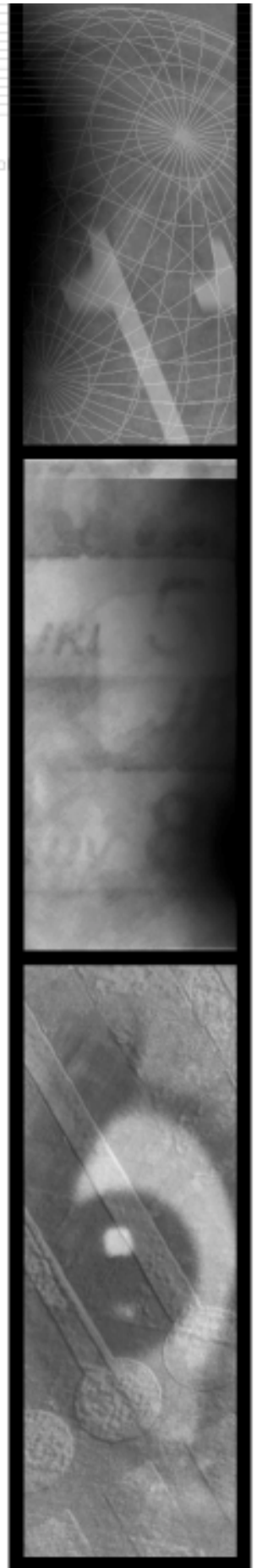
Schoolcraft College

Campus Life
Services and Activities

Campus Life
Services and Activities

Student Identification

Each semester's tuition payment receipt identifies students as Schoolcraft College students. Students should carry it at all times when attending classes, using the library, computer labs, testing services or attending College-sponsored events. Picture identification cards are available in the Student Activities Office at no charge. Valid identification must be presented to obtain a card. There is a charge to replace a lost ID card.

Food Service

VisTaTech Center, Waterman Wing
Option's Snack Shop at Radcliff Center

Henry's, located along Main Street in the VisTaTech Center, features an array of food and beverage choices to please any student or visitor to campus. A bountiful salad bar, fresh seafood, pasta and pizza are just some of the choices. Several homemade soups are prepared daily, and a wide selection of beverages is available, including freshly ground cappuccino and espresso. Henry's is the place to have breakfast, lunch or dinner while on campus. Hours are from 8 A.M. to 7 P.M. during the fall and winter semesters.

Options at Radcliff provides service from 8 A.M. until 8:30 P.M. during the fall and winter semesters. Soups, sandwiches and a wide selection of convenience foods are offered daily. Vending machines are located in every classroom building on campus.

Food Service provides full service catering for any event on campus, from coffee service for small meetings to formal banquet functions. Call 734-462-4471 or fax 734-462-4516 for more information.

Children's Center

South Parking Lot Livonia Campus
734-462-4442

The Schoolcraft College Children's Center is the laboratory for the Child Care and Development Program. It is accredited by the National Association for the Education of Young Children and is under the direction of College faculty and trained teachers. The primary purpose of the Center is to provide learning experiences for students enrolled in the Child Care Development curriculum. The educational program of the Center is designed for children aged 6 weeks through kindergarten and encourages physical, emotional, intellectual and social development through a variety of stimulating teacher-directed and child-selected activities. The Children's Center enrolls infants and toddlers aged 6 weeks through 2-1/2 years on a full-time basis only. The Children's Center generally has a waiting list. Those registering for five full days of care per week get preference.

The Center is open from 7 A.M. to 6 P.M. Monday through Friday and operates year-round. Parents who have questions or wish to place their children on a waiting list for possible admission are invited to call the Center at 734-462-4442.

College Bookstores

Livonia Campus
734-462-4409

Radcliff Campus
734-462-4778

Online Bookstore
www.schoolcraftbooks.com

Schoolcraft College has three bookstores for your convenience. The Livonia Campus Bookstore is located at the northeast end of campus, across from the Applied Science Building. The Radcliff Campus Bookstore is located in the Radcliff Center on the corner of the 100 and 400 halls. The Schoolcraft College Online Bookstore is located at *www.schoolcraftbooks.com*.

Required textbooks must be purchased at the campus where the class is held. All bookstores offer a wide selection of goods and services of high quality at equitable prices with particular attention paid to academic requirements.

Health Emergencies

When a student is injured or becomes ill while on campus, contact Public Safety at ext. 4424 from any campus phone. Public Safety will provide the initial response to a call for assistance.

Health Insurance

Sickness and accident insurance is available for full- and part-time students. Information on this program is available in student service offices in the McDowell Center.

Access to the Physical Fitness Facility

Physical Education Building
734-462-4400, ext. 5258

The Physical Education Building is used for instruction, special events, intercollegiate athletics and community events. When an area is not being used for a regularly scheduled class or event, students may use the area if they present a Schoolcraft College identification card or tuition receipt to the supervisor or attendant. Open swim and gym hours for current students are posted outside each facility in the building and in the Continuing Education schedule.

Athletics

Schoolcraft College is a member of the National Junior College Athletic Association and the Michigan Community College Athletic Association. The women's intercollegiate program includes cross country, basketball, soccer and volleyball. The men's intercollegiate program includes basketball, golf and soccer. The Athletic Committee reviews general policies relating to the scope of athletic programs.

Student Activities Office

VisTaTech Center, Waterman Wing Room 169
734-462-4422

Schoolcraft College believes out-of-classroom activities are essential to the total collegiate educational experience. Students are encouraged to participate in one or more College extracurricular activities for their intellectual, cultural, social, physical, organizational, spiritual, moral and emotional enrichment and growth.

Student Activities' goals are those of the College itself, namely to provide the finest intellectual experience in a framework that highlights the fullest individual and social growth of each person.

Schoolcraft College provides an office and staff to help students plan and operate organizational programs and services.

Clubs and Organizations

Schoolcraft College encourages students to organize College clubs and other groups that provide developmental experiences for their members, services to the campus and/or the local community and opportunities to interact with a variety of people.

Information and assistance in forming a College student club is available in the Student Activities Office. Campus clubs and organizations at Schoolcraft College are:

- African-American Student Association
- Art Club
- Beekeepers Club
- Campus Crusade for Christ
- Chess Club
- Edgerunners Ski Club
- Gay, Lesbian, Straight Alliance
- Gourmet Club
- Habitat for Humanity
- Health Information Technology Club
- International Student Relations Club
- Music Club
- National Computer Graphics Association
- Otaku Anime Animation Club
- Phi Theta Kappa Honor Society
- Quilting Club
- Student Activities Board
- Students Against Hunger
- Student Nursing Association

Connection—Schoolcraft's Student Newspaper

The *Connection* serves as a forum for expressing student opinion and a vehicle for reporting College and College-related activities and events from a student perspective. The *Connection* membership is open to all registered students on the basis of interest and demonstrated competency in writing, photography, layout, advertising, circulation or clerical skills. The *Connection* is distributed free to the campus community. Additional information and staff application forms are available in the Student Activities Office.

Performing Arts Groups

Schoolcraft College offers performance opportunities in the College choirs and instrumental ensembles, including the Chamber Singers, SCool JAzz vocal jazz ensemble, the Schoolcraft College Jazz Band and Schoolcraft College Community Wind Ensemble. The Schoolcraft College Community Choir meets regularly and performs large choral works. These groups rehearse regularly and perform concerts both on and off campus. Students may elect to participate with or without credit. Extracurricular performing groups are encouraged to use the facilities and equipment at the College.

Phi Theta Kappa Honor Society

Phi Theta Kappa is the international honorary scholastic society for community and junior colleges. Founded in 1918, Phi Theta Kappa was recognized officially by the American Association of Junior Colleges in 1929. The Schoolcraft College Omicron Iota Chapter was established in 1966 and became a five-star chapter in 1995. Eligibility information is available in the Student Activities Office in VisTaTech Center, Waterman Wing.

Schoolcraft College

Student Rights and Responsibilities
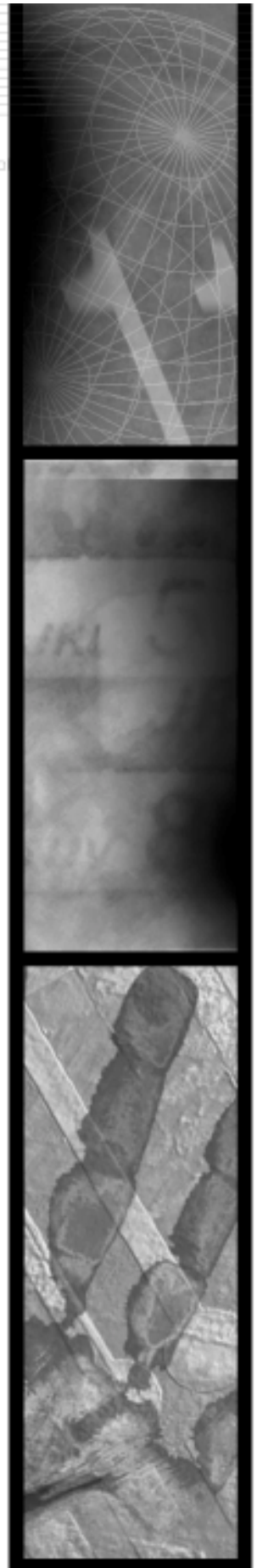
Student Rights and Responsibilities

Schoolcraft College was established in 1961 by the voters of the College District to make education beyond the high school level available to students interested in, and capable of benefiting from, such an education. The members of the Board of Trustees are the elected representatives of the College District electorate and are charged with making policies to achieve College objectives. Schoolcraft College recognizes its obligation to be responsive to the needs and concerns of the individual student, the student body and the community at large. Schoolcraft College cannot condone or support any action or activity by an individual or group that impinges on the rights of others, whether these individuals are members of the student body or the community at large.

Student Responsibilities

Students should understand that with each right they enjoy comes a corresponding duty and responsibility. No student should take any action that will restrict other individuals from pursuing their educational goals, or that will in any way interfere with the Board of Trustees and its representatives in the performance of their duties and responsibilities. Students are responsible for maintaining satisfactory standards of conduct and/or scholarship. We expect students to familiarize themselves with existing College regulations, including the Student Code of Conduct, and conduct themselves as responsible citizens at all times. Students who fail to conduct themselves in a responsible manner will be subject to disciplinary action as outlined in the Student Code of Conduct that may include suspension and/or dismissal from the College.

Student Rights

Members of the student body enjoy the same rights and privileges guaranteed to them as citizens of the United States and as residents of the State of Michigan. Such basic rights as freedom of speech, freedom of worship, and right of due process are in no way curtailed by existing policies and procedures. As a member of the Schoolcraft College community, a student is free to take advantage of all the educational opportunities available and to participate in all extracurricular activities sponsored by the College.

For each course in which they are enrolled, students are guaranteed a fair and proper evaluation of their academic efforts. Students are free to join any group with which they seek to be associated, to examine and discuss matters of particular interest to them, and to support any cause—both on and off campus—that does not disrupt the orderly operation of the College.

Student Privacy Rights

The Family Educational Rights and Privacy Act (FERPA) of 1974 grants all students the right to have their academic records withheld from any individual, agency or organization. Students choosing to release this information may do so by written consent.

According to the statute, if an individual student charges that his or her official records are inaccurate, misleading or otherwise inappropriate, the College must provide that student access to those records and an opportunity for a hearing to challenge those records. Students wishing to review their educational records must file a written request with the Registrar. Records covered by FERPA will be made available within 30 days of the receipt of the request. The right to a review or hearing under the Act does not include any right to challenge the appropriateness of a grade as determined by the instructor. However, students may use this process to verify that the instructor's grade has been properly transmitted to the student's records.

The College is authorized under the Act to release public information concerning students. Public information includes the student's name, address, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, enrollment status, degrees and awards received and the most recent educational agency or institution attended. The College may, *at its discretion*, release such public information at any time, unless the Registrar has received a prior written objection from the student specifying information that should not be released. The Registrar must receive this written objection from the student no later than 10 working days after classes begin in any semester or session. The Act permits disclosure without consent to College officials with a legitimate educational interest. College officials have a legitimate educational interest if they need to review an educational record to fulfill their designated professional responsibility. The College may designate a third party as a College official for the purpose of certifying enrollment and graduation.

As a part of the College's instructional program improvement efforts, and to meet the requirements of the Carl D. Perkins Vocational and Technical Education Act, Section 113 and the Workforce Investment Act of 1998, Section 122, the College will be using student Social Security Numbers to compile certain data for the purpose of instructional program improvement and Perkins and Workforce Investment Act reporting.

General Information

Alcoholic Beverages

No alcoholic beverages are permitted on campus except during approved campus functions. The excessive use of alcohol under any circumstance is not condoned by the College, and undesirable conduct resulting from alcohol use will be subject to disciplinary action.

Canceled Classes

The College reserves the right to cancel any class if its enrollment is low or for other valid reasons. The College may change the day, time of day or class location. Students will be contacted and may select another class or request a full refund. Refund checks are mailed directly to students.

Classroom Conduct

Students are expected to act responsibly and to conduct themselves in the classroom in a manner that does not disrupt the learning process. A climate of mutual respect and courtesy should exist between faculty and students. However, students must recognize that instructors, by virtue of their position, must exert a measure of authority in the classroom. Students should respect this authority. Disciplinary problems may result in a student being withdrawn from class and, in extreme cases, dismissal from the College.

College Closing–Due to Weather or Other Emergencies

Listen to major metro area radio stations and local television stations, and check the link on the College's Website for College closing information. Weather conditions can vary widely, even over a small geographic area. Students must exercise their own judgment concerning safety, whether the College is open or closed.

Drug-Free Policy

The Federal Drug-Free Schools and Communities Act Amendments of 1989 require all colleges and universities that receive federal funds to develop an illicit drug and alcohol prevention program for students and employees. Consistent with local, state and federal laws, the College will impose sanctions or seek legal remedies against students or employees who unlawfully possess, use or distribute illicit drugs and alcohol on College property or as part of any College activity.

Drugs and Narcotics

Students must observe the drug and narcotic laws of the State of Michigan, as well as federal laws and regulations as they apply to possession, use and sale of these substances. Undesirable student conduct resulting from possession, use or abuse will result in disciplinary action.

Equity in Athletics Disclosure Act (EADA)

The Equity in Athletics Disclosure Act is designed to make prospective students aware of a college's commitments to provide equitable opportunities to its men and women student athletes. A copy of this report is available in the Office of the Vice President for Enrollment Management or on the College's Website.

Students with Disabilities

Schoolcraft College does not discriminate on the basis of disabilities in recruiting and admitting students, recruiting and employing faculty and staff, or operating any of its programs and activities, as specified by federal laws and regulations. The designated coordinator for College compliance with Section 504 of the Rehabilitation Act of 1973 is the Vice President for Finance and Business Services, whose office is in the McDowell Center. Students may request services by contacting the Learning Assistance Center in the McDowell Center.

Lost and Found

All lost items should be given to the Public Safety Department on the Main Campus, or to the Central Office in one of the off-campus centers where the items will be recorded and held. For rules on disposition of these articles, see College Policy 1070.12, or call Public Safety at 734-462-4424.

Parking Regulations

Free parking is available in the North, South and Central Parking Lots with the exception of restricted areas which are posted. All parking lots are lined and vehicles are to be parked within the designated spaces. There is no parking on the diagonal yellow line ar-eas on either end of parking rows in any parking lot. All parking is in an east/west direction only. Any vehicle that is parked improperly will be ticketed.

The North, South and Central Lots have areas that are assigned to staff and faculty with permits. Special medical permits are required to park in any handicapped area. No parking is permitted on any College street.

Schoolcraft Public Safety officers are authorized to write City of Livonia traffic citations by authority granted under Title VI, Chapter I, of the Livonia Code. Tickets are payable at the 16th District Court, 15140 Farmington Road, Livonia, Michigan. Information regarding the fines for violations can be obtained by calling the court at 734-466-2500, ext. 3542. Court dates are indicated on the bottom of citations.

Students attending the Radcliff Center in Garden City are provided ample free parking in a paved lot with entrances on Wildwood and Radcliff streets. Handicapped spaces are provided. Parking violations at Radcliff Center will be issued by the Garden City Police Department. Information for payment of fines can be obtained by calling 734-525-8805.

Regulations

Copies of all student regulations are available in the Office of the Vice President for Enrollment Management in the McDowell Center.

Safety—Classroom and Laboratory

Personal safety is a major priority at Schoolcraft College. Safety glasses, headgear, aprons, lab coats, earplugs and other appropriate safety equipment are needed by all students in specific courses. Safety units are incorporated into courses where applicable.

Smoking

A Michigan public act prohibits smoking in all College buildings.

Solicitation of Funds

Individuals and agencies are not permitted to solicit funds, organize or participate in drives for any reason without first securing approval from the Vice President for Finance and Business Services.

Student Disciplinary Standards Committee

A Student Disciplinary Standards Committee handles all serious breaches of discipline. The committee is appointed by and responsible to the Vice President for Enrollment Management and is composed of staff members and students.

Student Financial Obligations

Students must pay all required fees, fines, loans and other financial obligations owed to the College. Students who fail to meet financial obligations may be dismissed from the College, refused permission to register at a future date, or have holds placed on transcripts, grade reports and diplomas.

Students' Right-To-Know and Campus Security Act of 1990

Information on this act is available in the Public Safety Department, Service Building.

Title IX

Title IX states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance." The Vice President for Enrollment Management is Schoolcraft's Title IX coordinator. Students who would like further information regarding this act may call 734-462-4431.

Traffic Regulations

Traffic regulations with respect to speed and parking are posted on campus. Students, staff and visitors are required to follow the same traffic rules as on public streets. As a licensed operator of a motor vehicle, it is the driver's responsibility to observe the Michigan Vehicle Code laws as well as local ordinances.
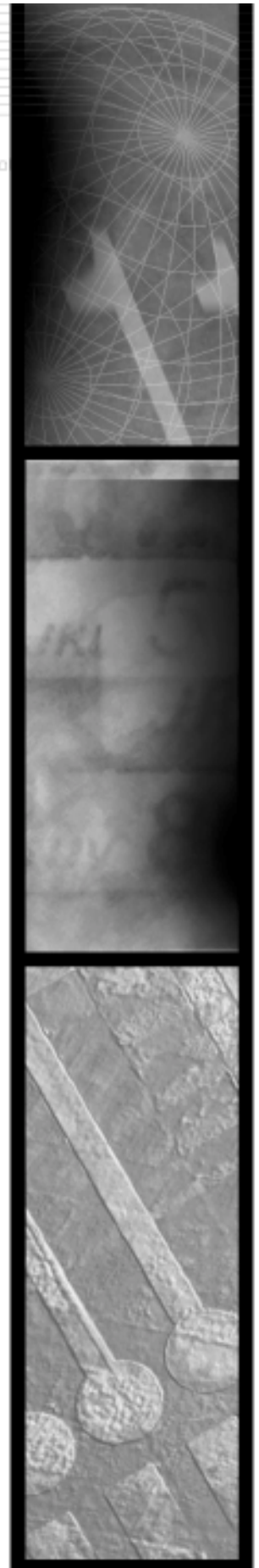
Schoolcraft College

Academic Policies and Procedures

Academic Policies and Procedures

Instructional Alternatives

Schoolcraft College provides students a variety of choices for earning credit aside from the traditional method. In addition to on-campus, in-class instruction, students can register for video courses, online courses, open entry/open exit courses, and other media-assisted instruction. There are classes offered at convenient community locations or on weekends to accommodate student schedules. Qualified students may apply to the Schoolcraft Scholars honors program or may earn credit through independent study under the direction of a faculty member.

Distance and Distributed Learning

Distance and distributed learning, which includes courses on videotape or the Internet, offers students a flexible form of education, creating options of where and when they can learn. These classes expand learning opportunities while allowing students to balance educational demands with work, travel or family responsibilities. Students receive regular college credit for distance and distributed learning classes. They are admitted and register for distance and distributed learning courses as they would for any credit course Schoolcraft College offers. The keys to successful distance and distributed learning are needs, motivation, discipline and effective time management. For more information, call 734-462-4532.

Video courses provide students with professionally produced videotapes, supplemented with a textbook and study guide. The first class is a face-to-face orientation session to acquaint students with overall course requirements, review sessions, testing dates and other important information. Lectures are presented via videotape checkout from the Library. Distance and distributed learning students study independently, visiting the campus for three or four review sessions and examinations.

Online Courses

Schoolcraft College ONLINE brings a variety of courses to you in various disciplines through the Internet. Online courses require independent, self-motivated learners with a working knowledge of computers and the Internet. Online course work takes place in a virtual environment, including communication and interaction with the faculty member and other students. Regular and active participation in online discussions is required. Text materials accompany each course.

To take an online course, students must own or have convenient access to:

- A computer system with a modem and CD-ROM.
- An Internet Service Provider and personal e-mail account.
- Windows 98 or higher; Office 97, 2000 or XP.
- Netscape 4.0 or higher or Internet Explorer 5.0 or higher.

Note: Some courses require specific software packages, i.e. Microsoft Office XP. Please check the Schedule of Classes for more information.

Online students have the opportunity to attend an orientation session, held on the first Saturday of each semester. Computer Lab mini training sessions in Blackboard are available during orientation for students who may need additional assistance with online procedures.

OMNIBUS

The OMNIBUS program provides working adults the perfect solution to problems they may have with attending traditional classes. OMNIBUS offers a totally online accelerated program granting associate and bachelor's degrees, with an option to complete a master of science in business administration leadership studies.

OMNIBUS is designed as computer-mediated learning, with students studying together through e-mail and the Internet, and with support materials such as audio and videotapes. Students complete course assignments from home or other locations where they have access to a personal computer.

The mission of the OMNIBUS program is to provide intensive, quality higher education in an innovative, integrated and collaborative format to mature students.

OMNIBUS is a collaboration of Schoolcraft College and Madonna University.

Open Entry/Open Exit Classes

The Open Entry/Open Exit (OE/OE) Program is a self-paced educational alternative. Courses in this program are designed for the motivated student who can master course material without traditional classroom instruction, traditional lectures and/or scheduled class meetings. Students may register for the program before or after a semester starts, work at their own pace, use the entire semester to complete course work or complete course work early. Students may complete a course in a week, a month or a semester. Work may be done at home or from the College's computer labs. Instructors are available in the OE/OE Lab at regularly scheduled times to assist students. More information about this program is available on the College's Web page.

Independent Learning

The College provides students an opportunity to earn credit for certain courses through independent study. Students are expected to master the competencies the course requires. Students work independently under the direction of the assigned faculty member, and are expected to meet with the faculty member at designated times during the term. Contact the Assistant Dean of Liberal Arts/Independent and Distance and Distributed Learning for more information. Students must obtain approval from an instructor to take an independent learning course.

Hybrid Courses

Hybrid courses may combine face-to-face instruction with on-line delivery. In a hybrid course a significant portion of the course's learning activities occurs online, and time typically spent in the classroom is reduced but not eliminated. A hybrid course blends the best features of in-class teaching with the best features of online learning to encourage active independent learning and to reduce class seat time.

Students who successfully complete hybrid courses are typically independent, self-motivated learners who possess a working knowledge of computers and the Internet. In order to take a hybrid course, students must own or have convenient access to:

- A computer system with at least 32MB of RAM.
- Windows 98 or higher.
- 800x600 resolution color monitor.
- A modem (preferably 56K Baud or higher).
- CD-ROM Drive.
- An Internet Service Provider and personal e-mail account.
- Netscape Navigator 4.0 or higher, OR Internet Explorer 5.0 or higher.
- Office 97, 2000 or XP*
- NOTE: CIS 120, 180, 215, 225, OIS 165 and 265 require MS Office XP. (Macintosh systems should have equivalent requirements)

Schoolcraft Scholars

Students accepted into the Schoolcraft Honors Program complete six honors courses and 100 hours of service-learning. Tuition is awarded for all honors courses as long as an honor student maintains a 3.5 grade-point-average.

The first and final honors courses are taken with other honors students. An honors colloquium in humanities introduces students to community organizations; a capstone course in sociology supports the completion of extensive service projects. Students earn honors credit in four other courses of their choice by completing honors projects with members of the Honors Faculty.

While participating in the program, Schoolcraft Scholars attend numerous fieldtrips, lectures and workshops open to the College at large. The honors program accepts applications year-round. Among other requirements, it is recommended that applicants have a graduating high school GPA or 12-hour college GPA of 3.5.

Educational and Community Services
Business and Industrial Services

Business Development Center
McDowell Center Room 315
734-462-4441
734-462-4438
www.schoolcraft.edu/bdc

The Office for Business and Industrial Services responds to specific needs of workforce training and the business community.

Contract Customized Training

Courses listed in this catalog can be conducted on site or at other convenient locations, 24 hours a day, seven days a week. Formats include: consulting, short customized courses, degree credit courses, workshops, large conferences and tele-conferences. Certificates of Achievement, college credits or Continuing Education Units (CEUs) may be awarded.

Companies seeking to upgrade employee skills may be eligible for substantial savings through government subsidized training. Our staff will research opportunities and apply for these funds when available. Typical activities eligible for subsidized training include assistance to companies:

- Locating in the community and creating new jobs.
- Expanding and creating new jobs.
- Retaining employees who would likely be laid off, but who can continue employment if retrained to do another job.
- Installing new machinery, new processes, or manufacturing a new product.

Business Assistance Services

The Procurement Assistance Program provides information and training to businesses interested in exploring government markets. The program includes a daily download or mailing of bid opportunities specific to each company's products or services. In addition, all military specifications and federal standards are available within 24 hours to businesses enrolled in the program.

Our Export Resource Center is available to firms interested in expanding into foreign markets. Introductory workshops in both government contracting and foreign trade are offered on a regular basis.

Small business start-up help and business plan development are available from our entrepreneur service. Additional services include direct consultations, group training sessions, product development and brokering collaborative services.

Continuing Education Services

Continuing Education Center
734-462-4448

Continuing Education

Everyone benefits from lifelong learning—you, your family, your community and your workplace. Whether you take classes to fulfill personal or professional aspirations, you will have the opportunity to meet and interact with people who have similar goals and experiences. Continuing Education Services (CES) can help you develop new interests and insights in the area of your choice. We look forward to seeing you on campus.

Your choices include programs that offer:

- Opportunities designed for career-minded individuals in business management and computers.
- Certification and licensure classes designed for professional and technical personnel in fields such as nursing, K–12 teaching and school administration, real estate licensure preparation, culinary arts, equine arts and science.
- Small business management seminars designed to stimulate entre-preneurial leadership and local economic development.
- Personal development workshops, as well as courses and pro-grams designed to enhance the quality of life in the community.
- Retired Senior Volunteer Program (RSVP) designed to give senior adults an opportunity to work on campus with students and staff on a variety of projects.
- Kids on Campus Program, serving nearly 2,000 children annually, designed to provide extensive enrichment programs, academically enhanced activities and physical fitness opportunities for chil-dren, aged 5–15 years.
- Wellness and physical fitness programs designed for health-conscious individuals interested in dance, fitness, yoga, tai chi, self-defense, swimming and other recreational activities.

Continuing education classes are open to students of all ages. Instructors are professionals who bring a special expertise to the learning process.

Students receive nationally recognized Continuing Education Units (CEUs), based on attendance and participation, for most continuing education classes. Students in some specialized courses receive Certificates of Accomplishment.

Requests for refunds are to be mailed or faxed to the Registrar's Office and must be initiated by the student.

The College refund policy is as follows:

- Through the day before the first class, 100 percent course fees.
- Thereafter, no refund.

Refunds are mailed to the student's address of record.

Community Services

Special events such as concerts, conferences, dinners, lectures and recreational activities are scheduled on the Livonia cam-pus or at the Radcliff Center in Garden City as resources per-mit. Free parking is available at both locations.

College facilities are available for meetings, seminars and banquets for a fee. Because of its accessibility to freeways, Schoolcraft College is a convenient meeting place for many governmental and community groups. The College welcomes these activities and can cosponsor educational programs to help reduce costs.

Academic Policies

Attendance Procedures

Regular class attendance is necessary for maximum success in college. Faculty members announce any special attendance re-quirements during the first class meeting of each semester or session.

- Students are expected to attend all classes except in the event of illness or an unavoidable emergency.
- Students are responsible for arranging all work before attending athletic events, field trips or other College-sponsored events. Writ-ten assignments must be turned in to instructors before the event or at a time designated by instructors.
- Students are responsible for meeting all class requirements regard-less of absences and/or tardiness from class.
- Students attending Schoolcraft College under special programs may have specific attendance requirements.

Course Auditing

Qualified students may enroll in courses for which they do not de-sire credit by making application to the College and by paying the same tuition and applicable fees as regularly enrolled students.

The student's intention to audit the course should be made known at the time of registration. A change in audit/credit after the regis-tration period may be authorized through instructor/student con-sultation and written notification by the instructor to the Registrar. This change must be done before the last day to drop for a with-drawal grade as published by the semester schedule. Any student auditing a class may participate as a regularly enrolled student ex-cept that no final grade is issued to the auditor.

Credit Hours

Normally, students receive one hour of credit for each hour required in class per week during a 15-week semester. However, classes with labs, such as art, science, computers and technol-ogy, require additional class hours. Credit hours and total weekly course clock hours are listed in the course description section of this catalog.

Course Load — Fall and Winter Semesters

A full-time load is 12 semester credit hours. Students must receive permission from their counselors to elect more than 18 hours. Normally, students eligible for overloads earned a minimum grade-point average of 3.0 in the previous semester at Schoolcraft College. Students must obtain permission from a counselor before the beginning of each semester during which they wish to carry an increased load.

Course Load — Spring and Summer Sessions

The full-time course load in the spring and summer sessions is six semester credit hours. Normally, students eligible for overloads earned a minimum grade-point average of 3.0 in the previous semester at Schoolcraft College. Students must obtain permission from a counselor before the beginning of each session during which they wish to elect more than eight credit hours.

Classification of Students, Credit Classes

- Freshman   Fewer than 26 credit hours
- Sophomore   26 or more credit hours
- Full-time   12 or more credit hours per semester
- Part-time   Fewer than 12 credit hours per semester
- Special Student   High school student
- Advanced Standing   More than 60 credit hours

Credit by Examination

Schoolcraft College students may request credit by exam for a specific course by presenting evidence of special course proficiency, experience or education. Students are allowed to take exams only if instructors or department representatives find they are qualified to take the exam. Students are charged a fee, which is assessed by the Cashier's Office, before the examination. Applications are available in associate deans' offices.

Equivalency Credit

Schoolcraft College students may receive equivalency credit toward a certificate or associate degree in these instances:

- Work experience and/or training.
- Related instruction.
- Transfer courses from other colleges and universities.
- The National Occupational Competency Testing Institute (NOCTI).

The College requires a minimum number of credit hours earned at Schoolcraft before the equivalency credit is posted to the student's record.

Advanced Placement

Students may request course credit based on satisfactory test scores taken through the College Board Advanced Placement Program. Students requesting course credit should have their Advanced Placement scores sent to the Registrar's Office as early as possible.

CLEP/DANTES National Credit by Examination Programs

The College Level Examination Program and the DANTES Subject Standardized Tests (DSST) Program offer students the opportunity to obtain college credits based on satisfactory test score completion. Contact the Assessment Center for test registration information.

Student Records

The Registrar's Office maintains official College records for each student. These records are intended for College use and include data directly related to Schoolcraft College students. These records include, but are not limited to, identifying data, academic work completed, attendance data, scores on standardized tests, health data and counselor advising comments. See Student Privacy Rights.

Transcript Request

To forward official grade transcripts to designated colleges, recognized institutions or employers, students must submit a signed request or complete a request form in the Registrar's Office. Only transcripts bearing the Schoolcraft College seal and Registrar's signature are considered official and are not issued directly to students. Any transcript given to a student will be a "student copy." Transcripts are released only after all financial obligations to the College have been fulfilled. There is no charge for transcripts.

Grade Reports

Grade reports are available at www.schoolcraft.edu after the end of the semester. Printed grade reports are available by request. Requests for printed grade reports must be made before the end of the semester. Grade reports for students who have financial and other obligations to the College are not available until all obligations are removed.

Repeated Course

Students may wish to improve a final grade earned by repeating the course at Schoolcraft College. The last grade and credits earned replace any previous grade and credit hours in computing the grade-point average. The earlier record remains a part of the student's transcript and is identified as NC (NO CREDIT–Repeated Course). A grade of W or I will not replace the earlier grade in a repeated course. Transfer credit will not be accepted for a course if the student has earned a grade for that course from Schoolcraft College.

Withdrawal from College or Classes

Courses dropped any time through the end of late registration are not recorded on student transcripts. After late registration, students may withdraw officially from courses through the tenth week of a fall or winter semester, and through the fifth week of the spring/summer sessions. Students who officially withdraw from courses receive a W grade. The W grade is not used in computing the grade-point average. Classes lasting other than 15 weeks have prorated W dates.

Issuance of an Incomplete Grade

An instructor may award an incomplete (I) grade to students who, because of extenuating circumstances, were unable to complete the course work within the regular College semester/session. Students must have successfully completed the majority of the course before the incomplete grade is granted. The responsibility for completing a course rests with the student. A faculty member issuing an incomplete grade (I) must accompany it with the *Incomplete Grade* form.

Dean's List Recognizing Academic Achievement

Each semester we recognize students for high academic achievement by naming them to the Dean's List. The minimum requirements for fall or winter semester are:

- Full-time students who complete 12 or more credits during the semester with a semester grade-point average of 3.5 or higher. The College sends recognition cards to students' homes and notifies hometown newspapers.
- Part-time students, who after completing a total of 12, 24, 36, 48 and 60 credit hours, have earned a cumulative grade-point average of 3.5 or higher. The College sends recognition cards to students' homes.

Eligibility for Athletics

Students who participate in varsity athletics must have a grade-point average in keeping with the requirements established by the Schoolcraft College Athletic Committee, the Michigan Community College Athletic Association and the National Junior College Athletic Association. All eligibility requirements are listed in the Schoolcraft College Athletic Manual.

Grades and Grade Points

The grading system and computing method for grade-point averages are explained below.

Grades	Grade Scale
Excellent Performance	4.0–3.5
Very Good	3.4–3.0
Good	2.9–2.5
Average	2.4–2.0
Below Average	1.9–1.5
Poor	1.4–1.0
Failure	0.0–0.0
W * – Withdrawal	No points
I **– Incomplete	No points
AUDIT *** – No grade or credit awarded	No points
NC – No Credit – repeated course	No points

*   See Withdrawal from College or Classes. Observe dates in the current class schedule.

**   See Issuance of an Incomplete Grade.

*** Students must request audits when registering for classes.

Note: Individual programs may have special grade requirements.

Grade-point Average

Students can calculate their grade-point average as in this example:

Class Elected	Course Credit Hours		Grade Received		Grade Points Earned
English 101	3	X	2.2	=	6.6
Political Science 105	3	X	3.4	=	10.2
Mathematics 113	4	X	2.1	=	8.4
Chemistry 111	4	X	2.7	=	10.8
Total Credits	**14**		**Total Grade Points**		**36**

Multiply the course credit hours by the grade received to get the grade points earned. Divide the total grade points earned by course credits earned to yield the grade-point average:

36 / 14 = 2.57 grade-point average

Academic Probation

Students who have completed 15 credit hours and earned cumulative grade-point averages below 2.0 are placed on academic probation. The College records probationary status on student transcripts and grade reports. Students on academic probation must meet with a counselor before registering for any semester or session until academic probation is removed.

Academic probation is removed when the cumulative grade-point average is 2.0 or higher.

Academic Dismissal

Any student on academic probation who fails to earn a grade-point average of 2.0 or higher after completing a total of 30 credit hours will be academically dismissed from the College. The official record (transcript) and grade report reflect this status. A student may appeal the dismissal to the Vice President for Instruction.

A student who transfers from another college and is admitted to Schoolcraft College on academic probation is subject to the above stated academic conditions.

Students receiving financial aid assistance or veteran's benefits must meet the specific academic requirements that determine continuation for these programs.

Readmission for Academically Dismissed Students

Students must petition the Vice President for Instruction and meet with the Associate Dean for Academic and Assessment Services for readmission. As a condition of readmission, if petitions are honored, students must follow specific recommendations made by the Vice President for Instruction.

Appeals Procedure for Academic Matters

Students may appeal academic decisions regarding a grade or other actions resulting from their academic performance. Step I of the Appeal process must be made within ten (10) working days of the occurrence, or receipt of a grade, and must follow the procedures outlined below:

Step I

Students must seek to resolve academic matters informally with the instructor. During the spring/summer session(s), when an instructor may not be available, students may proceed to Step II after an effort is made to communicate with the instructor.

Step II

Students may formalize complaints through written appeal to the appropriate associate dean. The appeal must be made in writing and should include the following:

- The student's name, student number, address, telephone number and times and dates of availability.
- The specific complaint.
- The desired remedy.

The associate dean will review the complaint, investigate the facts, and send a written decision to the student within seven (7) working days. If both the student and associate dean agree, the time limit may be extended.

Step III

If the academic issue is not resolved to the student's satisfaction, an appeal may be made to the Dean of Instruction. The appeal must be made in writing, including all information given in Step II, within five (5) working days of receipt of the Step II decision. The Dean of Instruction will hear the complaint, investigate the facts and when possible, convene a hearing of the individuals involved. A written decision will be given within ten (10) working days of the hearing. Certain circumstances may make it impossible to respond within the ten (10) day time limit. If both the student and the Dean of Instruction agree, the time limit may be extended; otherwise a decision will be made on available facts.

Step IV

If the matter is still unresolved, the student must notify the Vice President for Enrollment Management in writing, no later than five (5) working days after the Step III decision is rendered. The Vice President for Enrollment Management will convene and chair a Hearing Committee within ten (10) working days. The Hearing Committee will have an equal number of faculty, students and administrators. Students have a right to:

- Hear all statements made about the situation and examine relevant materials, as long as such examination does not violate the Family Rights and Privacy Act or other laws and policies.

- Question any person or material presented.

- Present their own cases including supporting material or testimony.

- Have an advisor or legal counsel present (who will not speak for the student).

- Tape record the hearing or otherwise make a record of the proceedings.

The Vice President for Enrollment Management will complete the process with a final written decision to the student no later than ten (10) working days after the hearing.

If, after Step IV, the student is unsatisfied, he/she may appeal directly to the Board of Trustees in writing within ten (10) days of receiving the Step IV response. A letter must be written to the Board indicating the student's name, address, telephone number, the complaint and exactly what remedy is desired from the Board. This hearing will occur at the next available meeting of the Board. The Board will render a decision to the student in writing within thirty-five (35) days (the Board meets monthly). The decision of the Board marks the end of the internal judicial process.

Expedited Process

Occasionally a situation arises which requires more immediate action. Examples include deadlines such as graduation dates, external testing dates, transfers to other institutions or employment opportunities. The student may request, in writing, an Expedited Process, and if the Vice President for Enrollment Management concurs, the following steps will be taken:

Step I

Students must seek to resolve academic matters informally with their instructor. During the spring/summer session(s), when an instructor may not be available, students may proceed to Step II after an effort is made to communicate with the instructor.

Step II

Students may appeal in writing directly to the Vice President for Enrollment Management. The written appeal should include the following:

- The student's name, student number, address, telephone number and times and dates of availability.

- The specific complaint.

- The desired remedy.

Both the Dean of Instruction and the Vice President for Enrollment Management will confer with all necessary parties in an attempt to resolve the issue. Should the complaint still not be resolved, the Vice President for Enrollment Management will convene a meeting consisting of an equal number of faculty, students and administrators. The rules of the hearing will be the same as those expressed in Step IV. Both sides of the dispute will be heard. The decision will be reviewed* and forwarded to the student within ten (10) working days of the hearing. This decision marks the end of the internal judicial process.

* A review is conducted by the President and/or designee and may involve legal counsel.

Graduation Requirements
Degree Requirements

Schoolcraft College believes that having certain fundamental skills will enable students to learn and perform more successfully in future personal, educational, occupational and social endeavors. In each curriculum, the College requires general education courses in English, the humanities, the biological and physical sciences and the social sciences, which broaden a student's intellectual and cultural background.

In keeping with this philosophy, all entering students working toward an associate degree at Schoolcraft College must complete courses that fulfill the College's 10 General Education Goals. The General Education Goals ensure that Schoolcraft College graduates have basic competence in mathematics, writing, oral communication, reasoning, computer technology, science, personal development, the arts, social sciences, international perspective and diversity.

Associate Degree Requirements

To earn an associate degree, students must:

- Earn an overall grade-point average of 2.0 or better.

- Complete a minimum of 60 earned credit hours, with the exception of some career programs that require more than 60 credit hours.

In addition:

- The last 15 credit hours must be earned at Schoolcraft or a minimum of 50 credit hours earned at Schoolcraft. Exceptions may be considered by the Vice President for Instruction.

- Students must complete the 10 General Education Goals required for their associate degree.

- During their last semester, students must file the Intent to Graduate form before the published deadline date. (Please review a current Schedule of Classes for dates.) The College Registrar will verify all requests to determine compliance with course requirements, general education goals and validity of course waivers, if applicable.

Multiple Degree Requirements

Students earning additional degrees must earn a minimum of 15 additional credit hours at Schoolcraft College beyond the completion of their last degree for each new degree desired.

Certificates of Program Completion

Schoolcraft College awards two types of certificates. The pre-associate certificate is generally awarded before earning an associate degree. The post-associate certificate is awarded after receiving an associate degree. Both certificate programs are career rather than transfer oriented.

Pre-Associate Certificates

A pre-associate certificate is awarded upon satisfactory completion of a program of study with a minimum 2.0 grade-point average. Pre-associate certificates do not require completing General Education Goals. The courses for many pre-associate certificates are in the companion associate degree program.

Students who plan to earn an associate degree in a program area with a certificate option may consider earning both.

Post-Associate Certificates

Post-associate certificates are awarded by completing 15 or more credits within the certificate program at Schoolcraft College with a minimum 2.0 grade-point average. A student may enter the post-associate program after earning an associate degree from School-craft or another college. The courses within the post-associate certificate are designed to provide higher level specialized training in job-related skills.

Graduation Procedures

When applying for graduation, students must:

• Complete degree requirements from the current catalog (year of graduation).

OR

• Complete degree requirements from the catalog in effect the year a student first entered Schoolcraft College, or a subsequent catalog, provided that either selection is within the past six years. Students who have attended the College for five years or longer may be required to demonstrate skill in their fields before being approved as candidates for graduation.

OR

• Students who have not attended credit classes for three consecutive calendar years must follow the College catalog in effect when they return or a catalog subsequent to their return provided that either selection is within the past six years.

Any changes in these requirements must be approved in writing by the appropriate instructional administrator.

Intent to Graduate

Students who plan to earn an associate degree or a certificate of program completion must complete an Intent to Graduate form with a counselor before the published deadline date in the semester or session during which they will complete degree requirements. Once the Intent to Graduate form is completed with a counselor, the form is delivered to the Registrar's Office by the student.

Commencement—Graduation

The commencement ceremony is held each year at the end of the winter semester, usually in May. The College encourages students earning associate degrees or certificates of program completion to participate in commencement ceremonies. Students completing their program requirements the following spring or summer session are qualified to participate, but must submit an Application to Attend Commencement form to the Registrar's Office.

Associate Degree General Education Goals

Schoolcraft College is committed to the belief that a sound education has its foundation in general education. Through general education, students gain an opportunity to acquire the knowledge, skills and attitudes fundamental to attaining a more satisfying life, and which contribute to future personal, occupational, academic and civic success.

The College requires candidates for all associate degrees to have basic competence in ten general areas. Courses in these areas constitute Schoolcraft's General Education Goals requirement. The areas are math, writing, speaking and listening, reasoning, computer and information technology, science, the individual, arts and humanities, social institutions, and international perspectives and diversity. Some courses apply only to a particular associate degree program, and **students may substitute a department's more advanced course to satisfy a General Education Goal requirement.** Certain courses fulfill two goals.

A Schoolcraft College graduate with an associate degree should be able to meet the following goals:

Math

GOAL 1. Understand and perform computations using the concepts of collegiate level mathematics. Perform, with reasonable accuracy, the computations necessary to master mathematics courses at or above the 100 level.

Select one course.

Accounting 103
Culinary Arts only.
Accounting 201
Accounting 202
Business 105
Electronics 128
Electronics, Biomedical Engineering Technologist, Computer Service and Laser Technology majors.

Mathematics 105
Elementary Education majors only.
Mathematics 111
Mathematics 113
Nursing 116
Nursing majors only.

Writing

GOAL 2. Use written English competently. Organize and develop ideas into grammatical sentences and effective paragraphs; understand, conduct and employ basic research methods.

Select one combination of courses.

English 100 & English 106
Computer Service, Computer Aided Design: Tool/Mechanical, Culinary Arts, Culinary Management and Manufacturing for Quality Production majors only.

English 100 & English 116
Biomedical Engineering Technologist, Computer Service, Cosmetology Management, Electronics, Laser Technology, Child Care and Development and Correctional Science majors only.

English 101 & English 102

English 101 & English 106
Accounting, Small Business Management, Marketing and Applied Management, Medical Assisting, Correctional Science, Child Care Development and Special Needs Paraprofessional, Office Information Systems and Computer Information Systems majors only.

English 107
Broadcast Communications majors only.

Speaking and Listening

GOAL 3. Speak and listen competently and in an organized and critical manner with individuals in different situations.

Select one course or a combination of courses.

Communications 103
English 100
French 101 & French 102
Medical Assisting 180
Medical Assisting majors only.

Nursing 122
Nursing majors only.
Spanish 101 & Spanish 102

Reasoning

GOAL 4. Use systematic, critical and creative processes, drawing from knowledge of appropriate disciplines, to identify problems, analyze alternate solutions and make decisions.

Select one course.

Biology 101
Chemistry 111
Collegiate Skills 101
Collegiate Skills 130
Nursing majors only.
Correctional Science 261
Correctional Science majors only.
Criminal Justice 211
Criminal Justice majors only.
Electronics 127
Electronics majors only.
English 205

English 206
Geology 133
Nursing 120
Nursing majors only.
Philosophy 243
Philosophy 247
Physics 104
Physics 123
Physics 181
Political Science 105

Computer and Information Technology

GOAL 5. Understand the importance of information technology in today's society; demonstrate an ability to use computer systems to achieve professional, educational and personal objectives, respecting the legal and intellectual rights of individuals and organizations.

Select one course.

Allied Health Education 101
Computer Aided Design 103
Computer Graphics Technology 121
Computer Graphics Technology 123
Computer Graphics Technology 125
Computer Info. Systems 105
Computer Info. Systems 115
Computer Info. Systems 120
Computer Info. Systems 129

Computer Service 126
Computer Service, Biomedical Engineering Technologist, Electronics and Laser Technology majors only.
Culinary Arts 243
Culinary Arts majors only.
Office Info. Systems 100
Office Info. Systems 145
Office Info. Systems 165
Music 171

Science

GOAL 6. Understand the philosophy of science and the principles that are basic to scientific inquiry and research.

Select one course.

Biology 101

Biology 104

Biology 105

Business 217
Small Business Management, General Business and Marketing and Applied Management majors only.

Chemistry 111

Computer Info.
  Systems 250
Computer Information Systems majors only.

Criminal Justice 201
Correctional Science and Criminal Justice majors only.

Criminal Justice 209
Criminal Justice majors only.

Electronics 119

Electronics 127
Electronics, Computer Service, Biomedical Engineering Technologist and Laser Technology majors only.

EMT 107
Emergency Medical Technology and Fire Technology majors only.

Fire 200

Geography 105

Geography 130

Geography 212

Geology 133

Metallurgy 102

Metallurgy 280

Physics 104

Physics 123

Physics 181

The Individual

GOAL 7. Understand human behavior as it relates to individual development, mental and/or physical health and wellness.

Select one course.

Biology 103

Biology 105

Biology 115

Human Devel.
  Services 110

Physical Education 121

Physical Education 123

Physical Education 202

Psychology 153

Psychology 201

Arts and Humanities

GOAL 8. Understand the arts as a means of human expression; develop an awareness of the role of art in personal, social and cultural enrichment.

Select one course.

Art 105

Art 106

Art 113

Art 115

Art 116

Art 201

Business 122
General Business and Marketing and Applied Management majors only.

Culinary Arts 295
Culinary Arts majors only.

English 200

English 243

English 244

English 245

English 246

English 248

Humanities 106

Humanities 210

Music 102

Music 103

Music 105

Music 110

Music 111

Music 121

Music 131

Music 133

Music 141

Music 149

Music 164

Music 165

Theatre 120

Theatre 207

Theatre 208

Social Institutions

GOAL 9. Understand the major ideas and historical events that have shaped American society, and have knowledge of the functioning of the American social and political systems.

*Select one course **or** any two of the listed history courses.*

Anthropology 112

Anthropology 201

Biology 104

Economics 103

Economics 201

Geography 212

History 141

History 151

History 152

History 153

History 230

Political Science 105

Psychology 153

Psychology 201

Sociology 201

International Perspectives and Diversity

GOAL 10. Demonstrate an awareness of the contemporary global community; recognize the value of culturally diverse populations; and understand how major ideas in world societies and civilizations have shaped cultures.

Select one course.

Anthropology 201

Art 115

Art 116

Art 201

CGT 151

Economics 201

English 243

English 244

English 245

English 246

French 101

French 102

Geography 130

Geography 236

History 134

History 137

History 138

Humanities 106

Music 105

Philosophy 243

Sociology 201

Spanish 101

Spanish 102

Associate Degrees

Associate Degree candidates must satisfy the specific degree requirements listed below, including completion of the Schoolcraft College General Education Goals.

ASSOCIATE IN ARTS (AA)

The Associate in Arts degree is for students who plan to transfer to a senior institution and pursue a major in most transfer programs, including liberal arts.

1. English 101 and 102 required — 6 credit hours.
2. Humanities — 8 credit hours.
   Art, Foreign Language, History, Literature, Music Appreciation, Music Literature or Music Theory, Philosophy, Communication Arts, Theatre or Humanities.
3. Sciences — 8 credit hours (one course must be a laboratory course). Biology, Chemistry, Physical Geography, Geology, Mathematics, Physics.
4. Social Sciences — 8 credit hours.
   Anthropology, Economics, World Regional Geography, History, Political Science, Psychology or Sociology.
5. General Electives — 30 credit hours.
   Electives may be chosen from transferable 100 or 200 level courses.
6. Courses that apply to this degree must be at the 100 or 200 level.
7. Complete all Schoolcraft College General Education requirements.

ASSOCIATE IN APPLIED SCIENCE (AAS)

The Associate in Applied Science degree is for students who plan to seek career-oriented employment upon completion of a career program.

1. English — 6 credit hours required by individual curriculum.
2. Completion of one of the career programs listed in the Schoolcraft College catalog.
3. Courses that apply to this degree must be at the 100 or 200 level.
4. Complete all Schoolcraft College General Education requirements.

ASSOCIATE IN ENGINEERING (AE)

The Associate in Engineering degree is for students who plan to pursue a baccalaureate degree in engineering.

1. English 101 and 102 required — 6 credit hours.
2. Humanities — 6 credit hours.
   Art, Foreign Language, History, Literature, Music Appreciation, Music Literature or Music Theory, Philosophy, Communication Arts, Theatre or Humanities.
3. Sciences — 34 credit hours.
   Chemistry 111 required.
   Physics 211 and 212 required.
   Math 150, 151, 240 and 252 required.
4. Social Sciences — 7 credit hours.
   Economics 201 required.
5. Additional classes to satisfy Schoolcraft goal requirements and transfer institutions. 8–15 credit hours.

Courses that apply to this degree must be at the 100 or 200 level.

ASSOCIATE IN SCIENCE (AS)

The Associate in Science degree is for students who plan to pursue a baccalaureate degree in a science field.

1. English 101 and 102 required — 6 credit hours.
2. Humanities — 8 credit hours.
   Art, Foreign Language, History, Literature, Music Appreciation, Music Literature or Music Theory, Philosophy, Communication Arts, Theater and Humanities.
3. Sciences — 20 credit hours (one course must be a laboratory course).
   Biology, Chemistry, Physical Geography, Geology, Mathematics, Physics or Conservation.
4. Social Sciences — 8 credit hours.
   Anthropology, Economics, World Geography, World Regional Geography, History, Political Science, Psychology or Sociology.
5. General Electives — 18 credit hours. Electives may be chosen from transferable 100 or 200 level courses.
6. Courses that apply to this degree must be at the 100 or 200 level.
7. Complete all Schoolcraft College General Education requirements.

ASSOCIATE IN GENERAL STUDIES (AGS)

The Associate in General Studies degree is for students who plan to transfer to a senior institution and pursue a baccalaureate degree or who plan to individualize a program of study.

1. English 101 and 102 required — 6 credit hours.
2. Humanities — 8 credit hours.
   Art, Foreign Language, History, Literature, Music Appreciation, Music Literature or Music Theory, Philosophy, Communication Arts, Theatre or Humanities.
3. Sciences — 8 credit hours (one course must be a laboratory course). Biology, Chemistry, Physical Geography, Geology, Mathematics, Physics.
4. Social Sciences — 8 credit hours.
   Anthropology, Economics, World Regional Geography, History, Political Science, Psychology or Sociology.
5. General Electives — 30 credit hours. Electives may be chosen from transferable 100 or 200 level courses.
6. Complete all Schoolcraft College General Education requirements.

OR

1. English 101 and 102 required — 6 credit hours.
2. Any two of the following for a total of 24 credit hours:
   Humanities — 12 credit hours required.
   Sciences — 12 credit hours required.
   Social Sciences — 12 credit hours required.
3. General Electives — 30 credit hours required.
4. Courses that apply to this degree must be at the 100 or 200 level.
5. Complete all Schoolcraft College General Education requirements.

Substitution — Waiver

Students may wish to substitute one course for another, or have a course waived. Students who choose to use this procedure should see a counselor to discuss available options and initiate the process.

Change of Curriculum or Program

A change in a program of study (curriculum) must be recorded on a data form available in the Registrar's Office in the McDowell Center.
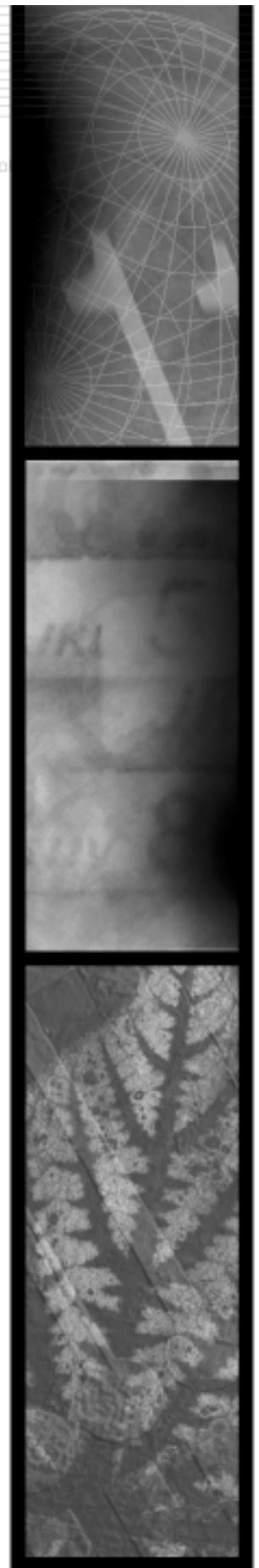
Schoolcraft College

Academic Programs

Academic Programs

There are many opportunities to earn college credit at Schoolcraft College. Students may choose to obtain transfer credit toward a four-year degree, earn an associate degree in a career-related area or obtain a certificate that can be applied toward a degree program while preparing for employment. Whatever students choose to study, we recommend that they plan the program with a Schoolcraft College counselor.

Programs of study fall into two major categories: Transfer and career.

- **Transfer programs** are designed to prepare students who plan to transfer to four-year colleges and universities after completing their coursework at Schoolcraft College.

- **Career programs** are designed to prepare students for entry into a specific job-related field, for advancement in a current job or for making a career change. Many career courses and programs will transfer to other colleges and universities. **See a Schoolcraft College counselor for additional information.**

Transfer Programs

Many students who come to Schoolcraft College plan to transfer to a university to earn a bachelor's degree before entering the job market. During the first two years, transfer students complete general education courses including English, mathematics, science, social science, and humanities, in addition to courses related to their specific program of study. Generally, universities accept 60 credit hours toward the bachelor's degree. Some universities will accept more than 60 credits. See a Schoolcraft College counselor for details.

The College works closely with four-year universities to provide current transfer information for a smooth transition from Schoolcraft College to a student's chosen university. Because each institution has different requirements, it is important that students planning to transfer follow this transfer checklist:

- Identify the four-year university of choice as early as possible.
- Work with a Schoolcraft College counselor to keep current with transfer issues, to satisfy your associate degree requirements and to ensure transferability of courses.
- Inquire about the MACRAO Agreement. See MACRAO Articulation Agreement. Visit the Member Services area at www.macrao.org.
- Meet with representatives from Michigan's four-year universities at Schoolcraft. Visitation dates and scholarship information are listed on the College cable television network, posted in the Counseling Center, on the transfer bulletin boards throughout campus and appear on Schoolcraft's marquees.
- Follow the transfer guide, prepared by the four-year university, which lists course requirements for your specific transfer program. See the Senior Colleges Agreement list for additional information.
- Apply to the four-year university of your choice in a timely manner. Transfer applications are available in the Counseling Center.
- Discover how your academic grades can transform into financial gain. Inquire about transfer scholarships in the Counseling Center.
- Attend transfer events.

The following transfer programs are offered at Schoolcraft College:

List of Transfer Programs

Business Related
- Accounting
- Advertising
- Business Administration
- Communications
- Computer Science
- Hotel Management

Education
- Elementary
- Secondary
- Special

Engineering
- Chemical
- Civil
- Computer Systems
- Electrical
- Environmental
- Industrial
- Materials Science
- Mechanical

Health Related
- Pre-Dental Hygiene
- Pre-Dentistry
- Pre-Medicine
- Pre-Mortuary Science
- Pre-Nursing
- Pre-Optometry

- Pre-Pharmacy
- Pre-Physical Therapy
- Pre-Veterinary

Liberal Arts
- Anthropology
- Art
- Biology
- Chemistry
- Conservation
- Criminal Justice
- Economics
- English
- Foreign Language
- Geography
- Geology
- History
- Mathematics
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Public Administration
- Social Work
- Sociology
- Statistics
- Theatre

AGREEMENTS WITH SENIOR INSTITUTIONS

Schoolcraft has numerous agreements with senior colleges and universities. Most of the agreements are in the form of transfer guides, course equivalencies or formal articulation agreements that provide specific course transfer information in a variety of majors. Following these agreements allows students to make a seamless transition to senior institutions. Schoolcraft College counselors will help students interpret these agreements.

Transfer agreements are available from the following:

Private	State
Cleary University	Central Michigan University
College for Creative Studies	Eastern Michigan University
Concordia College	Ferris State University
Davenport University	Grand Valley State University
Franklin University	Michigan State University
Kettering University	Michigan Technological University
Lawrence Tech. University	Northern Michigan University
Madonna University	Oakland University
Marygrove College	University of Michigan-Ann Arbor
Northwood University	University of Michigan-Dearborn
Saint Mary's College	University of Michigan-Flint
of Ave Maria	Wayne State University
Siena Heights University	Western Michigan University
Specs Howard	
University of Detroit Mercy	
William Tyndale College	
Walsh College	

MACRAO ARTICULATION AGREEMENT

The Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) Articulation Agreement was established to improve the process of transferring course work between two-year and four-year colleges in Michigan. Schoolcraft College participates in this agreement with the following four-year institutions:

Adrian College*
Albion College
Baker College
Calvin College*
Central Michigan University
Cleary University*
Concordia College*
Davenport University
Eastern Michigan University*
Ferris State University*
Finlandia University*
Grand Valley State University
Lake Superior State University*
Lawrence Tech. University*

Madonna University*
Marygrove College
Michigan State University*
Michigan Tech. University*
Northern Michigan University*
Northwood University
Oakland University*
Olivet College
Rochester College
Saginaw Valley State University*
Saint Mary's College
Siena Heights University*
Spring Arbor University
Western Michigan University

The MACRAO Agreement ensures that any student who is accepted as a transfer student by one of the colleges listed, has satisfied the basic general education requirements of that four-year institution. Students must complete the distribution of course work listed below:

• English Composition (ENG 101 & 102) .... 6 credit hours
• Humanities .... 8 credit hours
• Social Science .... 8 credit hours
• Science (must include one laboratory course) 8 credit hours

Courses in the humanities, social sciences and sciences must be selected from more than one discipline.

Schoolcraft College requires that students earn a grade of 2.0 for any class that is used to meet the MACRAO Agreement. Transcripts of Associate in Arts or Associate in Science degree graduates who qualify will automatically be stamped "MACRAO Agreement Satisfied."

Students meeting the MACRAO Agreement but not receiving an associate of arts or science degree must request from the Registrar's Office that transcripts be stamped "MACRAO Agreement Satisfied."

* These four-year colleges have attached special conditions (provisos) to their agreements. These provisos are available from the four-year colleges' Admissions Departments. Usually these conditions can be satisfied after transferring to the four-year college.

CAREER PROGRAMS

Schoolcraft College's career programs are based on both students' interests and community employment needs. They prepare students to enter challenging specialized careers after two years of college or less. Instructors emphasize job specific knowledge, and students can pursue most of these programs full- or part-time. Many of the courses in these programs will transfer to other colleges and universities. For additional transfer information, students should visit the Counseling Center and meet with a counselor.

List of Career Programs

Business Certificate
Accounting
Basic Business
Computer Information Systems
Network Specialist NetPrep
Office Specialist

Business Associate Degree
Accounting
Computer Information Systems
Cosmetology Management
General Business
Marketing and Applied Management
Office Administration
Small Business Management

Communications Arts Associate Degree
Broadcast Communications

Health Certificate
Coding Specialist
Medical Assisting [1]
Medical Transcription [1]
Nursing—Licensed Practical [1]

Allied Health Associate Degree
Health Information Technology [1]
Nursing—Licensed Practical [1]
Nursing—Registered [1]

Public Service Certificate
Child Care and Development
Child Care—Family Support

Child Care—Special Needs Paraprofessional
Child Development Associate
Emergency Medical Technology
Firefighter Technology

Public Service Associate Degree
Child Care and Development
Child Care—Family Support
Child Care—Special Needs Paraprofessional
Correctional Science
Criminal Justice
Criminal Justice with Academy
Emergency Medical Technology
Fire Technology
Fire Technology with Academy

Technology Certificate
Computer Aided Drafting—
    ElectroMechanical
Computer Aided Drafting—Technical
Computer Graphics Technology Foundation
Computer Graphics Technology
Computer Service Technician
Culinary Arts [1]
Electronics Service
Energy Specialist
Laser Technology
Metallurgy—Applied Physical
Music—Foundations
Music—Intermediate

Music—Recording Technology
Piano Teacher
Welding—Fabrication

Technology Associate Degree
Biomedical Engineering Technologist
Computer Assisted Manufacturing
Computer Aided Design—
    Mechanical Design
Computer Aided Design—Tool Design
Computer Graphics Technology
Culinary Arts [1]
Electronic Technology
Environmental Technology
Manufacturing for Quality Production
Metallurgy and Materials Science
Music—Recording Technology

Post-Associate Certificate [1]
Biomedical Applications
Computer Graphics Technology
Computer Information Systems
Culinary Management
Materials Science

[1]Students must be officially admitted to these programs prior to selecting any core/major courses. Call the Office of Admissions, 734-462-4426, for more information.

ACCOUNTING

ACCOUNTING (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00005)

The Accounting Program is designed to familiarize students with the work and challenges facing accountants. The program provides specialized and effective training for those planning to seek a career in accounting.

An accountant compiles and analyzes business records and prepares financial reports. An accountant may specialize in auditing, tax accounting, cost accounting, budget and control or system and procedures.

Students who satisfactorily complete the Accounting curriculum and all General Education requirements qualify for the Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

ACCT 201	Principles of Accounting	4
CIS 115*	Introduction to Computer Based Systems	3
or		
CIS 120*	Software Applications for the Microcomputer	3
ENG 101**	(Minimum Requirement)	3
PSYCH 153	Human Relations	3
or		
PSYCH 201	General Psychology	4
ELECTIVE	Goal #8 Course	1-3
		14-17

Winter Semester

ACCT 202	Principles of Accounting	4
CIS 180	Spreadsheet Applications	3
BUS 207	Business Law	3
ENG 106	Business English	3
COMA 103	Fundamentals of Speech	3
		16

Spring Session

ECON 202	Principles of Economics	4
or		
BUS 101	Introduction to Business	3
or		
ACCT 262	Payroll Accounting— Manual to Computerized	3
		3-4

SECOND YEAR
Fall Semester

ACCT 221	Intermediate Accounting	4
ACCT 226	Cost Accounting	4
POLS 105	Survey of American Government	3
ECON 201	Principles of Economics	4
		15

Winter Semester

ACCT 222	Intermediate Accounting	4
ACCT 238	Federal Tax Accounting	4
ACCT 260	Computer Based Accounting	3
or		
ACCT 261	Computerized Accounting	3
ELECTIVE	Goal #6 Course	3-4
		14-15

PROGRAM TOTAL 62-66 CREDITS

* Students must take CIS 115 before entering this program unless they have completed an introductory course elsewhere with a grade of 3.0 or better, or they have equivalent work experience. **CIS 120 is required**.

** Placement in the appropriate English course is based on students' placement test scores.

The above program meets all General Education requirements.

ACCOUNTING (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00001)

The Accounting Program is designed to familiarize students with the work and the challenges facing accountants. The courses provide background knowledge.

Students who satisfactorily complete an accounting certificate curriculum qualify for a Certificate of Program completion.

Fall Semester

ACCT 201	Principles of Accounting	4
BUS 101	Introduction to Business	3
or		
PSYCH 153	Human Relations	3
CIS 115*	Introduction to Computer Based Systems	3
or		
CIS 120*	Software Applications for the Microcomputer	3
ENG 101	English Composition	3
		13

Winter Semester

ACCT 202	Principles of Accounting	4
ACCT 238	Federal Tax Accounting	4
BUS 207	Business Law	3
ACCT 260	Computer Based Accounting	3
or		
ACCT 261	Computerized Accounting	3
		14

Spring Session

COMA 103	Fundamentals of Speech	3
ACCT 262	Payroll Accounting— Manual to Computerized	3
		6

PROGRAM TOTAL 33 CREDITS

* Students must take CIS 115 before entering this certificate program unless they have completed an introductory course elsewhere with a grade of 3.0 or better, or they have equivalent work experience. **CIS 120 is required**.

ACCOUNTING TRANSFER PROGRAM

(Schoolcraft program code # AA.00500)

The Accounting Transfer Program is a two-year associate degree program designed for students who wish to transfer to institutions offering a bachelor's degree in areas such as Financial, Managerial, Cost, or Tax Accounting.

Students who satisfactorily complete the Accounting transfer curriculum and the General Education requirements qualify for an Associate in Arts Degree.

FIRST YEAR
Fall Semester

ACCT 201	Principles of Accounting	4
BUS 101	Introduction to Business	3
ENG 101*	(Minimum Requirement)	3
ELECTIVE	History Course	3-4
		13-14

Winter Semester

ACCT 202	Principles of Accounting	4
CIS 115	Introduction to Computer Based Systems	3
ENG 102	English Composition	3
MATH 113	Intermediate Algebra for College Students	4
		14

Spring/Summer Session

COMA 103	Fundamentals of Speech	3
PSYCH 153	Human Relations	3
		6

SECOND YEAR
Fall Semester

ACCT 221	Intermediate Accounting	4
BIOL 101	General Biology	4
or		
GEOL 133	Physical Geology	4
ECON 201	Principles of Economics	4
ELECTIVE	Goal #8 Course	3
		15

Winter Semester

ACCT 222	Intermediate Accounting	4
BUS 207	Business Law	3
ECON 202	Principles of Economics	4
POLS 105	Survey of American Government	3
		14

PROGRAM TOTAL 62-63 CREDITS

* Placement in appropriate English course is based on student's placement test score.

Note: Slight variations in required courses may exist depending on the transfer institution. It is in the student's best interest to consult a counselor or check the Transfer Guides in the Counseling Department for specific requirements.

The above program meets all General Education requirements.

BIOMEDICAL ENGINEERING TECHNOLOGY

BIOMEDICAL ENGINEERING TECHNOLOGIST (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00128)

The Biomedical Engineering Technologist Program is designed to develop technicians able to maintain and service medical electronic equipment in hospitals, pathological and hematological laboratories, and industries engaged in the manufacture and sale of medical electronic equipment.

Students should be prepared to spend two additional semesters in the required two internships. After successfully completing the first two semesters, students are qualified to take the first internship course, BMET 254. At the conclusion of the semester, students will return to campus to continue studies. After completing an additional semester, students may take the second internship course, BMET 255. Failure to complete an internship is cause for student termination from the program.

Students who satisfactorily complete the program and all General Education requirements qualify for an Associate in Applied Science Degree.

Students must meet with the BMET Internship Coordinator to enroll in BMET 254 and BMET 255, to be eligible to fulfill program requirements.

FIRST YEAR
Fall Semester

ELECT 127	DC Circuits and Mathematical Modeling	5
ELECT 128	AC Circuits and Mathematical Modeling	5
ELECT 119	Basic Measurement and Reporting Skills.	3
		13

Winter Semester

COMPS 147	Computer and Peripheral Maintenance and Management	4
ELECT 129	Diodes and Transistors	3
BMET 115	Biomedical Instrumentation Terminology and Safety	2
ENG 100	Communication Skills	3
		12

Spring Session

ELECT 226	Digital Logic Circuits	4
ENG 106	Business English	3
		7

15 Weeks (See Coordinator)

BMET 254	Biomedical Equipment Internship 1	3
		3

SECOND YEAR
Fall Semester

ELECT 134	Introduction to Microcontrollers	3
ELECT 206	Operational Amplifiers and Linear Integrated Circuits	4
POLS 105	Survey of American Government	3
PSYCH 153	Human Relations	3
HUM 106	Introduction to Art and Music	1
		14

Winter Semester

ELECT 229	Electronics Troubleshooting	3
ELECT 204	Microcomputer Interface	3
BMET 203	Transducers	5
BIOL 105	Elementary Human Anatomy and Physiology 1	4
		15

15 Weeks (See Coordinator)

BMET 255	Biomedical Equipment Internship 2	3
		3

PROGRAM TOTAL 67 CREDITS

The above program meets all General Education requirements.
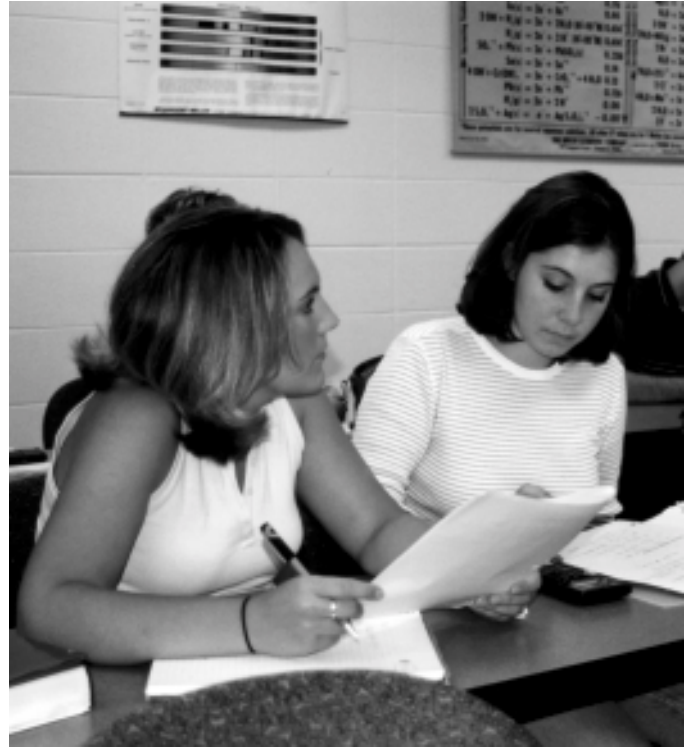
BIOMEDICAL APPLICATIONS (POST-ASSOCIATE CERTIFICATE)

(Schoolcraft program code # PAC.00178)

This post-associate certificate in Biomedical Applications is designed to provide working professionals who have experience and/or training in the Biomedical Engineering field opportunities to study some closely related materials being integrated into the medical technology field.

Completion of this program will enhance a professional's ability to meet the current and future changing technologies related to the biomedical field. These courses are also intended to meet requirements for current and future professional certification.

Prior to admission to this program, students must have already completed a minimum of an accredited Associate Degree in Applied Science. The post-associate certificate is awarded upon successful completion of 15 credit hours (exact number may vary slightly due to credit value or content of course).

BIOMEDICAL APPLICATIONS
CERTIFICATE REQUIREMENTS

CIS 235	Introduction to Microcomputer Operations	3
CIS 271	NetPrep Local Area Networks	3
CIS 272	NetPrep Wide Area Networks	3
CIS 273	NetPrep TCP/IP and Network Architectures	3
LASR 232	Laser Systems and Applications	4

Completion of a minimum of 15 credit hours is essential. Courses can be taken through independent study. Students may choose an applicable 200-level elective.

BROADCAST COMMUNICATIONS

BROADCAST COMMUNICATIONS (ASSOCIATE DEGREE)

(Schoolcraft program code # AA.00041)

Students who complete the Associate in Arts Degree with a major in Broadcast Communications and fulfill General Education requirements will have developed the skills necessary to function as entry-level employees in radio, television, cable television or industrial television settings. The sixty-hour program is articulated with the Specs Howard School (SHS) of Broadcast Arts, Inc. located in Southfield, Michigan. Fifteen hours of credit are awarded for completion of the thirty-week SHS Certificate Program and the remaining forty-five semester hours of credit are taken at Schoolcraft. The program can begin at either school.

Note: Tuition at the Specs Howard School is higher than at Schoolcraft College.

TYPICAL PROGRAM SCHEDULE
SPECS HOWARD SCHOOL
Fall Semester

Vocal Technique	1.5
Broadcast Concept	1.5
Broadcast Writing	1.5
Interpersonal Communication Development	0.5
Workshop	1.5
	6.5

SPECS HOWARD SCHOOL
Winter Semester

Technical Competency	0.5
Studio Class	2.0
WLDN Air Shift	1.0
WLDN News Shift	2.0
Television Production I, II, III, IV, V	3.0
	8.5

SCHOOLCRAFT COLLEGE
FIRST YEAR
Fall Semester

ENG 101	English Composition	3
COMA 103	Fundamentals of Speech	3
BUS 101	Introduction to Business	3
POLS 105	Survey of American Government	3
ELECTIVE	Goal #1 Course	4
		16

Winter Semester

ENG 107	Introduction to Journalism	3
PSYCH 201	General Psychology	4
COMA 201	Discussion	3
GEOG 130	Physical Geography	4
CIS 105	Computer Orientation	1
		15

SECOND YEAR
Fall Semester

THEA 241	Oral Interpretation of Literature	3
THEA 208	Acting 1	3
SOC 201	Principles of Sociology	3
GEOL 133	Physical Geology	4
ELECTIVE		1-3
		14-16

PROGRAM TOTAL 60-62 CREDITS

The above program meets all General Education requirements.
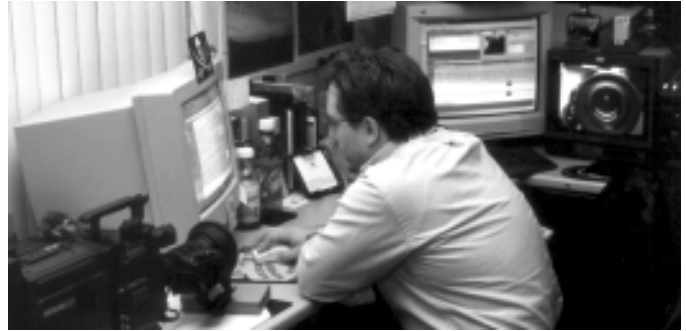
BUSINESS—GENERAL

BUSINESS-GENERAL (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00008)

The General Business Program is intended to provide students with a balanced curriculum composed of liberal arts, general business, and technical skills that provide a unified awareness of the activities and operational setting of a business. The program is intended to lay a foundation for a variety of entry-level positions in business that may ultimately lead to specialized study in some area of management training.

Students who satisfactorily complete the General Business curriculum and all General Education requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

BUS 101	Introduction to Business	3
BUS 105	Business Math	3
BUS 122	Advertising	3
CIS 115*	Introduction to Computer Based Systems	3
or		
CIS 120*	Software Applications for the Microcomputer	3
ENG 101**	English Composition	3
		15

Winter Semester

BUS 120	Principles of Salesmanship	3
ACCT 103	Introduction to Accounting	4
or		
ACCT 201	Principles of Accounting	4
ENG 106	Business English	3
POLS 105	Survey of American Government	3
PSYCH 153	Human Relations	3
or		
PSYCH 201	General Psychology	4
		16-17

SECOND YEAR
Fall Semester

BUS 217	Business Management	3
BUS 220	Supervision	3
ENG 116	Technical Writing	3
ECON 103	Introductory Economics	3
or		
ECON 201	Principles of Economics	4
ELECTIVE***		3
		15-16

Winter Semester

BUS 207	Business Law	3
BUS 226	Principles of Marketing	3
COMA 103	Fundamentals of Speech	3
HIST 230	U.S. Business History	3
ELECTIVE***		3
		15

PROGRAM TOTAL 61-63 CREDITS

  * Students must take CIS 115 unless they have completed an introductory course elsewhere with a grade of 3.0 or better or have equivalent work experience. CIS 120 required.

 ** Placement in the appropriate English course is based on students' placement test scores.

*** Suggested electives: BUS 161, 162, 204, 205, 208, 230 CIS 215.

The above program meets all General Education requirements.

BUSINESS-BASIC (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00002)

The Basic Business Program introduces students to accounting, economics and the basics of business. It also develops students' basic skills in keyboarding and computer operations.

Students who satisfactorily complete a business certificate curriculum qualify for a Certificate of Program completion.

Fall Semester

BUS 101	Introduction to Business	3
ACCT 103	Introduction to Accounting	4
or		
ACCT 201	Principles of Accounting	4
OIS 100	Keyboarding 1	2
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
PSYCH 153	Human Relations	3
		15

Winter Semester

BUS 217	Business Management	3
ECON 103	Introductory Economics	3
or		
ECON 201	Principles of Economics	4
ENG 106	Business English	3
COMA 103	Fundamentals of Speech	3
CIS 115*	Introduction to Computer Based Systems	3
or		
CIS 120*	Software Applications for the Microcomputer	3
		15-16

Spring Session

BUS 105	Business Math	3
		3

PROGRAM TOTAL 33-34 CREDITS

 * Students must take CIS 115 unless they have completed an introductory course elsewhere with a grade of 3.0 or better or have equivalent work experience. CIS 120 required.

CHILD AND FAMILY SERVICES

CHILD CARE AND DEVELOPMENT (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00020)

To work effectively with children, child care workers must be sensitive to and understand the developmental stages of children. This curriculum contains theoretical and practical experiences to prepare students to work in child care centers, licensed child care homes, nursery schools and federally funded programs such as Headstart.

Practicum experiences in the college Children's Center will expose students to sound child caring techniques in a supportive atmosphere. Off-campus placements at local facilities will also be used to provide additional and varied opportunities for experience.

Students will meet criteria established by the State of Michigan to direct a child care facility.

The Associate in Applied Science Degree is awarded upon successful completion of the curriculum and all General Education requirements.

FIRST YEAR
Fall Semester
CCD 116	Child Development	3
CCD 118	Infant and Toddler Care	3
CCD 101	Preschool Child Care	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
PSYCH 153	Human Relations	3
or		
PSYCH 201	General Psychology	4
		15-16

Winter Semester
CCD 150	Child Care Practicum 1	3
CCD 115	School Age Child Care	3
CCD 216	The Child with Special Needs	3
ENG 106	Business English	3
or		
ENG 102	English Composition	3
ELECTIVE	Goal #6 Course	3-4
		15-16

Spring Session
CCD 126	Creative Activities	3
CCD 170	Behavior Management	3
		6

SECOND YEAR
Fall Semester
CCD 200	Child Care Practicum 2	3
CCD 211	Children and Youth in Groups	3
CCD 100	Introduction to Child Welfare Services	3
ELECTIVE	Goal #1 Course	3-4
PE 121	First Aid	2
ELECTIVE	Goal #5 Course	1-3
		15-18

Winter Semester
CCD 121	The Adolescent	3
CCD 214	Operation and Maintenance of a Child Care Facility	3
COMA 103	Fundamentals of Speech	3
ELECTIVE	Goal #4 Course	3
ELECTIVE	Goal #8 & Goal #10 Course	1-4
		13-16

PROGRAM TOTAL 64-72 CREDITS

The above program meets all General Education requirements.

CHILD CARE AND DEVELOPMENT (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00031)

The Child Care and Development Certificate Program provides an educational foundation for understanding children's development and children's needs. The program emphasizes helping students acquire the knowledge and skills needed to plan developmentally appropriate learning environments, nurturing strategies and activities for children which promote their physical, intellectual, social and emotional growth and well being.

Fall Semester
CCD 116	Child Development	3
CCD 118	Infant and Toddler Care	3
CCD 101	Preschool Child Care	3
CCD 150	Child Care Practicum 1	3
CCD 216	The Child with Special Needs	3
		15

Winter Semester
CCD 100	Introduction to Child Welfare Services	3
CCD 126	Creative Activities	3
CCD 211	Children and Youth in Groups	3
CCD 214	Operation and Maintenance of a Child Care Facility	3
CCD 200	Child Care Practicum 2	3
		15

Spring Session
CCD 170	Behavior Management	3
PE 121	First Aid	2
		5

PROGRAM TOTAL 35 CREDITS

The Children's Center at Schoolcraft College is accredited by the National Association for the Education of Young Children (NAEYC) and is the foremost authority in the care of children birth through age eight. The accreditation we earned is held by only three percent of centers in Michigan and seven percent of centers in the United States.

For more information please contact:
National Association for the Education of Young Children (NAEYC)
1509 16th Street N.W.
Washington, DC 20036
1-800-424-2460
www.naeyc.org

CHILD CARE—SPECIAL NEEDS PARAPROFESSIONAL (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00021)

Working with children and adults with disabilities requires sensitivity to individual needs and an ability to help identify and develop the strengths of each individual. This curriculum contains theoretical and practical experience designed to prepare students to work in public school special education classrooms, inclusive classrooms and resource rooms, institutional settings, sheltered workshops, job coach programs, group homes, or supported-living programs. Students learn to work effectively as members of professional special needs teams.

Students who successfully complete the program will meet the requirements of the State Department of Education for Instructional Assistants.

The Associate in Applied Science Degree is awarded upon successful completion of the curriculum and all General Education requirements.

FIRST YEAR
Fall Semester

CCD 116	Child Development	3
CCD 216	The Child with Special Needs	3
CCD 105	Introduction to Developmental Disabilities	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
PSYCH 153	Human Relations	3
or		
PSYCH 201	General Psychology	4
		15-16

Winter Semester

CCD 150	Child Care Practicum 1	3
CCD 215	Methods and Curricula for Persons with Developmental Disabilities	3
CCD 130	Learning Disabilities	3
ENG 106	Business English	3
or		
ENG 102	English Composition	3
ELECTIVE	Goal #6 Course	3-4
		15-16

Spring Session

CCD 126	Creative Activities	3
CCD 170	Behavior Management	3
		6

SECOND YEAR
Fall Semester

CCD 140	Emotional Impairment	3
CCD 211	Children and Youth in Groups	3
CCD 200	Child Care Practicum 2	3
ELECTIVE	Goal #1 Course	3-4
PE 121	First Aid	2
ELECTIVE	Goal #5 Course	1-3
		15-18

Winter Semester

CCD 113	Special Education Programs and Supported Community Living	3
CCD 100	Introduction to Child Welfare Services	3
or		
CCD 101	Preschool Child Care	3
or		
CCD 115	School Age Child Care	3
or		
CCD 121	The Adolescent	3
COMA 103	Fundamentals of Speech	3
ELECTIVE	Goal #4 Course	3
ELECTIVE	Goal #8 & Goal #10 Course	1-4
		13-16

PROGRAM TOTAL 64-72 CREDITS

The above program meets all General Education requirements.

CHILD CARE—SPECIAL NEEDS PARAPROFESSIONAL (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00032)

The Child Care—Special Needs Paraprofessional Certificate Program provides an educational foundation for understanding normal human development and the special needs of individuals who have mental, physical and/or emotional disabilities. The program emphasizes helping students develop the sensitivity and skills to identify and promote the potential of each individual regardless of handicapping condition.

Fall Semester

CCD 116	Child Development	3
CCD 216	The Child with Special Needs	3
CCD 105	Introduction to Developmental Disabilities	3
CCD 150	Child Care Practicum 1	3
CCD 140	Emotional Impairment	3
		15

Winter Semester

CCD 215	Methods and Curricula for Persons with Developmental Disabilities	3
CCD 130	Learning Disabilities	3
CCD 113	Special Education Programs and Supported Community Living	3
CCD 211	Children and Youth in Groups	3
CCD 200	Child Care Practicum 2	3
		15

Spring Session

CCD 170	Behavior Management	3
PE 121	First Aid	2
		5

PROGRAM TOTAL 35 CREDITS

CHILD DEVELOPMENT ASSOCIATE (CDA) (CERTIFICATE PROGRAM)

(Schoolcraft program code # 1YC.00034)

The Child Development Associate (CDA) Program represents a national effort to credential qualified caregivers who work with children from birth to age five. At Schoolcraft College, CDA preparation consists of meeting the objectives and requirements of eight courses in the Child Care and Development curriculum that address the Competency Goals in 13 Functional Areas identified by the CDA Professional Preparation Program. Candidates must also document 480 hours of experience working with children within the past five years, prepare a professional resource file, and be formally observed working with children.*

The following are the required courses necessary to meet CDA competencies.

CCD 116	Child Development	3
CCD 118	Infant and Toddler Care	3
CCD 101	Preschool Child Care	3
CCD 100	Child Welfare Services	3
CCD 150	Child Care Practicum 1	3
CCD 170	Behavior Management	3
CCD 126	Creative Activities	3
CCD 214	Operation and Maintenance of a Child Care Facility	3
CCD 155	CDA Assessment Preparation	1

PROGRAM TOTAL 25 CREDITS

* Upon successful completion of the required courses, students earn a Schoolcraft College certificate. To earn the CDA, candidates may then apply to the Council for Early Childhood Professional Recognition. The Council charges an application fee, assigns a representative to assess the candidate and awards this national credential.

CHILD CARE—FAMILY SUPPORT
(ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00243)

The Family Support Associate Degree offers training in current best practice and principles in family support. The approach empowers families by identifying and nurturing families' strengths, by connecting families to community resources and by helping parents become advocates for their families. Students will be prepared to work with a variety of health, education and human service agencies. Students will gain a broad range of knowledge and skills that include:

1) Understanding the empowerment and family support approach to family development.
2) Developing communication skills.
3) Establishing and maintaining a mutually respectful relationship with families.
4) Helping families assess their strengths and needs.
5) Building communities of support.
6) Increasing sensitivity to and appreciation of many cultures.

FIRST YEAR
Fall Semester

CCD 180	Introduction to Family Support	3
CCD 116	Child Development	3
CCD 100	Child Welfare Services	3
SOC 201	Principles of Sociology	3
ENG 100	Communication Skills (Goal #2)	3
or		
ENG 101	English Composition	3
		15

Winter Semester

CCD 185	Empowering Families	3
SOC 209	Marriage and Family	3
CCD 216	The Child with Special Needs	3
ENG 106	Business English (Goal #2)	3
or		
ENG 102	English Composition	3
COMA 103	Fundamentals of Speech (Goal #3)	3
		15

Spring Session

ELECTIVE*	CCD	3
ELECTIVE	Goal #5 Course	1-3
		4-6

SECOND YEAR
Fall Semester

SOC 205	Social Problems	3
CCD 211	Children and Youth in Groups	3
ELECTIVE	Goal #1 Course	3-4
PSYCH 153	Human Relations (Goals #7 & #9)	3
ANTH 201	Cultural Anthropology (Goal #10)	3
		15-16

Winter Semester

CCD 202	Family Support Practicum	3
SOC 220	Urban Sociology	3
ELECTIVE	Goal #4 Course	3
ELECTIVE	Goal #6 Course	3-4
ELECTIVE	Goal #8 Course	1-4
		13-17

PROGRAM TOTAL 62-69 CREDITS

* Suggested electives: CCD 101, 115, 118, 121.

The above program meets all General Education requirements.

CHILD CARE—FAMILY SUPPORT
(ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00143)

The Family Support Certificate Program provides an educational foundation for understanding current best practice and principles in family support. The program emphasizes the identification of families' strengths and becoming familiar with and linking families to community resources.

Fall Semester

CCD 180	Introduction to Family Support	3
CCD 100	Child Welfare Services	3
SOC 201	Principles of Sociology	3
CCD 116	Child Development	3
SOC 209	Marriage and Family	3
		15

Winter Semester

CCD 185	Empowering Families	3
SOC 205	Social Problems	3
SOC 220	Urban Sociology	3
CCD 216	The Child with Special Needs	3
CCD 211	Children and Youth in Groups	3
		15

Spring Session

CCD 202	Family Support Practicum	3

PROGRAM TOTAL 33 CREDITS

COMPUTER AIDED DESIGN—ASSOCIATE DEGREE PROGRAMS

MECHANICAL AND TOOL DESIGN OPTIONS

As technology capability shifts from two dimensional drafting to three dimensional modeling, the training of technicians will need to change with it. In addition to understanding the basic principles of dimensioning and drafting, future designers will need to be trained in understanding the complete product development process and how computers have connected them. The skills needed by Tool Designers have grown to include how to import and manipulate 3D models and how to interface with simulation and machining programs. Mechanical Designers need to be trained in creating, editing, linking and distributing data files which represent the product information while understanding the processes necessary to create and distribute the product.

GENERAL EDUCATION CORE COURSES

Dept.	Course No.	Course Title	Credits
ENG	100*	Communications (Goal #2 & Goal #3)	3
ENG	106*	Business English	3
HUM	106*	Introduction to Art and Music (Goal #8 & #10)	1
MATH	113	Intermediate Algebra for College Students (Goal #1)	4
POLS	105*	Survey of American Government (Goals #4 & #9)	3
PSYCH	153*	Human Relations (Goals #7 & #9)	3
			CREDITS 17

* Other courses meeting the General Education Goal(s) may be substituted.

CURRICULUM CORE COURSES

Dept.	Course No.	Course Title	Credits
CAD	103	Engineering Graphics (Goal #5)	3
CAD	105	Mechanical Engineering Drawing	4
CAD	107	Detailing	4
DRFG	114	Descriptive Geometry	3
CAD	201	I-DEAS Level 1	4
DSGN	180	Machine Elements and Design	4
DSGN	240	Tool and Die Design	4
DSGN	260	Jig and Fixture Design	4
MATH	119	Trigonometry	3
MET	102	Introduction to Materials Science (Goal #6)	3
MET	114	Advanced Materials and Applications	3
MFG	102	Basic Machining, Measurements and Manufacturing Processes	3
CAM	102	Introduction to Computer Numerical Control (CNC)	3
			CREDITS 45

CAD/MECHANICAL

(Schoolcraft program code # AAS.00170)

Majors will take a Science Elective from the following list:

Dept.	Course No.	Course Title	Credits
PHYS	123*	Applied Physics	5
ELECT	127	DC Circuits and Math Modeling	5
ELECT	135	Fluid Power	4
CHEM	111	General Chemistry	4
LASR	103*	Laser Concepts	4
			4-5
		PROGRAM TOTAL CREDITS 66-67	

* Or higher level course

The above program meets all General Education requirements.

CAD/TOOL DESIGN

(Schoolcraft program code # AAS.00140)

Majors will take:

Dept.	Course No.	Course Title	Credits
ELECT	135	Fluid Power	4
			4
		PROGRAM TOTAL CREDITS 66	

The above program meets all General Education requirements.

COMPUTER AIDED DRAFTING (CAD)

CAD-DRAFTING — ELECTROMECHANICAL (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00118)

Through this series of specialized courses students will develop saleable skills in Computer Aided Electromechanical Drafting. Students may select, at any time, to work towards an Associate Degree in Computer Aided Design.

Students who satisfactorily complete the Drafting Electro-Mechanical Certificate curriculum qualify for a certificate of program completion.

FIRST YEAR
Fall Semester

CAD 103	Engineering Graphics	3
ELECT 135	Fluid Power	4
ELECT 127	DC Circuits and Mathematical Modeling	5
MATH 113	Intermediate Algebra for College Students	4
		16

Winter Semester

CAD 105	Mechanical Engineering Drawing	4
DSGN 113	Hydraulics/Pneumatics/Electrical Schematics	3
ELECT 128	AC Circuits and Mathematical Modeling	5
		12

Spring Session

CAD 107	Detailing	4
		4

PROGRAM TOTAL 32 CREDITS

CAD-DRAFTING—TECHNICAL (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00119)

Skills offered in these courses prepare the student for employment as a CAD drafter or detailer. Students at any time may transfer into the CAD Associate Degree Program.

Students who satisfactorily complete the CAD-Drafting—Technical Certificate Program curriculum qualify for a certificate of program completion.

FIRST YEAR
Fall Semester

CAD 103	Engineering Graphics	3
MFG 102	Basic Machining, Measurements and Manufacturing Processes	3
MATH 113	Intermediate Algebra for College Students	4
		10

Winter Semester

CAD 105	Mechanical Engineering Drawing	4
MET 102	Introduction to Materials Science	3
MATH 119	Trigonometry	3
		10

Spring Session

CAD 107	Detailing	4
CAD 201	I-DEAS Level 1	4
		8

PROGRAM TOTAL 28 CREDITS

COMPUTER ASSISTED MANUFACTURING

COMPUTER ASSISTED MANUFACTURING (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00150)

The CAM Technology graduate will comprehend, apply and analyze the processes, materials, equipment and software used in manufacturing to produce a product. The successful graduate will be able to use CAD/CAM software to generate CNC coding.

The Associate in Applied Science Degree is awarded upon successful completion of the curriculum and all General Education Goal requirements.

FIRST YEAR
Fall Semester

MFG 102	Basic Machining, Measurements and Manufacturing Processes	3
CAM 102	Introduction to Computer Numerical Control (CNC)	3
COMPS 126	Technical Programming	3
CAD 101	Introduction to Computer Aided Drafting	3
MATH 113	Intermediate Algebra for College Students	4
		16

Winter Semester

MFG 103	Manufacturing Theory and Machine Operation	3
CAM 103	Computer Numerical Control Programming	3
MET 102	Introduction to Materials Science	3
ELECT 135	Fluid Power	4
MATH 119	Trigonometry	3
		16

SECOND YEAR
Fall Semester

ENG 100	Communication Skills	3
MET 114	Advanced Materials and Applications	3
PSYCH 153	Human Relations	3
LASR 103	Laser Concepts	4
		13

Winter Semester

ENG 106	Business English	3
HUM 106	Introduction to Art and Music	1
POLS 105	Survey of American Government	3
CAM 205	Computer Aided Machining (CAD/CAM)	3
QM 106	Introduction to Quality Systems	3
ELECTIVE		3
		16

PROGRAM TOTAL 61 CREDITS

The above program meets all General Education requirements.

COMPUTER GRAPHICS TECHNOLOGY

The Computer Graphics Technology Program prepares people for a career in the fields of graphic design and computer graphics. Students learn how to use professional level software, hardware and peripherals and to apply the principles of design, typography, and color theory to the creation of effective print and electronic based visual communication. The student who satisfactorily completes the CGT Curriculum and meets all General Education Requirements qualifies for an Associate of Applied Science Degree.

COMPUTER GRAPHICS TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00028)

Complete all the General Education Goal Courses, the CGT Foundation Track, one CGT Specialist Track, and the Capstone Courses (61-63 credit hours)

COMPUTER GRAPHICS TECHNOLOGY FOUNDATION (CERTIFICATE)

(Schoolcraft program code #1YC.00164)

Complete the CGT Foundation Track and additional Design Electives to reach a minimum total of 15 credit hours.

COMPUTER GRAPHICS TECHNOLOGY (CERTIFICATE)

(Schoolcraft program code # 1YC.00136)

Complete the CGT Foundation Track, one CGT Specialist Track, and additional Design Electives to reach a minimum total of 30 credit hours.

COMPUTER GRAPHICS TECHNOLOGY (POST-ASSOCIATE DEGREE CERTIFICATE)

(Schoolcraft program code # PAC.00181)

Complete one CGT Specialist Track and additional Design Electives to reach a minimum total of 15 credit hours. Students must have already earned the CGT Associate Degree or completed a similar program at an accredited institution.

Note: For best success, students should contact the CGT department for expected curriculum changes and upgrades.

General Education Goal Courses

Math	Take any course which meets Goal #1	3
Writing	Take any sequence of courses which meets Goal #2	6
Speaking & Listening	Take any course which meets Goal #3	3
Reasoning	Take any course which meets Goal #4	3
Science	Take any course which meets Goal #6	4
The Individual	Take any course which meets Goal #7	3
Social Institutions	Take any course which meets Goal #9	3

GENERAL EDUCATION CORE CREDITS 25

Computer Graphics Technology Foundation Track

ART 105 or	Basic Drawing (Goal #8)	3
ART 106	Basic Design (Goal #8)	3
CGT 121	Publishing/PageMaker (Goal #5)	3
CGT 123	Illustration/Illustrator (Goal #5)	3
CGT 125	Digital Imaging 1/Photoshop (Goal #5)	3
ART 116 or	Art History (Goal #10)	4
ART 201 or	Art Appreciation (Goal #10)	3
CGT 151	Survey of Design (Goal #10)	2

CGT FOUNDATION TRACK CREDITS 14-16

CGT Specialist Tracks

All CGT students must complete the CGT Foundation track, or demonstrate equivalent competency, before beginning any Specialist Track.

Publishing

CGT 110	Graphics	2
CGT 113	Page Layout	2
CGT 226	Digital Imaging 2/Photoshop	3
Design Electives*		7
CGT 231	Electronic Publishing	3

PUBLISHING TRACK CREDITS 17

Animation

CGT 155	Storyboarding	2
CGT 208	Premiere	3
CGT 215	Motion Graphics	3
Design Electives*		6
CGT 246	2D Animation	3

ANIMATION TRACK CREDITS 17

Multimedia

CGT 141	Multimedia/Director	3
CGT 155	Storyboarding	2
CGT 206	Multimedia/Lingo or	3
CGT 211	Flash	3
Design* or Music Elective		6
CGT 242	Multimedia	3

MULTIMEDIA TRACK CREDITS 17

Web Design

CGT 135	Web Graphics	3
CGT 152	Screen Design	2
CGT 211	Flash or	3
CIS 238	Java Script	3
Design Electives*		6
CGT 236	Web Design	3

WEB DESIGN TRACK CREDITS 17

 * Elective courses in the Specialist Tracks can be selected from the following list: ART 105, ART 106, ART 125, ART 126, CGT 150, CGT 151, CGT 152, CGT 154, CGT 155, CGT 156, CGT 157. Appropriate courses from other disciplines, such as Advertising, Business, Marketing, or Computer Information Systems may be substituted with department approval. A course already required may not be used to fulfill an elective requirement.

Capstone Courses

All CGT Associate Degree students must complete:

CGT 153	Portfolio Development	2

as well as one of the following to reach a minimum of 61 credits for the program:

CGT 250	Practical Application (Goal #10)	3
CGT 270	Internship (Requires consent of the Department)	3
CGT 298	Honors Studies (Requires consent of the Department)	3

CAPSTONE CREDITS 5
PROGRAM TOTAL 61-63 CREDITS

The above program meets all General Education requirements.

COMPUTER INFORMATION SYSTEMS

**COMPUTER INFORMATION SYSTEMS—PROGRAMMING
(ASSOCIATE DEGREE - OPTION 1)**

(Schoolcraft program code # AAS.00012)

As business and industry embrace new technology and procedures, the need for specially trained people accelerates. This program is designed to prepare the student for a position as an entry-level programmer. Students will learn to become proficient in following directions, analyzing problems, and writing step-by-step instructions so that the computer will efficiently process the data needed to solve these problems. Accuracy, persistence, patience, and the ability to communicate both orally and in writing are important characteristics a computer programmer should possess.

Upon successful completion of this curriculum and all General Education requirements, Schoolcraft College awards an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester
CIS 115	Introduction to Computer Based Systems	3
CIS 129	Introduction to Programming	3
MATH 113	Intermediate Algebra for College Students	4
COMA 103	Fundamentals of Speech	3
ELECTIVE**	CIS	3
		16

Winter Semester
CIS 170 or	Microsoft Windows	3
CIS 178	Technical Microsoft Windows	3
CIS 225	Database Management Systems for the Microcomputer	3
ENG 101	English Composition	3
ACCT 201	Principles of Accounting	4
CIS 211	Introduction to C++	2
		15

Spring Session
POLS 105	Survey of American Government	3
		3

SECOND YEAR
Fall Semester
CIS 175 or	Visual Basic	3
CIS 176	Visual Basic.NET	3
CIS 250	Systems Development and Design	4
CIS 255 or	Introduction to LINUX	3
CIS 260	Introduction to UNIX	3
HUM 106	Introduction to Art and Music	1
ELECTIVE**	CIS	3
		14

Winter Semester
CIS 221	Advanced C++	2
CIS 290	Object-Oriented Programming with Java	3
ENG 102	English Composition	3
ELECTIVE**	CIS	3
PSYCH 153 or	Human Relations	3
PSYCH 201	General Psychology	4
		14-15

PROGRAM TOTAL 62-63 CREDITS

** Students may select one of the following courses if not previously taken: CIS 120, 177, 185, 210, 212, 223, 226, 233, 238, 251, 255, 256, 260, 275, or 281.

The above program meets all General Education requirements.

**COMPUTER INFORMATION SYSTEMS—
MICROCOMPUTER SUPPORT TECHNICIAN
(ASSOCIATE DEGREE - OPTION 2)**

(Schoolcraft program code # AAS.00012)

As business and industry embrace new technology and procedures, the need for specially trained people accelerates. This program is designed to prepare the student for entry-level positions supporting users of microcomputer components of the operating system. Students will learn popular software applications and understand the microcomputer components of the operating system. Technicians will assist microcomputer users by recommending appropriate hardware and software, interpreting software manuals, organizing the disk storage, and creating systems solutions using the microcomputer.

Upon successful completion of this curriculum and all General Education requirements, Schoolcraft College awards an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester
CIS 115	Introduction to Computer Based Systems	3
CIS 129	Introduction to Programming	3
MATH 113	Intermediate Algebra for College Students	4
ENG 101	English Composition	3
		13

Winter Semester
CIS 120	Software Applications for the Microcomputer	3
CIS 170 or	Microsoft Windows	3
CIS 178	Technical Microsoft Windows	3
ENG 102	English Composition	3
POLS 105	Survey of American Government	3
ACCT 201 or	Principles of Accounting	4
BUS 201	Business Statistics	3
		15-16

Spring Session
CIS 175 or	Visual Basic	3
CIS 176	Visual Basic.NET	3
		3

SECOND YEAR
Fall Semester
CIS 215	Advanced Software Applications	3
CIS 225	Database Management Systems for the Microcomputer	3
CIS 235	Microcomputer Operations	3
CIS 265	Networking 1	3
COMA 103	Fundamentals of Speech	3
		15

Winter Semester
HUM 106	Introduction to Art and Music	1
CIS 180*	Spreadsheet Applications	3
CIS 250	Systems Development and Design	4
CIS 276	Networking 2	3
PSYCH 153 or	Human Relations	3
PSYCH 201	General Psychology	4
		14-15

PROGRAM TOTAL 60-62 CREDITS

* Students may elect to replace CIS 180 with CIS 182 and CIS 282. (Both courses must be taken to replace CIS 180)

The above program meets all General Education requirements.

COMPUTER INFORMATION SYSTEMS—INTRODUCTORY (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00004)

The Computer Information Systems Certificate Program introduces students to several programming languages. In addition, students obtain a basic knowledge of accounting and English.

Students who satisfactorily complete the Computer Information Systems curriculum qualify for a Certificate of Program completion.

Fall Semester

CIS 115*	Introduction to Computer Based Systems	3
or		
CIS 120*	Software Applications for the Microcomputer	3
CIS 170	Microsoft Windows	3
or		
CIS 178	Technical Microsoft Windows	3
ACCT 201	Principles of Accounting	4
ENG 101	English Composition	3
CIS 129	Introduction to Programming	3
		16

Winter Semester

CIS 210	Programming with "C"	3
CIS 122	Microsoft Outlook	2
CIS 175	Visual Basic	3
or		
CIS 176	Visual Basic.NET	3
CIS 225	Database Management Systems for the Microcomputer	3
MATH 113	Intermediate Algebra for College Students	4
		15

PROGRAM TOTAL 31 CREDITS

* Students must take CIS 115 before entering this certificate program unless they have completed an introductory course elsewhere with a grade of 3.0 or better, or they have equivalent work experience. CIS 120 is required.

Students may anytime during or after the first year select one of the CIS Associate Degree Programs. However, all degree requirements must be fulfilled.

COMPUTER INFORMATION SYSTEMS (POST-ASSOCIATE CERTIFICATE)

(Schoolcraft program code # PAC.00155)

This post-associate certificate in Computer Science Information Systems is designed for working professionals who have experience and/or training in the computer field. This certificate will provide study in the newest technology and will enhance students' ability to meet the needs of the ever changing Computer Information Systems environment.

Prior to admission in this program, students must have already completed a minimum of an accredited Associate Degree in Applied Science. The post-associate certificate is awarded upon successful completion of 15 credit hours (exact number may vary slightly due to credit value of courses).

COMPUTER INFORMATION SYSTEMS CERTIFICATE REQUIREMENTS
A student may choose from any of the courses listed below:

CIS 177	Visual Basic for Applications	3
CIS 185	Introduction to HTML	3
CIS 210	Programming with "C"	3
CIS 211	Introduction to C++	2
CIS 212	Introduction to CGI Using Perl	3
CIS 221	Advanced C++	2
CIS 223	Introduction to C#	3
CIS 226	Advanced Database Using PL/SQL With Oracle	3
CIS 233	Active Server Pages	3
CIS 235	Microcomputer Operations	3
CIS 238	JavaScript	3
CIS 250	Systems Development and Design	3
CIS 251	IT Project Management	3
CIS 255	Introduction to LINUX	3
CIS 256	Introduction to XML	3
CIS 260	Introduction to UNIX	3
CIS 265	Networking 1	3
CIS 275	Advanced Visual Basic	3
CIS 276	Networking 2	3
CIS 281	Data Structures and Introduction to Windows Programming	3
CIS 290	Object-Oriented Programming with Java	3

Completion of a minimum of 15 credit hours is required.

Courses may be taken through independent study.

COMPUTER SERVICE

COMPUTER SERVICE TECHNICIAN (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00159)

Computer Service Technicians provide technical support for computer systems, microcomputers, networks and peripheral devices. The technician needs to be able to provide diagnostic analysis and solutions to hardware, software and network problems. A technician will need to have a broad background in the areas of microcomputers, as well as network wiring and standards. The technician will also assist in the installation and maintaining of computer systems, networks, and software.

Students who complete the Computer Service Program qualify for a Certificate of Program Completion.

Fall Semester

ELECT 127	DC Circuits and Mathematical Modeling	5
ELECT 119	Basic Measurement and Reporting Skills	3
COMPS 124	Introduction to Personal Computers and Software	3
COMPS 126	Technical Programming	3
CIS 235	Microcomputer Operations	3
		17

Winter Semester

CIS 265	Networking 1	3
COMPS 147	Computer Peripherals Maintenance and Management	4
ELECTIVE	CIS	3
ELECTIVE	CIS	3
		13

PROGRAM TOTAL 30 CREDITS

COMPUTER INFORMATION SYSTEMS—
NETWORKING SPECIALIST NETPREP TRACK (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00270)

The curriculum provides students with an in-depth understanding of the theory, hardware, and software of computer networking. For students who have completed NetPrep at the secondary level, this program offers more advanced networking study while also providing a complete introductory program for students or adult learners who are new to the field.

First Year
Fall Semester

CIS 171	NetPrep Introduction to Networking	3
CIS 271	NetPrep Local Area Networks	3
CIS 272	NetPrep Wide Area Networks	3
CIS 273	NetPrep TCP/IP and Network Architectures	3
ELECTIVE**	CIS	3
		15

Winter Semester

CIS 283	NetPrep Introduction to Internet Technologies	3
CIS 284	NetPrep Internetworking Devices	3
CIS 285	NetPrep Process and Protocols	3
CIS 286	NetPrep Network Analysis and Design	3
ELECTIVE**	CIS	3
		15

PROGRAM TOTAL 30 CREDITS

** Students may select one of the following courses if not previously taken: CIS 170, 178, 235 or 255.

CORRECTIONAL SCIENCE

CORRECTIONAL SCIENCE (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00132)

The Correctional Science Program is designed to prepare students for employment in the corrections field. The purpose of corrections is to resocialize and neutralize deviant behavior after the criminal courts have imposed sentencing for violation of laws.

Course work explores the broad spectrum of systems, processes, and people constituting the correctional field as well as the historical and philosophical aspects of probation, incarceration, prisoner rights, and the role of the officer. Qualifications include the ability to deal with diverse personalities and a positive attitude.

Students may begin the degree program with the five courses certified by the Michigan Correctional Officers' Training Council (MCOTC), making them eligible for employment with the Department of Corrections while they complete their degree. Students who satisfactorily complete the Correctional Science Program, including all General Education requirements, qualify for an Associate in Applied Science Degree.

Career paths include employment in correctional facilities, field services, treatment and volunteer programs, community corrections, and camps.

For more information please contact:

Michigan Correctional Officers' Training Council (MCOTC)
Main Building—715 West Willow
Lansing, MI 48913
517-334-6573
www.mcoles.org

FIRST YEAR
Fall Semester

COR 110	Introduction to Corrections	3
COR 120	Correctional Facilities—Organization and Administration	3
CJ 113	Introduction to Criminal Justice System	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
COMA 103	Fundamentals of Speech	3
CIS 105	Computer Orientation	1
		16

Winter Semester

COR 150	Client Growth and Development.	3
COR 160	Client Relations in Corrections	3
POLS 105	Survey of American Government	3
ENG 116	Technical Writing	3
or		
ENG 102	English Composition	3
CIS 115	Introduction to Computer Based Systems	3
HUM 106	Introduction to Art and Music	1
		16

SECOND YEAR
Fall Semester

COR 231	Parole and Probation	3
COR 211	Legal Issues in Corrections	3
CJ 201	Criminal Investigation	3
CJ 221	Juvenile Justice	3
PSYCH 201	General Psychology	4
		16

Winter Semester

CJ 212	Criminology	3
COR 251	Prisoner Services—Treatment Programs	3
COR 261	Interviewing and Interrogation Techniques	3
SOC 201	Principles of Sociology	3
BUS 105	Business Math	3
		15

PROGRAM TOTAL 63 CREDITS

The above program meets all General Education requirements.

COSMETOLOGY MANAGEMENT

COSMETOLOGY MANAGEMENT (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00010)

This program is designed to give licensed, practicing cosmetologists an opportunity to develop special skills in business-related activities and to obtain an Associate Degree in Applied Science from Schoolcraft College.

Schoolcraft College will grant credit equal to 30 semester credit hours upon receipt of current and proper evidence of license based upon the standards of the State Board of Cosmetology. These credits will not be entered into the student's transcript until a minimum of 15 semester credit hours has been earned with a grade-point average of 2.0 at Schoolcraft College.

Students who satisfactorily complete this program and all General Education requirements qualify for an Associate in Applied Science Degree.

General and related requirements to be completed at Schoolcraft College include the first year completed by advanced standing followed by these classes.

SECOND YEAR
Fall Semester

BUS 101	Introduction to Business	3
BUS 103	Organizing a Small Business	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
PSYCH 153	Human Relations	3
BUS 105	Business Math	3
		15

Winter Semester

ACCT 103	Introduction to Accounting	4
BUS 104	Operating a Small Business	3
ENG 116	Technical Writing	3
COMA 103	Fundamentals of Speech	3
POLS 105	Survey of American Government	3
		16

Spring Session

CIS 105	Computer Orientation	1
HUM 106	Introduction Art and Music	1
ELECTIVE	Goal #6 Course	3
		5

PROGRAM TOTAL 36 CREDITS

The above program meets all General Education requirements.

CRIMINAL JUSTICE

CRIMINAL JUSTICE (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00086)

Law enforcement has become a highly specialized and complex area of work at the local, state and national levels. Accounting, administering and interpreting of the activities and responsibilities of law enforcement officers dictate that post-high school training is indispensable in carrying out these tasks.

Objectives of the Criminal Justice Associate in Applied Science Degree Program are to upgrade personnel employed in law enforcement and to prepare students for full-employment in this field.

Students who successfully complete this program and all General Education requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

CJ 113	Introduction to the Criminal Justice System	3
CJ 102	Organization and Administration	3
POLS 105	Survey of American Government	3
COMA 103	Fundamentals of Speech	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
		15

Winter Semester

HUM 106	Introduction to Art and Music	1
COR 110	Introduction to Corrections	3
CJ 104	Introduction to Security	3
PSYCH 153	Human Relations	3
ENG 102	English Composition	3
or		
ENG 116	Technical Writing	3
CJ 107	Police Field Operations	3
		16

SECOND YEAR
Fall Semester

CJ 209	Criminalistics	3
CJ 211	Criminal Law and Procedures	3
BIOL 103	Health Education	3
CIS 105	Computer Orientation	1
BUS 105	Business Math	3
ELECTIVE		3
		16

Winter Semester

CJ 201	Criminal Investigation	3
CJ 212	Criminology	3
CJ 221	Juvenile Justice	3
SOC 201	Principles of Sociology	3
CIS 115	Introduction to Computer Based Systems	3
		15

PROGRAM TOTAL 62 CREDITS

The above program meets all General Education requirements.

CRIMINAL JUSTICE (ASSOCIATE DEGREE WITH ACADEMY)

(Schoolcraft program code # AAS.00086) - Restricted Enrollment

This program contains courses restricted to students officially admitted to this program.

The criminal justice system is a highly specialized field. Law enforcement officers are employed by 40,000 local police agencies nationwide as well as county sheriffs' departments. Law enforcement officers must be prepared to interact with the public in a position of responsibility and authority. Knowledge of the criminal justice system, including criminal law, police field operations, criminal investigation, and human relations, enhances the professionalism of the criminal justice system.

Candidates for employment as law enforcement officers must be certified by the Michigan Commission on Law Enforcement Standards (MCOLES). After completing the Police Academy (CJ 286), students may become certified by passing the MCOLES Certification Exam. Certification is valid for one year. Pre-service students, who are not employed by a law enforcement agency, must complete 41 credit hours of course work for the associate degree before taking CJ 286. Students who complete this program and all General Education requirements qualify for an Associate in Applied Science Degree.

For more information contact:

Michigan Commission on Law Enforcement Standards (MCOLES)
7426 North Canal Road
Lansing, MI 48913
517-322-1417
mcoles.org

FIRST YEAR
Fall Semester

CJ 102	Organization and Administration.	3
POLS 105	Survey of American Government	3
COMA 103	Fundamentals of Speech	3
ENG 100	Communication Skills	3
or		
ENG 101	English Composition	3
HUM 106	Introduction to Art and Music	1
		13

Winter Semester

COR 110	Introduction to Corrections	3
CJ 211	Criminal Law and Procedures	3
PSYCH 153	Human Relations	3
ENG 116	Technical Writing	3
or		
ENG 102	English Composition	3
CIS 105	Computer Orientation	1
		13

SECOND YEAR
Fall Semester

BUS 105	Business Math	3
CJ 209	Basic Criminalistics	3
CJ 212	Criminology	3
CJ 221	Juvenile Justice	3
SOC 201	Principles of Sociology	3
		15

Winter Semester

CJ 286	Police Academy	21
		21

PROGRAM TOTAL 62 CREDITS

The above program meets all General Education requirements.

CULINARY ARTS

CULINARY ARTS (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00087)

This program contains courses restricted to students officially admitted to this program.

The Culinary Arts Associate Degree Program provides the skills necessary to enter food service occupations at advanced levels. The general education portion of the curriculum is vital to students' development.

The technical portion of the curriculum prepares students in quality food preparation, advanced food preparation, cost control, portion control, quantity baking, quantity pastry, advanced pastry, meat cutting, garde-manger, dining room operation and gourmet cooking. Supervisory functions, menu formulation, terminology, and decorative culinary skills are also covered.

Students who satisfactorily complete this program and General Education requirements qualify for an Associate in Applied Science Degree.

CAP 090, Introduction to Professional Cooking is a preprogram requirement.

** Signifies course is also open to any Schoolcraft student.

FIRST YEAR
Fall Semester

		Lecture/Lab	
CAP 144	Baking 1	(4-0)	4
CAP 124	Breakfast and Pantry	(4-0)	4
CAP 125	Pastries 1	(4-0)	4
CAP 141	Culinary Sanitation**	(2-0)	2
ENG 100	Communication Skills (Goals #2 & #3)	(3-0)	3
			17

Winter Semester

CAP 142	Butchery	(4-0)	4
CAP 128	Introduction to Food Techniques	(4-0)	4
CAP 143	Dining Room Service	(4-0)	4
ENG 106	Business English	(3-0)	3
BUS 105	Business Math (Goal #1)	(3-0)	3
or			
ACCT 103	Introduction to Accounting (Goal #1)	(4-0)	4
ELECTIVE*			3-4
			21-23

SECOND YEAR
Fall Semester

CAP 227	Restaurant Operation	(4-0)	4
CAP 229	International Cuisine	(4-0)	4
CAP 215	Charcuterie	(4-0)	4
CAP 241	Culinary Nutrition**	(2-0)	2
SOC 201	Principles of Sociology	(3-0)	3
or			
PSYCH 153	Human Relations (Goals #7 & #9)	(3-0)	3
ELECTIVE*			3-4
			20-21

Winter Semester
(2nd year continued)

CAP 240	Pastries 2	(4-0)	4
CAP 242	Ala Carte	(4-0)	4
CAP 243	Storeroom Operations (Goal #5)	(3-0)	3
POLS 105	Survey of American Government (Goals #4 & #9)	(3-0)	3
ELECTIVES*			6-7
			20-21

PROGRAM TOTAL 78-82 CREDITS

The above program meets all General Education requirements.

CULINARY ARTS (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00079)

Upon completion of the one-year certificate program, students may select the Associate Degree as their second year option. All the requirements of that Associate Degree must be fulfilled, including all of the General Education Goal courses.

FIRST YEAR
Fall Semester

		Lecture/Lab	
CAP 144	Baking 1	(4-0)	4
CAP 124	Breakfast and Pantry	(4-0)	4
CAP 125	Pastries 1	(4-0)	4
CAP 141	Culinary Sanitation**	(2-0)	2
ENG 100	Communication Skills	(3-0)	3
			17

Winter Semester

CAP 142	Butchery	(4-0)	4
CAP 128	Introduction to Food Techniques	(4-0)	4
CAP 143	Dining Room Service	(4-0)	4
ENG 106	Business English	(3-0)	3
BUS 105	Business Math	(3-0)	3
CAP 241	Culinary Nutrition**	(2-0)	2
			20

PROGRAM TOTAL 37 CREDITS

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* Culinary Arts students must choose their 12 credits of electives from the list below:

		Lec/Lab	Cr. Hrs.
ART 105	Basic Drawing (Goal #8)	(0-6)	3
ART 201	Art Appreciation (Goal #8 & Goal #10)	(3-0)	3
BUS 122	Advertising	(3-0)	3
BUS 207	Business Law	(3-0)	3
BUS 217	Business Management (Goal #6)	(3-0)	3
BUS 220	Supervision	(3-0)	3
BUS 226	Principles of Marketing	(3-0)	3
CIS 120	Software App. for the Microcomputer	(3-0)	3
CM 107	Food and Culture	(3-0)	3
CM 108	Introduction to Hotel/Hospitality Management	(2-0)	2
CM 109	Hospitality Law	(3-0)	3
CM 203	Restaurant Concepts and Design	(3-0)	3
CM 210	Wine and Spirits**	(3-0)	3
CM 211	Culinary Marketing for Restaurant Industry	(3-0)	3
CAP 190	Externship	(1-15)	3
CAP 247	Banquets and Catering**	(2-2)	3
CAP 260	Competitive Ice Carving**	(2-2)	3
CAP 265	Advanced Competitive Ice Carving**	(1-3)	3
CAP 267	Chocolatier	(4-0)	4
CAP 295	Salon Competition 1 (Goal #8)	(2-2)	3
CAP 296	Salon Competition 2	(2-2)	3

** Signifies course is also open to any Schoolcraft student.

CULINARY MANAGEMENT

CULINARY MANAGEMENT (POST-ASSOCIATE CERTIFICATE)

(Schoolcraft program code #PAC.00157)

The new Culinary Management Program is designed for individuals who have already mastered the Culinary Arts skill concepts and are now interested in enriching their formal education. Practical applications in managerial, financial and marketing concepts will be explored with an emphasis on entrepreneurial techniques in restaurant operations.

Escalating food-service requirements often necessitate that a person acquire a formalized foundation in Culinary Arts which is then complemented by a stronger understanding of management. Inventory, purchasing, receiving, cost controls, and menu formulation are also taught in this new management post-associate certificate.

Admission Requirements at Schoolcraft College
In addition to following the College's general admission procedure, students must have completed an accredited Associate Degree in Culinary Arts. Students having earned a two-year Culinary Arts certificate must fulfill their needed general education goal courses concurrently to earn this post-associate certificate. Individual cases will be reviewed at the discretion of the Culinary Arts department.

The post-associate certificate is awarded upon successful completion of 15 credit hours (exact number may vary slightly due to credit value or content of courses).

CULINARY MANAGEMENT CERTIFICATE REQUIREMENTS

Fall Semester

CM 213	Culinary Management for Restaurant Operations	3
CM 203	Restaurant Concepts and Design	3
CM 222	Management Accounting in the Restaurant Industry	4

Winter Semester

CM 107	Food and Culture	3
CM 211	Culinary Marketing for the Restaurant Industry	3

Program Elective-Suggested

CM 108	Introduction to Hotel/Hospitality Management	2
CM 109	Hospitality Law	3
CM 210	Wine and Spirits	3

Completion of a minimum of 15 credit hours is essential.

A student may choose an applicable 200-level elective.

EDUCATION

EDUCATION TRANSFER PROGRAM
PRE-ELEMENTARY EDUCATION

(Schoolcraft program code # AA.00700)

Pre-Elementary Education is a two-year Liberal Arts Program designed for students who plan to become teachers in elementary education. It provides curriculum to satisfy the General Education Requirements for Schoolcraft College and basic courses to be transferred to the Elementary Education Program leading to a bachelor's degree with a teaching certificate. Students should see a counselor to ensure maximum ease of transfer. Students who satisfactorily complete the Pre-Elementary Education curriculum and the General Education requirements qualify for an Associate in Arts Degree.

FIRST YEAR
Fall Semester

ENG 101	English Composition	3
GEOG 130	Physical Geography	4
MATH 105	Mathematics for Elementary Teachers	4
POLS 105	Survey of American Government	3
CIS 115	Introduction to Computer Based Systems	3
or		
CIS 120	Software Applications for the Microcomputer	3
		17

Winter Semester

ENG 102	English Composition	3
MUSIC 107	Music for Elementary Teachers	4
ART 113	Art Education	3
COMA 103	Fundamentals of Speech	3
HIST 151*	Early America—U.S. History	3
		16

SECOND YEAR
Fall Semester

ENG 203	Children's Literature	3
PE 240	Physical Education for Elementary Teachers	3
PSYCH 201	General Psychology	4
ELECTIVES**		5-6
		15-16

Winter Semester

ENG 243	Introduction to Literature—Short Fiction	3
PHIL 243	Introduction to Philosophy	3
GEOL 133***	Physical Geology	4
ELECTIVES**		5-6
		15-16

PROGRAM TOTAL 63-65 CREDITS

* HIST 152 or HIST 153 may be substituted for HIST 151.

** Any combination of the following courses may be taken for 9 to 11 hours of electives: CIS 115 (3) or CIS 120 (3), HIST 134 (4), HIST 137 (4), HIST 138 (3), PE Activities (maximum 2 credits), SOC 201 (3).

*** CHEM 111 may be substituted for GEOL 133.

> **Note:** Slight variations in required courses may exist depending on the transfer institution. It is in the student's best interest to consult a counselor or check the Transfer Guides in the Counseling Department for specific requirements.

The above program meets all General Education requirements.

ELECTRONIC TECHNOLOGY

ELECTRONIC TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00120)

This Electronics Program is designed to give students a strong background in the fundamentals of electricity, electronic devices and basic circuits-digital and linear. The curriculum includes laboratory demonstration of the principles taught in class affording practical experience in fabrication, instrumentation and presentation.

The program is not directly aimed at specific products. With the multiplicity of equipment presently in use and the rapid advance and change in technology, the department stresses the development of a broad background that will enable students to find employment and be able to further their skills in a diversified number of industries.

Hand tools and fabrication tools required for this program will be purchased by the student.

Students who satisfactorily complete the Electronic Technology Program and all General Education requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

ELECT 127	DC Circuits and Mathematical Modeling	5
ELECT 119	Basic Measurement and Reporting Skills	3
PSYCH 153	Human Relations	3
ENG 100*	Communication Skills	3
COMPS 124	Introduction to Personal Computers and Software	3
		17

Winter Semester

ELECT 128	AC Circuits and Mathematical Modeling	5
ELECT 129	Diodes and Transistors	3
COMPS 126	Technical Programming	3
ENG 106*	Business English	3
HUM 106	Introduction to Art and Music	1
		15

SECOND YEAR
Fall Semester

ELECT 206	Operational Amplifiers and Linear Integrated Circuits	4
ELECT 229	Electronics Troubleshooting	3
ELECT 134	Introduction to Microcontrollers	3
ELECT 226	Digital Logic Circuits	4
		14

Winter Semester

ELECT 135	Fluid Power	4
ELECT 237	Programmable Logic and Industrial Controls	4
POLS 105	Survey of American Government	3
ELECTIVE**		3-4
		14-15

PROGRAM TOTAL 60-61 CREDITS

* Students wishing to transfer to a four-year institution may select ENG 101, ENG 102 and COMA 103.

** Students wishing to transfer to a four-year institution may wish to select a Math elective.

The above program meets all General Education requirements.

ELECTRONICS SERVICE (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00125)

Fall Semester

ELECT 127	DC Circuits and Mathematical Modeling	5
ELECT 135	Fluid Power	4
ELECT 119	Basic Measurement and Reporting Skills	3
COMPS 124	Introduction to Personal Computers and Software	3
		15

Winter Semester

ELECT 128	AC Circuits and Mathematical Modeling	5
ELECT 129	Diodes and Transistors	3
ELECT 229	Electronic Troubleshooting	3
ELECT 237	Programmable Logic and Industrial Controls	4
		15

PROGRAM TOTAL 30 CREDITS

EMERGENCY MEDICAL TECHNOLOGY

EMERGENCY MEDICAL TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code # AGS.00024)

The Associate Degree in Emergency Medical Technology is designed for EMT students who wish to earn an associate degree. Upon successful completion of the Basic (107) and the three Paramedic (156, 157, & 158) courses, a student will qualify for the Emergency Medical Technology One-Year Certificate.

Upon completion of the general education requirements listed below, a student will qualify for an Associate in General Studies.

FIRST YEAR
Fall Semester

ENG 101	Communication Skills	3
EMT 107	Emergency Medical Technology—Basic	10.5
CIS 105	Computer Orientation	1
HUM 106	Introduction to Art and Music	1
		15.5

Winter Semester

COMA 103	Fundamentals of Speech	3
ENG 102	Technical Writing	3
BUS 105	Business Mathematics	3
POLS 105	Survey of American Government	3
PSYCH 153	Human Relations	3
		15

SECOND YEAR
Fall Semester

EMT 156	Paramedic Technology 1	16
		16

Winter Semester

EMT 157	Paramedic Technology 2	12
		12

Spring Session (12 Weeks)

EMT 158	Internship Experience	5
		5

PROGRAM TOTAL 63.5 CREDITS

Elective (Optional)

EMT 113	Emergency Medical Technology—Specialist	5

The above program meets all General Education requirements.

EMERGENCY MEDICAL TECHNOLOGY (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00024)

The Emergency Medical Technology Program prepares students for employment as emergency medical care givers. Content areas are covered in lectures, practical skills are developed in laboratory settings, and clinical applications are divided between ambulances and hospital emergency rooms.

All courses are approved by the Michigan Department of Consumer and Industry Service Licensing Division Bureau of Health Sciences and are to be taken in sequence. Each course prepares the student for the respective level of State licensing examination.

Students are evaluated in three areas: content, practical skills, and clinical performance. All the courses in the EMT Program set an 80% achievement level for a 2.0 grade. Practical skills are graded on a pass/fail basis, and students must pass all practical exams to successfully complete each course. Clinical performance is evaluated by attendance and feedback from ambulance and hospital personnel. Attendance policies are regulated by the State. All students participating at clinical sites will be required to purchase liability insurance. (coverage is good for one year)

Students who successfully pass the Emergency Medical Technology: Basic and the Paramedic Technology courses qualify for the Emergency Medical Technology One-Year Certificate.

FIRST YEAR
Fall Semester

EMT 107	Emergency Medical Technology—Basic	10.5
		10.5

SECOND YEAR
Fall Semester

EMT 156	Paramedic Technology 1	16
		16

Winter Semester

EMT 157	Paramedic Technology 2	12
		12

Spring Session

EMT 158	Internship Experience	5
		5

PROGRAM TOTAL 43.5 CREDITS

Elective (Optional)

EMT 113	Emergency Medical Technology—Specialist	5

The special nature of the EMT course work precludes concurrent enrollment in the courses for this certificate, thus necessitating additional time to complete the requirements for the one-year certificate. Historically, individuals who take all three courses have done so over a two-year period.

ENERGY SPECIALIST

ENERGY SPECIALIST (CERTIFICATE)

(Schoolcraft program code # 1YC.00156)

This program will provide students with the competencies, i.e. knowledge, skills, and attitudes to function as a beginning Customer Energy Specialist for Consumers Power Company.

The program is designed as an "On-the-Job" training program with the course work taken concurrently at participating Michigan Community Colleges. The student will be required to carry a minimum of four semester credit hours each semester while working as a trainee Customer Energy Specialist at Consumers Power Company.

Special admission criteria is required for entry into the program consisting of being hired by Consumers Power, passing the physical exam, and previous satisfactory completion of approximately 15 to 20 semester credit hours of the following courses: Basic Drafting, Practical Electricity, Computer Assisted Drafting, College Algebra, AC Circuits, Applied Physics, and Personal Computer Applications.

The following courses may be taken in any sequence providing the necessary prerequisites have been met.

Business

ACCT 201	Principles of Accounting	4
BUS 226	Principles of Marketing	3
BUS 101	Introduction to Business	3
BUS 207	Business Law	3
CIS 115	Introduction to Computer Based Systems	3
		16

Communications

ENG 101	English Composition	3
ENG 116	Technical Writing	3
COMA 103	Fundamentals of Speech	3
		9

Technical

CAD 103	Engineering Graphics	3
DSGN 113	Hydraulic/Pneumatic/Electrical Schematics	3
CAD 105	Mechanical Engineering Drawing	4
CAD 107	Detailing	4
PHYS 123	Applied Physics	5
ELECT 127	DC Circuits and Mathematical Modeling	5
ELECT 128	AC Circuits and Mathematical Modeling	5
		29

PROGRAM TOTAL 54 CREDITS

Program Electives - Suggested Course Options

COMA 201	Discussion	3
ACCT 202	Principles of Accounting	4
BUS 217	Business Management	3
BUS 230	Human Resource Management	3
MATH 113	Intermediate Algebra for College Students	4

ENGINEERING

ENGINEERING TRANSFER PROGRAM
PRE-ENGINEERING—MECHANICAL (ASSOCIATE DEGREE)

(Schoolcraft program code # AE.00039)

Pre-Engineering is a two-year associate degree program designed for students who wish to transfer to institutions offering a bachelor's degree in areas such as Mechanical, or Civil Engineering.

Students who satisfactorily complete the Pre-Engineering curriculum and the General Education requirements qualify for an Associate in Engineering Degree.

FIRST YEAR
Fall Semester

MATH 150	Calculus with Analytic Geometry 1	5
CHEM 111	General Chemistry	4
ENG 101	English Composition	3
CAD 103**	Engineering Graphics	3
		15

Winter Semester

MATH 151	Calculus with Analytic Geometry 2	5
PHYS 211	General Physics	5
ENG 102	English Composition	3
PSYCH 201*	General Psychology	4
		17

Spring/Summer Session

HUM*	Goal #8 course	3
		3

SECOND YEAR
Fall Semester

MATH 240	Calculus with Analytic Geometry 3	5
PHYS 212	General Physics	5
ENGR 201	Statics	3
COMA 103*	Fundamentals of Speech	3
		16

Winter Semester

MATH 252	Differential Equations	5
ENGR 202	Mechanics of Materials	3
ENGR 203	Dynamics	4
ECON 201	Principles of Economics	4
		16

PROGRAM TOTAL 67 CREDITS

* Students may substitute other courses in humanities/social sciences, which satisfy goal requirements and the transfer institution.

** Students may substitute other CAD or CIS courses which satisfy goal #5 and the transfer institution. Contact counseling for more information.

Note: Slight variations in required courses may exist depending on the transfer institution. It is in the student's best interest to consult a counselor or check the Transfer Guides in the Counseling Department for specific requirements.

The above program meets all General Education requirements.

ENVIRONMENTAL TECHNOLOGY

ENVIRONMENTAL TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00176)

Environmental technicians provide technical assistance to engineers and scientists, by performing tasks such as sample collection, monitoring, instrument calibration, and data management. They are typically employed by environmental engineering consulting firms, industries, and government agencies. According to a survey of local firms, the job market for environmental technicians is very strong. Environmental technicians need a strong science background, a basic knowledge of computers, and both written and oral communication skills.

The Environmental Technology Program provides students with the necessary technical and social background to be successful environmental technicians. The curriculum includes courses in basic sciences, environmental science, communication, and computer literacy. The spring/summer cooperative work program also provides students with practical, on the job experience. Environmental Technology Program graduates should be able to conduct and assist with procedures that obtain information for the analysis, organization, and problem-solving of environmental issues.

Upon completion of the Environmental Technology Program, students should be able to:

- Identify and use appropriate terminology regarding environmental policies, rules, regulations, and laws.

- Understand state and federal laws, rules and regulations, and be familiar with state and federal government agencies.

- Use appropriate federal and state protocols to collect water, waste, air, and soil samples.

- Review hazardous waste state and federal forms to provide information for compliance with environmental standards.

- Be familiar with OSHA regulations, and perform duties related to the management, storage, disposal and emergency response of spills of hazardous materials, in accordance with OSHA health and safety requirements.

- Compile data and perform data manipulation using a word processor, spreadsheet, and graphs.

- Collect and compile data necessary for a environmental site assessment.

- Use basic concepts of geology and hydrology when compiling and summarizing the data used to analyze the transport of hazardous substances.

- Conduct field investigations using current instrumentation.

- Use advanced computer-aided mapping techniques.

- Understand basic risk assessment.

- Understand and use quality control procedures.

- Use sources of electronic information systems, such as Internet.

Students who satisfactorily complete the Environmental Technology Program qualify for an Associate Degree in Applied Science.

ENVIRONMENTAL TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00176)

FIRST YEAR
Fall Semester

ENG 100*	Communication Skills	3
GEOG 212	Environmental Science	3
GEOL 133	Physical Geology	4
or		
GEOG 130	Physical Geography	4
BIOL 101	General Biology	4
		14

Winter Semester

MATH 119	Trigonometry	3
ENVR 107	Soil Mechanics	4
CIS 115**	Introduction to Computer Based Systems	3
CHEM 111	General Chemistry	4
HUM 106***	Introduction to Art and Music	1
		15

SECOND YEAR
Fall Semester

ENVR 202	Environmental Microbiology	5
ENVR 204	Introductory Surveying	3
POLS 105	Survey of American Government	3
ENVR 206	Environmental Law and Regulations	3
		14

Winter Semester

ENVR 211	Health and Safety Training for Handling Hazardous Materials (40-Hour OSHA Training)	3
PE 121	First Aid	2
ENG 116	Technical Writing	3
ENVR 215	Environmental Seminar	1
GEOG 217	Water Resources	3
		12

Spring/Summer Session

ENVR 231	Field Co-op Experience	5
		5

PROGRAM TOTAL 60 CREDITS

* ENG 101 can be substituted. If ENG 101 is selected, then a General Education Goal #3 course must also be taken.

** CIS 115 or a higher CIS course that satisfies General Education Goal #5.

*** Students transferring to University of Michigan-Dearborn must complete a three-hour humanities course.

The above program meets all General Education requirements.

FIRE TECHNOLOGY

FIRE TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft Program code # AAS.00177)

Extinguishing fires places increasing demands on firefighters. No longer is directing a water stream on a burning building adequate. With the increase in hazardous materials on properties and the variety of synthetic building materials, firefighting has become an art, requiring specialized training with an emphasis on analysis and decision-making skills. It takes a team effort and a wealth of knowledge to fight fires today.

Recognizing the need for more highly skilled firefighters, many municipalities now require additional education for their employees. The curriculum developed for the associate in applied science degree program combines lecture with hands-on activities to prepare the student to respond to a variety of emergencies. Specialists in the field provide valuable input on both content and methodology.

The Fire Technology Associate Degree Program is designed for students who wish to attend part-time. The student who successfully completes the requirements for this program and meets all the General Education Goal requirements qualifies for an Associate in Applied Science Degree with emphasis in Fire Technology.

FIRST YEAR
Fall Semester

ENG 100	Communication Skills	3
FIRE 112	Firefighter 1—Basic Fire Suppression	10
ELECTIVE*		3-4
		16-17

Winter Semester

ENG 116	Technical Writing	3
FIRE 119	Firefighter 2—Advanced Fire Suppression	10
BUS 105	Business Mathematics	3
FIRE**	Special Topics	1
		17

SECOND YEAR
Fall Semester

EMT 107	Emergency Medical Technology—Basic	10.5
CIS 105	Computer Orientation	1
HUM 106	Introduction to Art and Music	1
ELECTIVE*		3-4
		15.5-16.5

Winter Semester

FIRE 200	Fire and Arson Investigation	4
FIRE 128	Firefighting Hydraulics and Water Supply	4
POLS 105	Survey of American Government	3
PSYCH 153	Human Relations	3
QM 106	Introduction to Quality Systems	3
		17

PROGRAM TOTAL 65.5-67.5 CREDITS

*Recommended Electives

CJ 104	Introduction to Security	3
FIRE 130	Firefighting Tactics and Strategy	3
FIRE 135	Fire Protection Systems	3
FIRE 205	Fire Department Organization and Administration	3
FIRE 207	Fire Company Officer	3
SOC 210	Cultural Diversity	3

**Special Topics

FIRE 141	Incident Command System	1
FIRE 142	Terrorism Awareness	1

The above program meets all General Education requirements.

FIRE TECHNOLOGY (ASSOCIATE DEGREE WITH ACADEMY)

(Schoolcraft program code # AAS.00177)

Extinguishing fires places increasing demands on firefighters. No longer is directing a water stream on a burning building adequate. With the increase in hazardous materials on properties and the variety of synthetic building materials, firefighting has become an art, requiring specialized training with an emphasis on analysis and decision-making skills. It takes a team effort and a wealth of knowledge to fight fires today.

Recognizing the need for more highly skilled firefighters, many municipalities now require additional education for their employees. The curriculum developed for the associate in applied science degree program combines lecture with hands-on activities to prepare the student to respond to a variety of emergencies. Specialists in the field provide valuable input on both content and methodology.

The Fire Technology Associate Degree with Academy is designed for students who wish to attend full time. The student who successfully completes the requirements for this program and meets all the General Education Goal requirements qualifies for an Associate in Applied Science Degree with emphasis in Fire Technology.

FIRST YEAR
Fall Semester

FIRE 124	Fire Academy	20
		20

Winter Semester

ENG 100	Communication Skills	3
EMT 107	Emergency Medical Technology—Basic	10.5
CIS 105	Computer Orientation	1
HUM 106	Introduction to Art and Music	1
		15.5

SECOND YEAR
Fall Semester

ENG 116	Technical Writing	3
BUS 105	Business Mathematics	3
ELECTIVE*		3-4
FIRE 200	Fire and Arson Investigation	4
		13-14

Winter Semester

FIRE 128	Firefighting Hydraulics and Water Supply	4
POLS 105	Survey of American Government	3
PSYCH 153	Human Relations	3
QM 106	Introduction to Quality Systems	3
ELECTIVE*		3-4
FIRE**	Special Topics	1
		17-18

PROGRAM TOTAL 65.5-67.5 CREDITS

*Recommended Electives

CJ 104	Introduction to Security	3
FIRE 130	Firefighting Tactics and Strategy	3
FIRE 135	Fire Protection Systems	3
FIRE 205	Fire Department Organization and Administration	3
FIRE 207	Fire Company Officer	3
SOC 210	Cultural Diversity	3

**Special Topics

FIRE 141	Incident Command System	1
FIRE 142	Terrorism Awareness	1

The above program meets all General Education requirements.

FIREFIGHTER TECHNOLOGY (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00149)

The Firefighter Technology Program provides career training for fire protection technicians. The program is offered in cooperation with the Michigan Fire Fighters Training Council and focuses on meeting the needs of fire service personnel. It is designed for students who are currently employed by Michigan Fire Marshal-recognized fire departments, are currently seeking employment, and/or are volunteers in recognized fire districts. All courses meet the state-mandated requirements for preparing students to take the state exam for certification as entry-level fire fighters.

All of the fire certificate courses require students to attain an average of 70% or better on test scores and to score at least 70% on their final exam to receive a passing grade of 2.0. The EMT course requires an average of 80% on tests and an 80% on the final for a grade of 2.0. Below 80% will receive a 0.0 for the course. Practical skills in both areas must be passed at stated proficiency levels to successfully complete each course and be recommended for the state certification exams. Students who successfully complete the requirements for this program will qualify for a Firefighter Technology Certificate.

FIRST YEAR
Fall Semester

FIRE 112	Firefighter 1—Basic Fire Suppression	10
		10

Winter Semester

FIRE 119	Firefighter 2—Advanced Fire Suppression	10
		10

Spring Session

EMT 107	Emergency Medical Technology—Basic	10.5
		10.5

PROGRAM TOTAL 30.5 CREDITS

(Alternate) FIRST YEAR
Fall Semester

FIRE 124	Fire Academy	20

Winter Semester

EMT 107	Emergency Medical Technology—Basic	10.5

HEALTH INFORMATION TECHNOLOGY

HEALTH INFORMATION TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00153)

The Health Information Technology Program is designed for the full-time or part-time student. The program coordinates classroom, laboratory and off-campus experience in a variety of healthcare facilities, such as acute care hospital, ambulatory care center, mental health facility and other health related facilities. The off-campus activities include supervised, professional practice assignments. The student gains experience in applying knowledge to technical procedures in health information systems.

The program will prepare the student to be a Health Information Technician. The technician is responsible for performing tasks related to the use, analysis, validation, presentation, abstracting, coding, storage, security, retrieval, quality measurement and control of healthcare data in a medical record and/or computer-based patient record.

The Health Information Technician is detail oriented and recognizes the business aspects of healthcare. The technician will have a strong interest in activities, such as assisting medical staff in evaluating quality of healthcare, safeguarding the confidentiality of medical records and utilizing healthcare data.

Health Information Technology courses should be taken in accordance with prerequisites, a minimum grade of 2.0 is required. Graduates are eligible to take the Registered Health Information Technician (RHIT) examination.

The Health Information Technology Program is accredited by the Commission on the Accreditation of Allied Health Educational Programs (CAAHEP) in cooperation with the Council on Accreditation of the American Health Information Management Association (AHIMA).

For more information, please contact:

American Health Information Management Association (AHIMA)
233 N. Michigan Ave., Suite 2150
Chicago, Illinois 60611-5519
312-233-1100
www.ahima.org

FIRST YEAR
Fall Semester

HIT 104*	Medical Terminology	4
HIT 109*	Principles Health Information Management 1	3
BIOL 236**	Anatomy/Physiology	5
ENG 101	English Composition	3
CIS 120	Software Applications for Microcomputer	3
		18

Winter Semester

HUM 106	Introduction to Art and Music	1
HIT 111	ICD-9-CM Classification	3
HIT 156	Clinical Affiliation 1	2
HIT 154	Health Record Practicum	3
ENG 102	English Composition	3
COMA 103	Fundamentals of Speech	3
HIT 112	Basic Laboratory & Diagnostic Tests	2
HIT 114	Pharmacology for Health Professionals	2
		19

Spring/Summer Session

BUS 105	Business Math	3
HIT 271	Human Diseases	4
		7

SECOND YEAR
Fall Semester

HIT 210	Principles of Health Information Management 2	3
HIT 217	Quality Assurance	2
HIT 216	Health Care Delivery Systems	2
HIT 218	Basic Ambulatory Coding	3
HIT 257	Clinical Affiliation 2	4
POLS 105	Survey of American Government	3
		17

Winter Semester

HIT 213	Health Information Technology Seminar	1
HIT 219	Organization and Management	2
HIT 220	Legal Aspects of Health Information	3
HIT 226	Intermediate ICD-9-CM Coding	3
HIT 228	Intermediate Ambulatory Coding	3
HIT 258	Clinical Affiliation 3	2
PSYCH 153	Human Relations	3
		17

PROGRAM TOTAL 78 CREDITS

* These courses may be taken prior to admission to the Health Information Technology Program, according to prerequisites.

** Students desiring transfer credit should substitute BIOL 237 & BIOL 238 and may select PSYCH 201 instead of PSYCH 153.

The above program meets all General Education requirements.

HEALTH—CODING SPECIALIST (CERTIFICATE)

(Schoolcraft program code # 1YC.00240)

The Coding Specialist Program will prepare a student to review and analyze health records to identify relevant diagnoses and procedure for patient services in the inpatient, ambulatory and/or ancillary setting. The student will practice translating diagnostic and procedural phrases utilized by healthcare providers into coded form.

In the program, students apply the following skills:

- Coding of inpatient diagnoses and procedures using International Classification of Diseases (ICD-9-CM).
- Coding of ambulatory setting procedures and services using Current Procedural Terminology (CPT).
- Reading and interpreting health record documentation to identify all diagnoses and procedures that affect the current inpatient stay/outpatient encounter visit.
- Applying approved coding guidelines to assign and sequence the correct diagnosis; procedure codes for hospital inpatient and outpatient services.

Minimum grade of 2.0 is required for progression to the next Health Information Technology course. A minimum grade of 2.0 is required for the basic science course.

The coder can be employed in hospital departments such as health information services (medical records), quality management, professional fee services, radiology, emergency room, outpatient/ambulatory surgery, ancillary services, and specialty physician clinics. Coders also work as independent contractors, consultants and trainers. The coding professional is employed by insurance companies, government agencies, health maintenance organizations and other facilities involved with various aspects of the reimbursement process of health claims.

The curriculum in the Coding Specialist Program will allow the student to select the Health Information Technology Associate Degree Program as a career path.

The student who satisfactorily completes the Coding Specialist curriculum qualifies for a Certificate of Program Completion.

FIRST YEAR
Fall Semester
BIOL 236**	Anatomy and Physiology	5
HIT 104*	Medical Terminology	4
HIT 109*	Principles of Health Information Management 1	3
		12

Winter Semester
HIT 111	ICD-9-CM Classification	3
HIT 271	Human Diseases	4
		7

SECOND YEAR
Fall Semester
HIT 112	Basic Laboratory and Diagnostic Tests	2
HIT 114	Pharmacology For Health Professionals	2
HIT 218	Basic Ambulatory Coding	3
		7

Winter Semester
HIT 226	Intermediate ICD-9-CM Coding	3
HIT 228	Intermediate Ambulatory Coding	3
		6

Spring/Summer
HIT 230	ICD-9-CM Coding Practicum	2
HIT 231	Ambulatory Coding Practicum	2
		4

PROGRAM TOTAL 36 CREDITS

* These courses may be taken prior to admission to the Health Coding Specialist Certificate, according to prerequisites.

** Students desiring transfer credit should substitute BIOL 237 & BIOL 238.

LASER TECHNOLOGY

LASER TECHNOLOGY (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00059)

Laser Technology is one of several careers in technology that are characterized by involvement with electronics, mechanics and digital logic. The basic elements of scientific theory and principles underlying the elements of laser systems are covered in this certificate program. Technicians will learn about the laser parameters associated in metal fusion; material cutting, shaping, piercing; biomedical surgery and heat treating of various materials.

Laser technicians are specialists who install, construct, operate, test, repair, and maintain systems that incorporate electronics power supplies and optics on laser application for business, industry, and medicine.

Students who complete the Laser Certificate qualify for a certificate of program completion.

FIRST YEAR
Fall Semester
LASR 103	Laser Concepts	4
ELECT 127	DC Circuits and Mathematical Modeling	5
MATH 113	Intermediate Algebra for College Students	4
		13

Winter Semester
LASR 104	Laser Optics and Components	5
ELECT 128	AC Circuits and Mathematical Modeling	5
CAD 101	Introduction to Computer Aided Drafting	3
		13

SECOND YEAR
Fall Semester
LASR 232	Laser Systems and Applications 1	4
ELECT 237	Programmable Logic and Industrial Controls	4
		8

PROGRAM TOTAL 34 CREDITS

MANUFACTURING

MANUFACTURING FOR QUALITY PRODUCTION (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00135)

The Manufacturing for Quality Production Program is designed to provide students with growth and development in a variety of manufacturing processes, to expose them to materials and methods of production and make them aware of planning and quality requirements of the various related processes. It should enable graduates to seek employment as management trainees or technicians to support manufacturing engineers in design and development activities.

Protective shop clothing and eye protection supplies required for the program will be purchased by the student.

The student who satisfactorily completes the Manufacturing for Quality Production curriculum and all General Education requirements qualifies for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

ENG 100	Communication Skills	3
MATH 113	Intermediate Algebra for College Students	4
CAM 102	Introduction to Computer Numerical Control (CNC)	3
MFG 102	Basic Machining, Measurements and Manufacturing Processes	3
		13

Winter Semester

MET 102	Introduction to Materials Science	3
CAM 103	Computer Numerical Control Programming	3
MFG 103	Manufacturing Theory and Machine Operation	3
COMPS 126	Technical Programming	3
QM 106	Introduction to Quality Systems	3
		15

Spring Session

QM 108	Quality Statistical Methods.	3
		3

SECOND YEAR
Fall Semester

ENG 106	Business English	3
MATH 119	Trigonometry	3
LASR 103 or	Laser Concepts	4
ELECT 135	Fluid Power	4
QM 107	Quality Planning and Team Building	3
		13

Winter Semester

POLS 105	Survey of American Government	3
ELECT 237	Programmable Logic and Industrial Controls	4
QM 112	Facilitating Quality Systems	3
PSYCH 153	Human Relations	3
HUM 106	Introduction to Art and Music	1
MFG 243	Manufacturing Systems Analysis	3
		17

PROGRAM TOTAL 61 CREDITS

The above program meets all General Education requirements.

MARKETING—APPLIED MANAGEMENT

MARKETING AND APPLIED MANAGEMENT (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00009)

The Schoolcraft College Marketing and Applied Management Program produces well-trained individuals who work in the distribution of goods and services. These individuals serve the customer and represent the company to the consumer. Therefore, graduates must be able to think, communicate and apply a knowledge of business.

Career opportunities are available in occupations ranging from buying and selling to distribution management.

Students who satisfactorily complete the Marketing and Applied Management curriculum and all General Education requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

BUS 101	Introduction to Business	3
BUS 122	Advertising	3
BUS 161	Retail Principles and Practices	3
ACCT 103 or	Introduction to Accounting	4
ACCT 201	Principles of Accounting	4
ENG 101	English Composition	3
		16

Winter Semester

BUS 105	Business Math	3
BUS 120	Principles of Salesmanship	3
BUS 162	Retail Merchandising	3
ENG 102 or	English Composition	3
ENG 106	Business English	3
PSYCH 153 or	Human Relations	3
PSYCH 201	General Psychology	4
		15-16

SECOND YEAR
Fall Semester

BUS 217	Business Management	3
BUS 220	Supervision	3
COMA 103	Fundamentals of Speech	3
ECON 103 or	Introductory Economics	3
ECON 201	Principles of Economics	4
ELECTIVE*		2-3
		14-16

Winter Semester

CIS 120	Software Applications for the Microcomputer	3
BUS 226	Principles of Marketing	3
BUS 230	Human Resources Management	3
POLS 105	Survey of American Government	3
ELECTIVE*		3
		15

PROGRAM TOTAL 60-63 CREDITS

* Suggested electives: BUS 204, 205, 208; CIS 180, 215; ENG 116; or OIS 100.

The above program meets all General Education requirements.

MEDICAL ASSISTING

MEDICAL ASSISTING (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00026)

The Medical Assisting Program is a one-year certificate program. Students may elect to complete the program in three semesters (Fall, Winter, and Spring/Summer) or on a part-time basis. The program is designed to coordinate classroom and laboratory experience with practical experience in a healthcare facility such as the physician's office.

Medical assistants are multiskilled allied health professionals who perform a wide range of roles in physicians' offices, clinics and other healthcare settings. They are proficient in a multitude of clinical and administrative tasks and are widely viewed by doctors as vital members of the healthcare delivery team.

Students are required to achieve a grade of 2.0 or better for all courses. Academic and medical assisting courses must be completed by the end of the Winter semester to be eligible for placement in the Office Practicum offered in the Spring.

The Office Practicum is an externship that is structured to provide experiences in applying knowledge, in performing administrative and clinical procedures and in developing professional attitudes for interacting with other professionals and consumers in a healthcare facility.

Students who satisfactorily complete the required curriculum qualify for a Certificate of Program completion. Students who elect to continue their education may apply these credits toward an associate degree.

The Medical Assisting Program is open to students officially admitted to the program.

The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). Graduates are eligible to take the Certified Medical Assistant (CMA) examination conducted by the certifying board of the American Association of Medical Assistants.

For more information please contact:

American Association of Medical Assistants' Endowment (AAMAE)
20 North Wacker Drive, Suite 1575
Chicago, Illinois 60606-2903
312-899-1500
www.aama-ntl.org

FIRST YEAR
Fall Semester

MA 134*	Medical Insurance Coding	3
MA 110	Phlebotomy	4
MA 140*	Medical Office Procedures	3
HIT 104*	Medical Terminology	4
CIS 105*	Computer Orientation	1
BIOL 105*	Elementary Human Anatomy and Physiology	4
		19

Winter Semester

HIT 271	Human Diseases	4
MA 174	Medical Lab Techniques	4
MA 180	Medical Office Clinical Procedures	4
MA 155*	Medical Insurance Billing	3
MT 108	Physician Office Transcription	2
PSYCH 153*	Human Relations	3
		20

Spring/Summer Session

ENG 101*	English Composition	3
MA 195	Office Practicum	3
		6

PROGRAM TOTAL 45 CREDITS

* These courses may be taken prior to admission to the Medical Assisting Program, according to prerequisites.

MEDICAL TRANSCRIPTION

MEDICAL TRANSCRIPTION (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00029)

The Medical Transcription Program prepares the student for entry-level employment as a medical transcriptionist in a variety of healthcare settings or as a self-employed transcriptionist. The medical transcriptionist is a specialist who interprets and transcribes dictation by physicians and other healthcare professionals in order to document patient care.

In the program students apply the following:

- Typing and word processing skills.
- Spelling, editing, and proofreading.
- Medical terminology used in medical reports, surgical procedures, drugs, instruments and laboratory tests.
- Terms related to human anatomy, physiology and pathophysiology.
- English grammar, structure and style.
- Medical transcription forms, styles and practices.
- Medical and surgical reference materials.

The courses designated as Medical Transcription are designed to give the student experience transcribing dictation from medical specialities such as Cardiology, Dermatology, Endocrinology, Gastroenterology, Neurology, Obstetrics and Gynecology, Ophthalmology, Orthopedics, Otorhinolaryngology, Pulmonary Medicine, Urology, Pathology, Radiology and other healthcare dictation. Students may elect to complete the program in three semesters (Fall, Winter, and Spring) or on a part-time basis.

Students who satisfactorily complete the required curriculum qualify for a Certificate of Program completion. Students who elect to continue their education may apply these credits toward an Associate Degree.

Upon completion of two-three years of experience in performing medical transcription in a variety of medical and surgical specialities, a qualified medical transcriptionist may take the certification examination offered by the American Association of Medical Transcription. Successful completion of the examination entitles an individual to be recognized as a Certified Medical Transcriptionist (CMT).

The Medical Transcription Program is open to students officially admitted to the program.

FIRST YEAR
Fall Semester

BIOL 105*	Elementary Human Anatomy and Physiology 1	4
HIT 104*	Medical Terminology	4
OIS 165*	Microsoft Word for Windows	3
MT 108	Physician Office Transcription	2
MT 106*	Principles of Medical Transcription	2
		15

Winter Semester

HIT 112	Basic Laboratory and Diagnostic Tests	2
HIT 114	Pharmacology for Health Professionals	2
HIT 271	Human Diseases	4
MT 157	Medical Transcription Seminar	1
MT 158	Medical Transcription 2	5
		14

Spring Session

MT 159	Medical Transcription 3	5
		5

PROGRAM TOTAL 34 CREDITS

* These courses may be taken prior to admission to the Medical Transcription Program, according to prerequisites.

METALLURGY

METALLURGY AND MATERIALS SCIENCE (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00184)

The Metallurgy and Materials Science Program has been specifically designed to accommodate most areas of industry associated with research, development, manufacturing and materials control. Carefully selecting electives will prepare students for specialization. Students interested in the laboratory control of processing may wish to select electives in welding, fabrication, manufacturing processes or quality control. Likewise, students interested in development or industrial research may wish to complete electives in materials or physical science, design or computer technology.

Metallurgy and Materials Science graduates have knowledge of the philosophy of metallic and nonmetallic materials used in industry and can apply principles basic to scientific laboratory investigation, research, product development and process control.

Students who satisfactorily complete the Metallurgy and Materials Science curriculum and all General Education requirements qualify for an Associate in Applied Science Degree.*

FIRST YEAR
Fall Semester

MET 102	Introduction to Materials Science	3
MFG 102	Basic Machining, Measurements and Manufacturing Processes	3
MET 120	Hazardous Materials Management	2
ENG 100	Communication Skills	3
MET 160	Composite Materials	3
CIS 105	Computer Orientation	1
		15

Winter Semester

MET 114	Advanced Materials and Applications	3
MET 152	Structure and Properties Laboratory	3
MATH 113	Intermediate Algebra for College Students	4
ENG 106	Business English	3
POLS 105	Survey of American Government	3
		16

SECOND YEAR
Fall Semester

MET 211	Physical Metallurgy Structures	3
MET 215	Mechanical Properties of Metals	3
MET 217	Computer Applications for Materials Science	3
MATH 122	Elementary Statistics	4
WELD 113	Shielded Metallic Arc Welding	3
		16

Winter Semester

HUM 106	Introduction to Art and Music	1
PSYCH 153	Human Relations	3
MET 248	Electron Microscopy and Image Analysis	3
MET 271	Corrosion and Corrosion Analysis	4
MET 280	Cooperative Metallurgical Experience 1	4
		15

PROGRAM TOTAL 62 CREDITS

* Students seeking transfer to a baccalaureate program should request transfer guides provided by the department.

The above program meets all General Education requirements.

METALLURGY—APPLIED PHYSICAL (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00124)

The Applied Physical Metallurgy Certificate Program is designed to provide people currently employed in the field with an opportunity to reinforce skills and acquire academic foundations necessary for advancement in the laboratory and related process situations. The program is oriented to property, process and structure areas of study and is designed and scheduled with consideration for part-time students.

Students who satisfactorily complete the Applied Physical Metallurgy Certificate curriculum qualify for a Certificate of Program completion.

FIRST YEAR
Fall Semester

MET 102	Introduction to Materials Science	3
MFG 102	Basic Machining, Measurements and Manufacturing Processes	3
QM 106	Introduction to Quality Systems	3
		9

Winter Semester

WELD 113	Shielded Metallic Arc Welding (S.M.A.W.)	3
MET 114	Advanced Materials and Applications	3
MET 120	Hazardous Materials Management	2
		8

SECOND YEAR
Fall Semester

MET 152	Structure and Properties Lab	3
MET 211	Physical Metallurgy Structures	3
MFG 243	Manufacturing Systems Analysis	3
		9

Winter Semester

ELECTIVE	MET	3
MET 215	Mechanical Properties of Metals	3
MET 280	Special Problems in Materials Science	4
		10

PROGRAM TOTAL 36 CREDITS

MATERIALS SCIENCE (POST-ASSOCIATE CERTIFICATE)

(Schoolcraft program code # PAC.00179)

This post-associate certificate in Materials Science is designed for working professionals who have industrial experience and/or training in the materials science field and who wish to study current technologies applied to laboratory practice and other materials-related endeavors.

Completion of this program will enhance students' abilities to meet the needs of current and changing industrial technologies in metallurgical and materials science applications, processing, and control environments. It will also provide support background for managerial and technical personnel who have direct responsibilities in industrial materials operations and planning. These courses are also intended to meet requirements for current and future professional certification.

Prior to admission to this program, students must have already completed a minimum of an accredited Associate Degree in Applied Science. The post-associate certificate is awarded upon successful completion of 15 credit hours (exact number may vary slightly due to credit value or content of courses).

Fall Semester

MET 211	Physical Metallurgy Structures	3
MET 215	Mechanical Properties of Metals	3
MET ELECTIVE		3

Winter Semester

MET 280	Special Problems in Materials Science	4
MET ELECTIVE		3

Completion of a minimum of 15 credit hours is essential.
Courses can be taken through independent study.
A student may choose an applicable 200-level elective.

MUSIC

MUSIC FOUNDATIONS CERTIFICATE (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00162)

Successful students completing this certificate will be able to notate all intervals, simple rhythmic patterns and basic chord progressions. Students will have a good general knowledge of musical styles from the 1600s to the present day; will have gained experience in performing publicly in ensembles; and will also have developed elementary training as soloists in voice or as instrumentalists.

Fall Semester

MUSIC 104	Basic Materials in Music Theory	3
MUSIC 121 or 131	Class or Private (Applied) Piano	2
MUSIC 105	Music Appreciation	3
MUSIC 113 or 124 or 117 or 141	Music Ensemble	1-2
MUSIC 133 or 135	Applied Music—Voice or Instrument	2
ELECTIVE	English Literature or Poetry, Art Appreciation suggested	3
HUM 106	Introduction to Art and Music	1
		15-16

Winter Semester

MUSIC 164 or 165	Music History 1 or 2	3
MUSIC 122 or 133	Class or Private (Applied) Piano	2
MUSIC 120 or 127 or 118 or 142	Music Ensemble	1-2
MUSIC 134 or 136	Applied Music—Voice or Instrument	2
MUSIC 171	Music Technology 1	3
ELECTIVE	(See Fall Semester Suggestions)	3
		14-15

PROGRAM TOTAL 29-31 CREDITS

MUSIC INTERMEDIATE CERTIFICATE (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00163)

Successful students completing this certificate will be able to notate moderately difficult rhythmic patterns and moderately difficult chord progressions. Students will have developed a more specific knowledge of music from the 1600s to the present day. Students will have gained experience in performing publicly in ensembles, and will have developed technical and musical skills as well as experience to perform as soloists in voice or as instrumentalists in public recitals and concerts.

Fall Semester

MUSIC 137	Sight Singing and Ear Training 1	1
MUSIC 164 or 165	Music History 1 or 2	3
MUSIC 153	Music Theory	3
MUSIC 213 or 224, or 217 or 241	Music Ensemble	1-2
MUSIC 171	Music Technology 1	3
MUSIC 231	Applied Music—Piano	2
MUSIC 233 or 235	Applied Music—Voice or Instrument	2
		15-16

Winter Semester

MUSIC 138	Sight Singing and Ear Training 2	1
MUSIC 164 or 165	Music History 1 or 2	3
MUSIC 154	Music Theory	3
MUSIC 219 or 227 or 218 or 242	Music Ensemble	1-2
MUSIC 232	Applied Music—Piano	2
MUSIC 234 or 236	Applied Music—Voice or Instrument	2
ELECTIVE	(English Literature, Poetry, or Art Appreciation suggested)	3
		15-16

PROGRAM TOTAL 30-32 CREDITS

MUSIC—RECORDING TECHNOLOGY (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00244)

The Recording Technology Associates Degree is designed to prepare the student for transfer to institutions offering a bachelor's degree in Recording Engineering or for apprenticeships at recording studios and various media venues. The program will teach the student the fundamentals and techniques relative to live concert and studio recordings as well as professional sound reinforcement.

Understanding the musical perspective is an important focus of the program. The required music courses will assist the recording engineer in a better understanding of what the performing musician is experiencing and will in turn improve the recording outcome.

Technological changes directly related to the recording industry are frequently introduced. The program is committed to staying current and will help the student understand new directions in the technology.

FIRST YEAR
Fall Semester

MUSIC 117, 119, 124, or 141	Music Ensemble	1-2
MUSIC 121	Class Piano	2
MUSIC 173	Basic Studio Techniques 1	3
MATH 113	Intermediate Algebra for College Students	4
COMA 103	Fundamentals of Speech	3
ENG 101	English Composition	3
		16-17

Winter Semester

HUM 106	Introduction to Art and Music	1
MUSIC 104	Basic Materials in Music Theory	3
MUSIC 123	Keyboard Skills for Recording Engineers	1
MUSIC 174	Basic Studio Techniques 2	3
PHYS 123	Applied Physics	5
ENG 102	English Composition	3
		16

SECOND YEAR
Fall Semester

MUSIC 171	Music Technology	3
MUSIC 273	Advanced Studio Techniques 1	3
MUSIC 137	Sight Singing and Ear Training 1	2
ELECT 119	Basic Measurement and Reporting Skills	3
PSYCH 201	General Psychology	4
		15

Winter Semester

MUSIC 138	Sight Singing and Ear Training 2	2
MUSIC 105 or	Music Appreciation	3
MUSIC 149	Popular Music Culture in America	3
MUSIC 130	Ear Training for Recording Engineers	2
MUSIC 172	Electronic Music	3
MUSIC 274	Advanced Studio Techniques 2	3
GEOG 133	World Regional Geography	4
		17

PROGRAM TOTAL 64-65 CREDITS

The above program meets all General Education requirements.
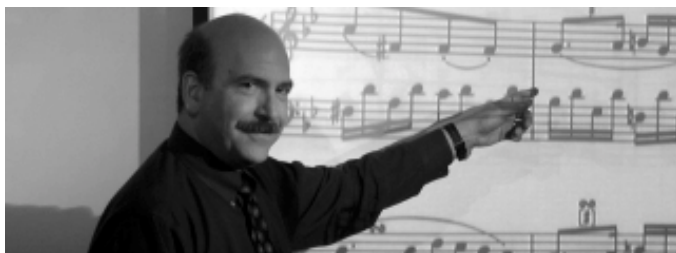
MUSIC—RECORDING TECHNOLOGY (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00144)

The Recording Technology Certificate will provide the student with skills important to the apprentice at recording studios and for quality home studio production. The program will prepare the student to understand the functions of audio signals and the sound reproduction equipment. The program will also acquaint them with emerging audio formats.

Listening in the manner of a recording engineer will be stressed as well as some fundamental music skills important to the musicians point of view.

Technological changes directly related to the recording industry are frequently introduced. The program is committed to staying current and will help the student understand new directions in the technology.

Fall Semester

MUSIC 104	Basic Materials in Music Theory	3
MUSIC 171	Music Technology	3
MUSIC 173	Basic Studio Techniques 1	3
MUSIC 121	Class Piano	2
ELECT 119	Basic Measurement and Reporting Skills	3
		14

Winter Semester

MUSIC 123	Keyboard Skills for Recording Engineers	1
MUSIC 130	Ear Training for Recording Engineers	2
MUSIC 172	Electronic Music	3
MUSIC 174	Basic Studio Techniques 2	3
MUSIC 105	Music Appreciation	3
		12

Spring Session

MUSIC 273	Advanced Studio Techniques 1	3
MUSIC 274	Advanced Studio Techniques 2	3
		6

PROGRAM TOTAL 32 CREDITS

NURSING—ADN

NURSING—REGISTERED (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00000)

The Associate Degree Nursing Program prepares students who have demonstrated the potential to fulfill the requirements for the Associate in Applied Science Degree for entry level nursing practice. Schoolcraft College Nursing Programs have uniquely structured pre-admission requirements that are reviewed each year. It is essential that you contact the Admissions Office for a current copy of the specific information sheet for the steps and prerequisites to enter the program of choice.

Students are admitted once a year, at the opening of the Fall Semester. After a student is accepted into the program, courses are scheduled into four 15-week semesters and a 7-week Spring Session. Nursing courses must be taken in sequence and a minimum grade of 2.0 is required for progression to the next nursing course. A minimum grade of 2.5 is required for the basic science courses. Academic courses other than nursing must be completed by the completion of the nursing courses. Students must furnish and maintain uniforms, lab coats, or other appropriate apparel required by the institution they are assigned for clinical instruction. Clinical assignments will be completed in acute care and community settings. Computer lab use is required in this program. See "Academic Computing Labs" in this catalog for policy requirements.

The student who satisfactorily completes the Associate Degree Nursing curriculum and all General Education requirements qualifies for an Associate in Applied Science Degree and is eligible to apply to write the National Council Licensure Examination for Registered Nursing (NCLEX-RN). This Nursing Program is offered at the Livonia Campus.

SAMPLE SCHEDULE OF COURSES
ADMISSION PREREQUISITES

BIOL 236*	Anatomy and Physiology	5
ENG 101	English Composition	3
BIOL 243	Microbiology	4
AHE 101	Introduction to Health Care	1
		13

FIRST YEAR
Fall Semester

NURS 116	Fundamentals of Nursing 1	3
NURS 117	Fundamentals of Nursing 2	3
NURS 118	Pharmacology 1	1
PSYCH 201	General Psychology	4
POLS 105	Survey of American Government	3
		14

Winter Semester

NURS 119	Pharmacology 2	1
NURS 120	Health Assessment and Adult Medical Surgical Nursing 1	4
NURS 121	Adult Medical Surgical Nursing 2	5
PSYCH 209	Child Psychology	3
		13

Spring Session

NURS 122	Psychiatric—Mental Health Nursing	4
ENG 102	English Composition	3
		7

SECOND YEAR
Fall Semester

SOC 201	Principles of Sociology	3
NURS 211	Nursing Care of Women and Childbearing Families	5
NURS 212	Nursing Care of Children and Families	5
		13

Winter Semester

NURS 213	Adult Medical Surgical Nursing 3	5
NURS 214	Leadership and Nursing Management of Complex Clients	5
ELECTIVE	Goal #8 Course	1-4
		11-14

PROGRAM TOTAL 71-74 CREDITS

* Students who may transfer to a baccalaureate program should elect the BIOL 237-238 sequence. Please review and follow all course prerequisites. In addition to the above schedule, it is recommended that students take BIOL 115, Nutrition, prior to entering the program.

In addition, COLLS 130, Applied Learning Theory–Nursing, is an available elective for pre-nursing students to develop study skills and success strategies.

For more information please contact:

State of Michigan
Department of Consumer and Industry Services
Office of Health Services
Board of Nursing
P.O. Box 30018
Lansing, MI 48909
517-373-4674
517-373-6873
www.allscrubs.com/boards.html

The above program meets all General Education requirements.

NURSING—PRACTICAL

NURSING — LICENSED PRACTICAL (ONE-YEAR CERTIFICATE)

(Schoolcraft program code #1YC.00017)

Practical nursing courses are open only to students who are officially admitted to the Practical Nursing Program.

Courses are designed to provide theory and practice in practical nursing for employment in hospitals, nursing homes, clinics, doctors' offices and patients' homes. Courses must be taken in sequence. A minimum grade of 2.0 is required for progression to the next course.

Schoolcraft College Nursing Programs have pre-admission requirements that are reviewed each year. It is essential to contact the Admissions Office for a current copy of prerequisites to enter the program of choice. Students are admitted once a year, at the opening of the fall semester. Courses are scheduled into two 15-week semesters, a 7-week spring session and a 4-week summer session. The Practical Nurse Program is designed to meet requirements for the certificate program.

Students must furnish and maintain uniforms, lab coats or other appropriate apparel required by the institution to which they are assigned for clinical instruction.

Students who satisfactorily complete the Practical Nursing curriculum qualify for a Certificate of Program completion and are eligible to apply to write the National Council Licensure Examination for Practical Nursing. This program is offered at the Livonia Campus.

FIRST YEAR
Fall Semester
AHE 101	Introduction to Health Care	1
PN 102	Fundamentals of Practical Nursing	8
PN 107	Human Behavior and Relationships	4
BIOL 105	Elementary Human Anatomy and Physiology 1 (PN)	4
		17

Winter Semester
PN 119	Mental Health Nursing	3
PN 123	Nursing Adult Patients	10
		13

Spring Session
PN 128	Trends in Practical Nursing	1
PN 130	Maternal and Child Nursing	5
		6

Summer Session
PN 135	Transition to Employment	3
		3

PROGRAM TOTAL 39 CREDITS

**NURSING — LICENSED PRACTICAL
(ASSOCIATE DEGREE IN GENERAL STUDIES)**

(Schoolcraft program code # AGS.00126)

This Associate Degree in General Studies/Nursing is designed for practical nursing certificate students who wish to earn an associate degree. Upon successful completion of the first year of study, summer session, students will be awarded a certificate in Practical Nursing, and will then be eligible to write the national licensing examination for practical nursing.

Upon completion of the second year of the program, students will qualify for an Associate Degree in General Studies, having met all degree and goal requirements. Many of the courses will meet the requirements of the Associate Degree in General Studies/Nursing if graduates wish to continue their education in nursing.

FIRST YEAR
Fall Semester
AHE 101	Introduction to Health Care (Goal #5)	1
PN 102	Fundamentals of Practical Nursing	8
PN 107	Human Behavior and Relationships	4
BIOL 105	Elementary Human Anatomy and Physiology 1 (Goal #6)	4
or		
BIOL 236*	Anatomy and Physiology	5
		17-18

Winter Semester
PN 123	Nursing Adult Patients	10
PSYCH 201	General Psychology (Goal #7)	4
SOC 201	Principles of Sociology (Goal #9)	3
		17

Spring Session (7 Weeks)
PN 128	Trends in Practical Nursing	1
PN 130	Maternal and Child Nursing	5
		6

Summer Session (4 Weeks)
PN 135	Transition to Employment	3
		3

SECOND YEAR
Fall Semester
ENG 101	English Composition (Goal #2)	3
BIOL 115	Nutrition (Goal #7)	3
ELECTIVE	Goal #1 Course	5
HUM 106	Introduction to Art and Music (Goal #8 & #10)	1
		12

Winter Semester
ENG 102	English Composition (Goal #2)	3
COMA 103	Fundamentals of Speech (Goal #3)	3
PSYCH 209	Child Psychology	3
POLS 105	Survey of American Government (Goals #4)	3
		12

PROGRAM TOTAL 67-68 CREDITS

* Students who may want to transfer to an associate degree nursing program should elect to take BIOL 236 or the BIOL 237-238 sequence.

The above program meets all General Education requirements.

OCCUPATIONAL THERAPY

OCCUPATIONAL THERAPY ASSISTANT (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00019)

Program is inactive.

OFFICE INFORMATION SYSTEMS

OFFICE ADMINISTRATION (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00133)

The Office Professional, as a member of the office information systems management team, plays an integral role in the successful operation of the organization. In today's information age, the OIS professional functions as the pivotal person in the office communications network.

The Office Administration curriculum is designed to offer courses that enhance students' technical skills, communications skills, and leadership/management skills with an emphasis on the professional work ethic.

The Associate in Applied Science Degree is awarded upon successful completion of this curriculum and all General Education requirements.

FIRST YEAR
Fall Semester

OIS 100	Keyboarding 1	2
OIS 102	Keyboarding 2	2
OIS 195	Time and Project Management	1
ENG 101	English Composition	3
POLS 105	Survey of American Government	3
PSYCH 153 or	Human Relations	3
PSYCH 201	General Psychology	4
		14-15

Winter Semester

OIS 105	Office Communications and Editing Skills	3
OIS 165	Microsoft Word for Windows	3
CIS 120	Software Applications for the Microcomputer	3
ENG 106	Business English	3
ELECTIVE	Goal #6 Course	3
		15

SECOND YEAR
Fall Semester

OIS 265	Advanced Microsoft Word for Windows	3
OIS 255	Office Procedures	2
ACCT 201	Principles of Accounting	4
COMA 103	Fundamentals of Speech	3
CIS 170	Microsoft Windows	3
HUM 106	Introduction to Art and Music	1
		16

Winter Semester

OIS 185	Business Presentation 1—Fundamental Concepts	3
OIS 260	Office Administration	3
ACCT 202	Principles of Accounting	4
BUS 207	Business Law	3
CIS 180	Spreadsheet Applications	3
		16

PROGRAM TOTAL 61-62 CREDITS

The above program meets all General Education requirements.

OFFICE SPECIALIST (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00166)

This certificate program focuses on office application software for today's administrative assistant. Microcomputers and software applications are the center of the technological revolution taking place in today's business offices.

The student enrolled in the Office Specialist's program will be prepared to take on broader and more challenging responsibilities in the business world. Successful completion of these courses helps to prepare students for the Microsoft Office Specialist certification exam.

Individuals who successfully complete this program will be prepared to obtain employment as administrative or executive secretaries; software specialists; word processing supervisors and managers.

FALL SEMESTER

OIS 105*	Office Communications and Editing Skills	3
CIS 115*	Introduction to Computer Based Systems	3
OIS 165*	Microsoft Word for Windows	3
OIS 195	Time and Project Management	1
OIS 255*	Office Procedures	2
		12

WINTER SEMESTER

OIS 265	Advanced Microsoft Word for Windows	3
CIS 120*	Software Applications for the Microcomputer	3
OIS 185	Business Presentation 1—Fundamental Concepts	3
CIS 225	Database Management Systems for the Microcomputer	3
		12

FALL SEMESTER

CIS 122	Microsoft Outlook	2
CIS 180**	Spreadsheet Applications	3
CIS 215	Advanced Software Applications for the Microcomputer	3
		8

PROGRAM TOTAL 32

 * Courses require a skill level equal to OIS 100. Students not possessing this skill level would be required to take OIS 100 before entering this certificate program.

** Students may elect to replace CIS 180 with CIS 182 and CIS 282. Both courses must be taken to replace CIS 180.

PIANO TEACHER

PIANO TEACHER CERTIFICATE

(Schoolcraft program code # 1YC.00115)

The Piano Teacher Certificate Program is designed for pianists with sufficient background to pursue professional careers as private piano teachers. The curriculum is structured to provide instruction in piano teaching materials and techniques as well as music theory and history. In addition, students are given numerous opportunities to observe and teach children enrolled in group piano classes on campus. (Two supervised teaching sessions of children are required.)

In order to enter the Piano Teacher Certificate Program, each applicant must audition to demonstrate an appropriate level of musicianship. Upon completion of the required curriculum, and upon recommendation of the music faculty, students are awarded Certificates of Program completion. Applied Music has an added fee.

Recommended as a two-year, part-time program. Listed below is the suggested sequence.

FIRST YEAR
Fall Semester

MUSIC 131	Applied Music—Piano	2
MUSIC 164	Music History 1	3
MUSIC 153	Music Theory	3
MUSIC 143	Practice Teaching and Practicum in Piano Teaching 1	2
		10

Winter Semester

MUSIC 132	Applied Music—Piano	2
MUSIC 165	Music History 2	3
MUSIC 154	Music Theory	3
MUSIC 144	Practice Teaching and Practicum in Piano Teaching 2	2
		10

SECOND YEAR
Fall Semester

MUSIC 231	Applied Music—Piano	2
MUSIC 137	Sight Singing and Ear Training 1	1
MUSIC 247	Piano Teaching Techniques and Materials 1	3
MUSIC 201	Keyboard Skills for Piano Teachers 1	2
MUSIC 243	Practice Teaching and Practicum in Piano Teaching 3	2
		10

Winter Semester

MUSIC 232	Applied Music—Piano	2
MUSIC 138	Sight Singing and Ear Training 2	1
MUSIC 257	Piano Teaching Techniques and Materials 1	3
MUSIC 202	Keyboard Skills for Piano Teachers 2	2
MUSIC 244	Practice Teaching and Practicum in Piano Teaching 4	2
		10

PROGRAM TOTAL 40 CREDITS

SMALL BUSINESS MANAGEMENT

SMALL BUSINESS MANAGEMENT (ASSOCIATE DEGREE)

(Schoolcraft program code # AAS.00011)

The Small Business Management Curriculum offers a well-balanced program of liberal arts courses, general business subjects, electives and the necessary training to meet the challenge of today's highly competitive business world. The Small Business Management curriculum is designed for those who already own and operate a small business, who are contemplating starting their own small business, or seek employment opportunities as managers in small business.

Students who satisfactorily complete the Small Business Management curriculum and all General Education requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR
Fall Semester

BUS 101	Introduction to Business	3
BUS 103	Organizing a Small Business	3
BUS 105	Business Math	3
CIS 120	Software Applications for the Microcomputer	3
ENG 101*	(Minimum Requirement)	3
		15

Winter Semester

BUS 104	Operating a Small Business	3
BUS 120	Principles of Salesmanship	3
ACCT 103 or	Introduction to Accounting	4
ACCT 201	Principles of Accounting	4
ENG 106	Business English	3
POLS 105	Survey of American Government	3
		16

SECOND YEAR
Fall Semester

BUS 204	Personal Finance	3
BUS 217	Business Management	3
BUS 220	Supervision	3
COMA 103	Fundamentals of Speech	3
ELECTIVE**		3
HUM 106	Introduction to Art and Music	1
		16

Winter Semester

BUS 207	Business Law	3
BUS 226	Principles of Marketing	3
BUS 230	Human Resources Management	3
PSYCH 153 or	Human Relations	3
PSYCH 201	General Psychology	4
ELECTIVE**		3
		15-16

PROGRAM TOTAL 62-63 CREDITS

* Placement in proper English course is based on student's placement test score.

** Suggested Electives: BUS 122, 161, 162, 205, 208, CIS 215, ENG 116.

The above program meets all General Education requirements.

THEATRE

THEATRE TRANSFER PROGRAM (ASSOCIATE DEGREE)

(Schoolcraft program code #AAS.00042)

The Theatre Program is designed to provide students with a balanced curriculum of theatre and liberal arts courses that will prepare them to transfer. This program includes performance and the technical aspects of theatre, including theory and practical experiences in theatre.

Upon completion of the program, the students qualify for an Associate of Arts Degree in Theatre.

FIRST YEAR
Fall Semester

ENG 101	English Composition	3
BIOL 101	General Biology	4
THEA 120	Theatre Activities	1
THEA 208	Acting 1	3
THEA 101	Introduction to Theatre	3
CIS 105	Computer Orientation	1
		15

Winter Semester

ENG 102	English Composition	3
THEA 121	Theatre Activities	1
THEA 209	Acting 2	3
THEA 207	Stagecraft and Lighting	3
MATH 113	Intermediate Algebra for College Students	4
		14

SECOND YEAR
Fall Semester

THEA 220	Theatre Activities	1
COMA 103	Fundamentals of Speech	3
HIST 153	Contemporary America—U.S. History	3
ENG 245	Introduction to Literature—Drama	3
POLS 105	Survey of American Government	3
THEA 231	History of Theatre 1	3
		16

Winter Semester

THEA 221	Theatre Activities	1
THEA 241	Oral Interpretation of Literature	3
ENG 248	Introduction to Literature—Shakespeare	3
PSYCH 201	General Psychology	4
THEA 232	History of Theatre 2	3
THEA 204	Stage Makeup	2
		16

PROGRAM TOTAL 61 CREDITS

The above program meets all General Education requirements.

WELDING TECHNOLOGY

WELDING—FABRICATION (ONE-YEAR CERTIFICATE)

(Schoolcraft program code # 1YC.00127)

There is continued need for persons with the skills to fabricate machinery components and other industrial equipment while working under the supervision of a welding journeyperson. The Welding—Fabrication Program prepares students for employment under classifications such as welders and/or industrial fabricators. The program includes joining materials, using weldments, special techniques, equipment and other recognized fastening methods. Students acquire skills in the broad categories of welding and fabrication with added emphasis upon support technical subjects.

Students are required to purchase protective clothing, protective (safety) shoes and eye protection equipment.

Students who satisfactorily complete the Welding—Fabrication Certificate curriculum qualify for a Certificate of Program completion.

ONE-YEAR PROGRAM

MET 102	Introduction to Materials Science	3
WELD 109	Algebra	2
WELD 113	Shielded Metallic Arc Welding (S.M.A.W)	3
WELD 115	Gas Metallic Arc Welding (G.M.A.W/M.I.G.)	3
WELD 119	Gas Tungsten—Inert Arc Welding (G.T.A.W./T.I.G.)	3
WELD 120	Advanced Processes—Stick Electrode/ (M.I.G.) Welding	3
WELD 130	Advanced Processes—Gas Tungsten, Ceramic and Polymer Welding	3
WELD 205	Welder's Print Reading	2
WELD 206	Welding Inspection and Qualification	2
*WELD 210-214	Exam Preparation (Select one)	3
WELD 223	Fabrication—Student Project	4

PROGRAM TOTAL 31 CREDITS

*Select one:

WELD 210	S.M.A.W	3
WELD 211	G.M.A.W.	3
WELD 212	G.T.A.W.	3
WELD 213	S.A.W.	3
WELD 214	Pipe Welding	3

Exams for above certificate will also be provided on an individual basis.

Schoolcraft College

Course Descriptions
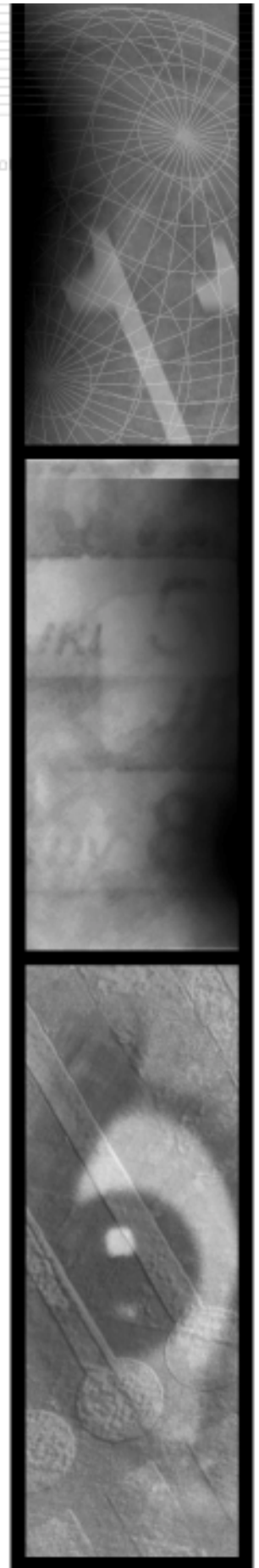
COURSE DESCRIPTIONS

KEY TO READING COURSE DESCRIPTIONS

SAMPLE COURSE LISTING:

Department   **Course Name**   **Lecture Hours/Week**

Course Number   **Lab Hours/Week**

Credit Hours

CHEM 111   General Chemistry (4 - 3) 4 Cr. Hrs.
First course in general chemistry. Includes laws of chemical combination, states of matter, atomic and molecular structure, bonding, physical and chemical properties of matter.

Course Description

Prerequisite: CHEM 051 or equivalent (with a grade of 2.0 or better) and MATH 113 or equivalent (may be taken concurrently).

Course required before taking this class

Courses are numbered as follows:

1. Courses numbered from 001 to 099 are considered pre-college, may not be transferrable, and do not apply toward an Associate Degree.

2. Courses numbered from 100 to 199 are primarily freshman-level courses.

3. Courses numbered 200 to 299 are primarily sophomore-level courses.

4. Final exams are required in all credit courses.

5. Many courses are sequenced so that it is necessary to master the material in a lower level course before attempting more complex material. Follow prerequisites to ensure success.

COURSE INDEX

ACCOUNTING

Associate Dean: Bruce Sweet, MA
Instructors: Professor LaVonda Ramey, MBA, CPA
Instructor Michelle Randall, MBA, CPA
Adjunct Faculty

ACCT 103 Introduction to Accounting (4 - 0) 4 Cr. Hrs.
Beginning accounting course with emphasis on accounting cycle for a sole proprietorship, journals, ledgers and basic financial statements. Accounting for cash, payroll, taxes and plant assets. Intended for students who want some accounting instruction prior to the Principles of Accounting course and those not majoring in business or economics.
Prerequisite: None.

ACCT 201 Principles of Accounting (4 - 0) 4 Cr. Hrs.
Principles of accounting with emphasis on accounting and the accounting cycle for a sole proprietorship, journals, ledgers, Income Statement, Statement of Owner's Equity, and Balance Sheet. Accounting for cash control, accounts receivable, bad debts, promissory notes, inventories, plant and intangible assets and payroll. The completion of a handwritten practice set is required.
Prerequisite: None.

ACCT 202 Principles of Accounting (4 - 0) 4 Cr. Hrs.
Continuation of ACCT 201 with emphasis on corporations and an introduction to partnership accounting. Accounting for liabilities, investments, statement analysis, management planning and an introduction to cost accounting.
Prerequisite: ACCT 201.

ACCT 221 Intermediate Accounting (4 - 0) 4 Cr. Hrs.
Expansion of accounting principles with emphasis on assets. Accounting for valuing current assets and current liabilities and plant assets.
Prerequisite: ACCT 202. ACCT 260 recommended.

ACCT 222 Intermediate Accounting (4 - 0) 4 Cr. Hrs
Continuation of ACCT 221 with emphasis on equity accounting. Accounting for current liabilities, long-term liabilities, leases, pensions, income taxes, statement of cash flows, financial statement analysis, accounting changes and errors and other appropriate current topics.
Prerequisite: ACCT 202. ACCT 260 recommended.

ACCT 226 Cost Accounting (4 - 0) 4 Cr. Hrs.
Concepts of cost accounting as a management tool for control and planning. Actual and standard cost methods as applied to job and process cost systems; accounting for materials, labor, and manufacturing overhead; direct costing method; and cost accounting projects. Fall only.
Prerequisite: ACCT 202 and CIS 180.

ACCT 238 Federal Tax Accounting (4 - 0) 4 Cr. Hrs.
Federal income tax laws with special emphasis on those regulations that relate to individuals and small business. Includes preparation of tax forms. Winter only.
Prerequisite: ACCT 201 recommended.

ACCT 260 Computer Based Accounting (3 - 0) 3 Cr. Hrs.
The student will complete comprehensive accounting problems using commercial packages. These packages shall include General Ledger, Accounts Receivable, Accounts Payable and Payroll. Student shall be responsible for modifying layout, making schedules and generating financial statements. The course could accommodate other accounting packages at the discretion of the student and instructor. Outside lab time is required.
Prerequisite: ACCT 202 and CIS 120.

ACCT 261 Computerized Accounting (3 - 0) 3 Cr. Hrs.
The student will complete comprehensive commercial accounting packages. These packages shall include General Ledger, Accounts Receivable, Accounts Payable and Payroll for both a service and merchandising business. Student shall be responsible for modifying layout, making schedules and generating financial statements. The course could accommodate other accounting packages at the discretion of the student and instructor. Outside lab time is required.
Prerequisite: ACCT 202 and CIS 120.

ACCT 262 Payroll Accounting—Manual to Computerized (3 - 0) 3 Cr. Hrs.
The student will complete a manual and computerized payroll practice set. These practice sets will include computing and paying wages and salaries to employees. Explain the various phases of the Social Security Taxes, Federal Income Taxes, State Income Taxes and Unemployment Compensation Insurance and the laws relating to them. The course will analyze and journalize payroll transactions and they will be able to file the appropriate payroll reports. Outside lab time is required.
Prerequisite: ACCT 202 and CIS 120.

ALLIED HEALTH EDUCATION

Assistant Dean: Monica Sullivan, MS
Instructors: Adjunct Faculty

AHE 101 Introduction to Health Care (1 - 0) 1 Cr. Hr.
A comprehensive review of the health care industry. The course will incorporate trends and changes related to health care facilities such as acute care hospitals, specialty hospitals, nursing homes, health maintenance organizations, hospice and home health care. The course will also deal with the impact and use of computers in the delivery and documentation of health care and the role of the medical professional in response to the health care delivery system.
Prerequisite: None. AHE 101 must be taken prior to completing the first 12 credit hours of Allied Health Programs.

ANTHROPOLOGY

Assistant Dean: Dominic Aquila, PhD
Instructors: Assistant Professor Josselyn Moore, MA
    Adjunct Faculty

ANTH 112   Introduction to Anthropology (3 - 0) 3 Cr. Hrs.
An introduction to the origin and diversity of humans. Topics include evolution of humans and their cultures, contemporary cultural diversity, linguistics, and applied anthropology. Focuses on biological and cultural adaptation.
Prerequisite: None.

ANTH 117   Introduction to Archaeology (3 - 0) 3 Cr. Hrs.
A general survey of Archaeology. Includes an overview of the history of the field, and the basic theories and methods employed in the study of prehistoric cultures. Prehistoric cultures are used as examples.
Prerequisite: None.

ANTH 201   Cultural Anthropology (3 - 0) 3 Cr. Hrs.
Comparison of ways of life for societies worldwide using anthropological theory and methods. 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.
Prerequisite: None.

ANTH 211   Myth, Magic and World Religions (3 - 0) 3 Cr. Hrs.
This course will survey past and present religious beliefs from around the world including tribal religions, Hinduism, Buddhism, Judaism, Christianity and Islam. The importance of religious values will be examined from an anthropological perspective providing an understanding of the role of contemporary religious beliefs in the rapidly changing world.
Prerequisite: ANTH 112 or 201 recommended.

ANTH 214   Native American Traditions (3 - 0) 3 Cr. Hrs.
This course provides a survey of Native American cultures from both Native and non-Native perspectives. Social, economic, religious and artistic traditions will be examined. Course content includes a review of prehistoric origins as well as an evaluation of the effects of centuries of contact with people from Europe, Africa and Asia.
Prerequisite: ANTH 112 or 201 recommended.

ART AND DESIGN

Assistant Dean: Dominic Aquila, PhD
Instructors: Assistant Professor Sarah Olson, MA
    Instructor Holly Stevens, MA
    Adjunct Faculty

ART 105   Basic Drawing 1 (3- 0) 3 Cr. Hrs.
Investigation of basic drawing materials; training in observation of and selection of significant elements. Emphasis is on the concept and its relationship to technique and materials. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate lab.
Prerequisite: ART 106 concurrently recommended.

ART 106   Basic Design 1 (3 - 0) 3 Cr. Hrs.
Introduction to the basic principles of design. Application of design principles of two and three-dimensional projects in various media. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 105 concurrently recommended.

ART 113   Art Education (3 - 0) 3 Cr. Hrs.
A study of child growth and development through creativity. Students study techniques and materials appropriate for use at various elementary grade levels. Emphasis on methods to stimulate children's creative interests. Students are required to make arrangements for observation of elementary classes during the latter part of the semester.
Prerequisite: PSYCH 201 recommended.

ART 115   Art History (4 - 0) 4 Cr. Hrs.
Development of Western Art from prehistoric times to the Renaissance, with emphasis on architecture and sculpture.
Prerequisite: None.

ART 116   Art History (4 - 0) 4 Cr. Hrs.
A study of the development of Western Art from the Renaissance to the present.
Prerequisite: ART 115 recommended.

ART 118   Ceramics 1 (3 - 0) 3 Cr. Hrs.
Fundamentals of ceramics; study of materials and basic techniques in shaping, decorating and firing. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 105 or equivalent.

ART 119   Ceramics 2 (3 - 0) 3 Cr. Hrs.
Continuation of ART 118. Emphasis on good ceramic form; work with various types of ceramic materials; advanced techniques in shaping, decorating, and firing. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 118.

ART 125   Basic Drawing 2—Figure Drawing (3 - 0) 3 Cr. Hrs.
Continuation of ART 105. Further investigation of drawing as recording of information. Emphasis is placed on the art of observation (looking and seeing), and the recording of the human figure in relationship to its setting, environment, materials and techniques. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate lab.
Prerequisite: ART 105 or consent of instructor.

ART 126   **Basic Design 2 (3 - 0) 3 Cr. Hrs.**
Continuation of Art 106. Further application of design principles in two and three dimensional projects in various media. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 106. ART 125 concurrently recommended.

ART 201   **Art Appreciation (3 - 0) 3 Cr. Hrs.**
An appreciation course dealing with the basic elements underlying all art forms and with the understanding of the aesthetic and technical problems that are involved.
Prerequisite: None.

ART 205   **Drawing 3 (3 - 0) 3 Cr. Hrs.**
Continuation of ART 105 and 125. Further investigation of materials and techniques, with in-depth study of one or two methods. Further emphasis is placed on portraiture within the study of directly observing and recording the human figure in relationship to its environment. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate lab.
Prerequisite: ART 105 and ART 125 or consent of the instructor.

ART 211   **Water Color Painting (3 - 0) 3 Cr. Hrs.**
Introduction to color composition as it relates to still life and landscape painting. Practice in the use of dry-brush and wet-wash techniques. Project completion and exhibition of works at semester end. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate lab.
Prerequisite: ART 105, ART 106 or consent of instructor.

ART 216   **Women in Art (4 - 0) 4 Cr. Hrs.**
Women's place in the history of western art with special consideration given to women as patrons, artists, and subjects and their impact in these realms.
Prerequisite: Art 115, 116 or 201 or consent of instructor

ART 218   **Ceramics 3 (3 - 0) 3 Cr. Hrs.**
An intermediate investigation of the artmaking process using techniques specific to ceramics. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 119.

ART 219   **Ceramics 4 (3 - 0) 3 Cr. Hrs.**
An intermediate investigation of the artmaking process using techniques specific to ceramics. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 218.

ART 236   **Painting 1 (3 - 0) 3 Cr. Hrs.**
Introduction to painting and exploration of the painting media, techniques, and processes. Studio experiences in developing representational and conceptual visual imagery. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: Six credit hours studio work or consent of instructor.

ART 239   **Painting 2 (3 - 0) 3 Cr. Hrs.**
Continuation of ART 236. Further investigation of the painting media, techniques, and processes. Studio experiences with emphasis on individual experimentation and visual imagery. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 236 plus six credit hours studio work or consent of instructor.

ART 243   **Sculpture 1 (3 - 0) 3 Cr. Hrs.**
Development of skills through exploratory experiences in sculptural media and techniques leading to the understanding of sculptural form and conception. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: Six credit hours studio work or consent of instructor.

ART 244   **Sculpture 2 (3 - 0) 3 Cr. Hrs.**
Continuation of Art 243. Further exploration and application of sculptural media and techniques leading to the understanding of sculptural form and conception. This studio course requires a six-hour per week commitment, which includes three hours in a lecture/lab and three hours in the appropriate open lab.
Prerequisite: ART 243.

AVIATION BUSINESS MANAGEMENT

Associate Dean: Robert F. Pearce, MPA
Instructors: Adjunct Faculty

AVM 101   **Introduction to Aviation Industry (3 - 0) 3 Cr. Hrs.**
This course will provide a practical view of today's aviation industry within the global transportation system, with special emphasis on the history of airports and airlines. The current realities of airport planning and management, along with the financial and business state of the commercial airline industry will also be presented. This course will discuss the current changes in the regulatory environment of aviation and the possible future of the industry.
Prerequisite: None.

BIOLOGY

Assistant Dean: Monica Sullivan, MS
Instructors: Professor Carolyn Steffen, PhD
    Associate Professor Mohammed Abbas, PhD
    Associate Professor Nickolas Butkevich, MS
    Associate Professor Thomas O'Connor, PhD
    Associate Professor Michael Orick, MS
    Assistant Professor Caroline McNutt, MS
    Instructor Bonnita Taylor
    Adjunct Faculty

BIOLOGY INTRODUCTION

The Biology Department offers 14 biology courses and one conservation course (see Conservation page). The department offers:

- A preparatory class (BIOL 050) for those lacking necessary background for other courses offered.

- Courses to fulfill transfer requirements for students planning to attend a senior college.

- Courses leading directly to job placement with or without completion of a degree program (particularly in Health Careers).

- Courses that provide for special interests of students, but not necessarily required in any curriculum.

Students following specific transfer curricula should be aware that they are not limited to only courses specifically listed in the transfer requirements, but have some freedom of electives and can therefore pursue special interests they may have in biology. Schoolcraft biology courses, with the exception of BIOL 050, are generally transferable. Specific information on transfer credit is available from counseling.

BIOL 050   Basic Biology (4 - 0) 4 Cr. Hrs.
This lecture course is offered to students who seek to acquire the necessary background and skills to successfully complete a college-level biology course such as General Biology (BIOL 101). Emphasis is placed on basic terminology and concepts that contribute to an understanding of the scientific process and biological principles, such as the scientific method, basic chemistry, cell biology, metabolism, and genetics.
Prerequisite: None.

BIOL 101   General Biology (4 - 3) 4 Cr. Hrs.
BIOL 101 is a one-semester introductory course for non-science majors. This course introduces students to the scientific study of living organisms. Students will investigate biological concepts including the chemical basis of life, cell structure and function, metabolism, reproduction, genetics, evolution, biological diversity and classification, plant structure and function, animal structure and function, and ecology. Students attend four hours of lecture and three hours of laboratory each week. This course may be used to fulfill the General Education Goals Science requirement. Science majors seeking to fulfill a two-semester introductory biology sequence should enroll in BIOL 120 and BIOL 130.
Prerequisite: BIOL 050 or successful completion with 2.0+ of introductory high school biology within the last five years.

BIOL 103   Health Education (3 - 0) 3 Cr. Hrs.
Study of current health problems related to selected human organ systems, diet, population, environment, fitness, cancer, disease, sexuality and substance abuse.
Prerequisite: None.

BIOL 104   Conservation and Natural Resources (3 - 0) 3 Cr. Hrs.
An introduction to the principles of conservation and natural resources use (soil, water, vegetation, wildlife, mineral, recreational, and human) and a review of conservation agencies and laws. The interrelationship of resources and their importance to our standard of living.
Prerequisite: One course in Biology and/or Geology is helpful.

BIOL 105   Elementary Human Anatomy and Physiology 1 (4 - 0) 4 Cr. Hrs.
This is a basic lecture-demonstration study of the human body.
Prerequisite: Introductory high school biology within the last five years or BIOL 050.

BIOL 115   Nutrition (3 - 0) 3 Cr. Hrs.
A study of the nature and role of nutrition with emphasis on changing needs in the human life cycle. The relationship between nutrition and health will be explored. Topics such as vegetarianism, food fads and fallacies, obesity, weight control and food additives are studied.
Prerequisite: None.

BIOL 120   Principles of Biology 1 (4 - 3) 5 Cr. Hrs.
This is the first course of a two-semester introductory biology sequence for students interested in transferring to a four-year institution to pursue a degree in biology or other science-related discipline. Together, BIOL 120 and BIOL 130 provide science majors with a comprehensive introduction to biology. In this course, students will attend four hours of lecture and three hours of lab each week to study the process of scientific inquiry, biochemistry, cell structure, membrane transport, metabolism, cell reproduction, molecular genetics, biotechnology, principles of inheritance, and evolution.
Prerequisite: CHEM 111 recommended. Successful completion with 2.0+ of high school introductory biology and chemistry within last five years.

BIOL 130   Principles of Biology 2 (4 - 3) 5 Cr. Hrs.
This is the second course of a two-semester introductory biology sequence for students interested in transferring to a four-year institution to pursue a degree in biology or other science-related discipline. Together, BIOL 120 and BIOL 130 provide science majors with a comprehensive introduction to biology. In this course, students will attend four hours of lecture and three hours of lab each week to study the evolution and diversity of living organisms, plant and animal anatomy and physiology, animal behavior, and ecology.
Prerequisite: BIOL 120 with 2.0+ grade point or department permission.

BIOL 211   Zoology (3 - 3) 4 Cr. Hrs.
Anatomy, physiology, genetics, development, ecology and classification of animals.
Prerequisite: BIOL 101.

BIOL 212   Botany (3 - 3) 4 Cr. Hrs.
Anatomy, physiology, genetics, development, ecology and classification of plants.
Prerequisite: BIOL 101.

BIOL 236   Anatomy and Physiology (4 - 3) 5 Cr. Hrs.
A lecture and laboratory study of the structure and function of all systems of the human body.
Prerequisite: BIOL 101.

BIOL 237   Principles of Human Anatomy and Physiology 1 (3 - 2) 4 Cr. Hrs.
First semester of a two semester sequence.
Anatomy and physiology of the human integumentary skeletal, muscular, nervous, and endocrine systems. Functional and structural interrelationships will be stressed.
Prerequisite: BIOL 101.

BIOL 238   Principles of Human Anatomy and Physiology 2 (3 - 2) 4 Cr. Hrs.
Second semester of a two semester sequence.
Continuation of BIOL 237. Anatomy and physiology of the circulatory, respiratory, digestive, urinary, and reproductive systems.
Prerequisite: BIOL 237.

BIOL 240   Review of Anatomy and Physiology (2 - 0) 2 Cr. Hrs.
This course is a review of the anatomy and physiology of the human body with special emphasis on the physiology of the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. This course is designed for students entering biomedical programs that require a review of the basic anatomy and physiology of the human body.
Prerequisite: BIOL 237 and BIOL 238, or BIOL 236 or equivalent. BIOL 105 with consent of instructor.

BIOL 243   Microbiology (3 - 4) 4 Cr. Hrs.
This course covers the world of microbes including microbial structures and function, biochemistry, metabolism, genetics, control of microbial growth, immunity, classification and epidemiology. Laboratory techniques commonly used in microbiology, including microscope use, bacterial smears, staining methods, aseptic techniques, isolation of pure cultures, identification of unknown microorganisms, antibiotic testing, and others are utilized.
Prerequisite: BIOL 101.

BIOMEDICAL ENGINEERING TECHNOLOGY

Associate Dean: Bruce Sweet, MA
Instructors: Instructor Chris Peters
                     Adjunct Faculty

BMET 115   Biomedical Instrumentation Terminology and Safety (2 - 1) 2 Cr. Hrs.
Students will acquire a knowledge of the language common to electronics and the medical profession based on spelling, pronunciation and definition of words and terms related to anatomy, medical equipment, electronic test equipment, and safety. They will become acquainted with the fundamentals of medical equipment and testing concepts. Students will be introduced to the field of Biomedical Engineering Technology as a career.
Prerequisite: Minimum 2.0 G.P.A. in ELECT 127 or equivalent.

BMET 203   Transducers (4 - 2) 5 Cr. Hrs.
This course is intended to provide students with a knowledge of mechanics, materials, magnetics, heat, sound, light, and nuclear physics with the sole intent of understanding transducers and other interfaces with electronic equipment used in the medical field.
Prerequisite: Minimum 2.0 G.P.A. in ELECT 129 or equivalent.

BMET 254   Biomedical Internship 1 (0 - 24/40) 3 Cr. Hrs.
This is the first cooperative assignment for a Biomedical Engineering Technology student who has completed the prerequisites for this course. Employment will be approximately 24–40 hours per week off campus in a technical capacity with a hospital or an employer in the biomedical field. The College and the employer will jointly evaluate the student, which will then serve as a basis for a final grade. (Usually 15 weeks)
Prerequisite: BMET 115 and ELECT 129. Approval of the BMET Coordinator and a 2.0 G.P.A. A student on a BMET internship is considered a full-time student with Schoolcraft College, with all the rights and privileges of a full-time student.

BMET 255   Biomedical Internship 2 (0 - 24/40) 3 Cr. Hrs.
This is the second cooperative assignment for a Biomedical Engineering Technology student who has completed one semester of internship. The conditions for assignment and evaluation are the same as for Biomedical Internship 1. The student is expected to handle an increased level of technical responsibility, and may possibly serve the internship at a hospital, medical equipment manufacturer, or a medical equipment service company. The College and the employer will jointly evaluate the student, which will then serve as a basis for a final grade. (Usually 15 weeks)
Prerequisite: BMET 254. Approval of the BMET Coordinator and a 2.0 G.P.A. A student on a BMET internship is considered a full-time student with Schoolcraft College, with all the rights and privileges of a full-time student.

BUSINESS

Associate Dean: Bruce Sweet, MA
Instructors: Professor Donald Ryktarsyk, MA
                 Adjunct Faculty

BUS 101   **Introduction to Business (3 - 0) 3 Cr. Hrs.**
Principles, problems and practices of business in the areas of organization, management, computer information systems, labor, production, personnel, marketing, finance, insurance, regulation, and government.
Prerequisite: None.

BUS 103   **Organizing a Small Business (3 - 0) 3 Cr. Hrs.**
This course emphasizes the organization for those who are operating, starting, or seeking employment in small business. The major topics include: Starting a small business, franchising, location, organizing, financing, and government regulation of a small business.
Prerequisite: None.

BUS 104   **Operating a Small Business (3 - 0) 3 Cr. Hrs.**
This course emphasizes operating a small business for those who are either operating, starting, or seeking employment in a small business. The major topics include: policies, insurance, employee relations, inventory control, pricing, and advertising.
Prerequisite: None.

BUS 105   **Business Mathematics (3 - 0) 3 Cr. Hrs.**
Review of fundamentals of arithmetic, percentage, simple and compound interest, taxes, insurance, bonds, applications to business practice.
Prerequisite: A minimum grade of 2.0 in MATH 045 or equivalent.

BUS 120   **Principles of Salesmanship (3 - 0) 3 Cr. Hrs.**
Fundamentals of retail, wholesale, outside, and service selling; practice in sales preparation and demonstration.
Prerequisite: None.

BUS 122   **Advertising (3 - 0) 3 Cr. Hrs.**
Provides the student with a general knowledge of the various facets of advertising, media selection, psychological buying motives, and advertising strategies. Also, the student will gain an appreciation of the various talents needed to bring about a good advertising message.
Prerequisite: None.

BUS 161   **Retail Principles and Practices (3 - 0) 3 Cr. Hrs.**
Fundamentals of store organization and operation; identification of problem situations pertaining to retail establishments; specific application for retail procedures.
Prerequisite: None.

BUS 162   **Retail Merchandising (3 - 0) 3 Cr. Hrs.**
Merchandising functions, fundamental activities of retail establishments, buying procedures, inventory control, and pricing.
Prerequisite: BUS 105.

BUS 201   **Business Statistics (3 - 0) 3 Cr. Hrs.**
Students apply statistical methods to data to gain insight into practical problems. Computer software is used to perform statistical calculations and generate charts and graphs.
Prerequisite: MATH 113.

BUS 204   **Personal Finance (3 - 0) 3 Cr. Hrs.**
A practical study of the problems and solutions facing the consumer in today's society. The areas that are covered include budgeting, banking, credit, and income taxes. Also considered are the selection of insurances, choice of housing, large item purchasing (such as automobiles) and occupational choices. In addition, the laws and regulations for consumer protection and where to get relief for personal buying problems are discussed.
Prerequisite: None.

BUS 205   **Personal Investing (3 - 0) 3 Cr. Hrs.**
Investment goals will be determined. These include the investment alternatives of savings, corporate stocks and bonds, mutual funds, government securities, and other investment opportunities. Also, the student will learn how to analyze and select these investment alternatives for individual portfolios.
Prerequisite: None.

BUS 207   **Business Law (3 - 0) 3 Cr. Hrs.**
Principles of law as applied to the legal environment of business, contracts, sales and consumer rights, bankruptcy and secured transactions - debtor/creditor rights.
Prerequisite: None.

BUS 208   **Business Law (3 - 0) 3 Cr. Hrs.**
Continuation of BUS 207 with emphasis on wills and estates, real and personal property, agency, partnerships, corporations, and employment.
Prerequisite: BUS 207 recommended.

BUS 217   **Business Management (3 - 0) 3 Cr. Hrs.**
This course centers discussion on basic functions of the management process. Included in this process are: decision making, organizing, staffing, planning, controlling, communicating, and directing.
Prerequisite: BUS 101 or consent of department.

BUS 220   **Supervision (3 - 0) 3 Cr. Hrs.**
A course geared to better understanding the first-line supervisor as a particularly critical position within an organization. It centers on the development of skills, attitudes and knowledge essential to job performance. The course concentrates on leadership, motivation, communication, and other related topics.
Prerequisite: None.

BUS 226   **Principles of Marketing (3 - 0) 3 Cr. Hrs.**
An integrated analytical approach to the marketing process with discussion of essential economic principles as they apply to the marketing process. Course considers the interrelationship of the marketing functions as they contribute to the marketing process.
Prerequisite: BUS 101 or consent of department.

BUS 230   **Human Resource Management (3 - 0) 3 Cr. Hrs.**
The course emphasizes the management of the procurement, development, compensation, integration, maintenance, and separation of human resources to accomplish individual, organizational, and social objectives.
Prerequisite: BUS 101 or consent of department.

CHEMISTRY

Assistant Dean: Monica Sullivan, MS
Instructors: Assistant Professor Cheryl Snyder, MS
                   Instructor Paul Dickson, PhD
                   Instructor Michael Waldyke, MS
                   Adjunct Faculty

CHEM 051   Basic Chemistry (4 - 2) 4 Cr. Hrs.
An elementary course in chemistry for students who have not had high school chemistry or who wish to review basic chemical concepts. The course provides an introduction to chemical measurement, basic definitions and laws, chemical nomenclature and equations, calculations based on chemical equations, atomic theory, the Periodic Table, solutions, acids, bases, gases, and organic chemistry.
    Prerequisite: MATH 053 or equivalent.

CHEM 111   General Chemistry (4 - 3) 4 Cr. Hrs.
This course is designed as a first course in a traditional one-year program in general college chemistry and includes a review of fundamental concepts such as symbols, formulas, chemical equations, laws of chemical combination, and physical and chemical properties. Atomic and molecular structure, bonding, stoichiometry, periodicity, gases, solutions, acids and bases, and electrochemistry and oxidation-reduction are also covered in this course.
    Prerequisite: Both CHEM 051 or equivalent with a grade of 2.0, and MATH 113 or equivalent. Math may be concurrent.

CHEM 117   General Chemistry and Qualitative Analysis (4 - 4) 5 Cr. Hrs.
This course is the second course in a traditional one-year general college chemistry program. It includes the study of kinetics, solution equilibria, solubility equilibria, hydrolysis, coordination compounds, thermodynamics and qualitative analysis. A brief introduction to organic chemistry and nuclear chemistry is also included. Laboratory work correlates with lecture and stresses the identification of common cations and anions by semimicro methods.
    Prerequisite: CHEM 111 with a grade of 2.0 or better or consent of department.

CHEM 125   Organic and Biochemistry (3 - 0) 3 Cr. Hrs.
A survey of organic and biochemistry emphasizing the major metabolic activities of living organisms. This course is recommended for premedical students, but does not usually apply as transfer chemistry credit. CHEM 125 is also intended for nursing and other health-related career curricula.
    Prerequisite: CHEM 111.
    Corequisite: CHEM 126 (not for Premed).

CHEM 126   Organic and Biochemistry (0 - 3) 1 Cr. Hr.
Selected laboratory exercises in organic and biochemistry corresponding to lecture topics in CHEM 125.
    Prerequisite: CHEM 111.
    Corequisite: CHEM 125.

CHEM 213   Organic Chemistry (4 - 4) 5 Cr. Hrs.
Integrated course stressing basic principles of organic chemistry such as nomenclature, chemical bonding, correlation of physical properties with structure, mechanisms of organic reactions of both the aliphatic and the aromatic series. Laboratory deals largely with synthesis of organic compounds and study of their properties.
    Prerequisite: CHEM 117 with a grade of 2.0 or better or consent of department.

CHEM 214   Organic Chemistry (4 - 4) 5 Cr. Hrs.
Continuation of CHEM 213. Emphasis upon mechanisms of organic reactions and interpretation of spectra. Lab work emphasizes preparation of organic compounds through multistep syntheses.
    Prerequisite: CHEM 213.

CHILD CARE

Assistant Dean: Dominic Aquila, PhD
Instructors: Assistant Professor Diane Flynn-Hahn, MA
                   Assistant Professor Elizabeth Schneider, MEd
                   Adjunct Faculty

CCD 100   Introduction to Child Welfare Services (3 - 0) 3 Cr. Hrs.
Students will receive wide exposure to community agencies and resources available to children and youth. There will be focus on identifying needs of children and methods through which those needs are met by the community when parents are unable to do so or need assistance.
    Prerequisite: None.

CCD 101   Preschool Child Care (3 - 0) 3 Cr. Hrs.
This course is designed to assist students in understanding the needs of the preschool child and methods by which they are met. There will be focus on phases of development, typical behaviors, and appropriate practices. Observational skills will be sharpened, with concentration on signals alerting students to the children's levels of functioning.
    Prerequisite or Corequisite: CCD 116 or consent of department.

CCD 105   Introduction to Developmental Disabilities (3 - 0) 3 Cr. Hrs.
This course is designed to introduce students to the health and developmental problems of persons with mental impairment (MI). Emphasis is placed on gaining knowledge of the various syndromes typical in MI populations and learning to recognize medical symptoms. Attention will also be given to developing an understanding of prescribed drugs and their side effects, infectious diseases and preventive measures against contagion.
    Prerequisite or Corequisite: CCD 216 or consent of department.

CCD 113   Special Educational Programs and Supported Community Living (3 - 0) 3 Cr. Hrs.
Students become familiar with considerations of placement and training of persons with developmental disabilities, emotional disabilities, learning disabilities and physical handicaps. Attention will be given to the theory and principles of normalization and appropriate community support. The course will cover the operation and maintenance of group homes. Included will be current laws and regulations regarding licensing, equipping and maintaining the physical plant, staffing, food services, health and social services, budgeting and program development.
    Prerequisite: None.

CCD 115   School Age Child Care (3 - 0) 3 Cr. Hrs.
This course is designed to identify the developmental tasks of middle childhood (ages 6-12) and suggest ways caregivers can help foster growth and development. Emphasis will be on understanding the needs of the school age child and methods by which they are met.
    Prerequisite or Corequisite: CCD 116 or consent of department.

CCD 116   Child Development (3 - 0) 3 Cr. Hrs.
This course is designed to provide students an overview of life from its beginning through adolescence. The course will concentrate on physical, cognitive, social and emotional development in the prenatal, infancy, toddler, preschool, middle childhood and adolescent periods.
    Prerequisite: None.

CCD 118   Infant and Toddler Care (3 - 0) 3 Cr. Hrs.
This course is designed to prepare students to provide care for infants and toddlers. Students will learn the essential ingredients in infant and toddler care and will learn to match caregiving strategies to very young children as they develop. A holistic emphasis focuses on the development of a curriculum which provides for the physical, emotional, social, and cognitive development of infants and toddlers.
**Prerequisite or Corequisite: CCD 116 or consent of
                    department.**

CCD 121   The Adolescent (3 - 0) 3 Cr. Hrs.
In this course the student will explore major theories in adolescent development and use the theoretical constructs to understand adolescent behavior. Students will recognize the contributing factors which lead to the development of a stable identity hierarchy and the development of responsibility in adolescence.
**Prerequisite or Corequisite: CCD 116 or consent of
                    department.**

CCD 126   Creative Activities (3 - 0) 3 Cr. Hrs.
The purpose of this course is to introduce the students to the stages of creativity and to art materials and techniques. Activities appropriate for preschool children and children and adults with developmental or emotional disabilities will be covered.
Prerequisite: None.

CCD 130   Learning Disabilities (3 - 0) 3 Cr. Hrs.
This course is designed to acquaint students with the perceptual and learning handicaps of children with learning disabilities. Students will learn about special education programs in public schools. The diagnosis of disorders of visual and auditory perception, language, motor coordination, equilibrium and laterality related to the learning processes are discussed as well as specific recommendations for remediation and implications for school planning.
**Prerequisite or Corequisite: CCD 216 or consent of
                    department.**

CCD 140   Emotional Impairment (3 - 0) 3 Cr. Hrs.
The purpose of this course is to acquaint students with concepts and materials related to the education of children with emotional disabilities. The major theories related to causes and treatment of emotional and behavior problems will be covered.
**Prerequisite or Corequisite: CCD 216 or consent of
                    department.**

CCD 150   Child Care Practicum 1 (1 - 12) 3 Cr. Hrs.
Students will have supervised experience working directly with children and youth in settings such as day care centers and group homes. They will have the opportunity to integrate classroom material and personal life experiences with on-the-job child care experience and evaluate the experiences of children in light of the concepts they have learned. Emphasis on observing and reporting activities of the children.
**Prerequisite or Corequisite: CCD 116 or consent of
                    department.**

CCD 151   Practicum Module 1 (1 - 10) 1 Cr. Hr.
This course is designed to provide the student 50 hours of experience working with children in a supervised setting. The emphasis is on understanding and demonstrating cooperative, dependable work habits as well as developmentally appropriate interactions with children. Learning and practicing techniques for observing children is integrated throughout the supervised experience. Practicum Module 1 is one of three practicum modules that complete Child Care Practicum 1.
Prerequisite: CCD 116.

CCD 152   Practicum Module 2 (1 - 10) 1 Cr. Hr.
This course is designed to provide the student 50 hours of experience working with children in a supervised setting. The emphasis is on understanding and demonstrating cooperative, dependable work habits as well as developmentally appropriate interactions with children. Learning and practicing techniques for observing children is integrated throughout the supervised experience. Observations will cover health and safety issues, and children's development of self concept, motor coordination, intellectual and communication skills. Practicum Module 2 is one of three practicum modules that complete Child Care Practicum 1.
Prerequisite: CCD 116.

CCD 153   Practicum Module 3 (1 - 10) 1 Cr. Hr.
This course is designed to provide the student 50 hours of experience working with children in a supervised setting. The emphasis is on understanding and demonstrating cooperative, dependable work habits as well as developmentally appropriate interactions with children. Learning and practicing techniques for observing children is integrated throughout the supervised experience. Observations will cover emotional developmental and social skills, creativity, and guidance techniques in child care centers. Administration and evaluation of child care centers is also examined. Practicum Module 3 is one of three practicum modules that complete Child Care Practicum 1.
Prerequisite: CCD 116.

CCD 155   CDA Assessment Preparation (1 - 0) 1 Cr. Hr.
To be awarded the CDA credential, a Candidate must present evidence to The Council for Early Childhood Professional Recognition of his/her competence as a child care provider/educator. This course is designed to support the CDA Candidate in preparation for the final assessment process.
**Prerequisite: CCD 116, CCD 100, CCD 101, CCD 118,
                    CCD 126, CCD 150, CCD 170, CCD 214
                    or consent of department.**

CCD 170   Behavior Management (3 - 0) 3 Cr. Hrs.
This course is designed to familiarize students with the behavior management options available for use with children and adults. A survey of behavior shaping techniques will be made including a study of the classical behavior modification model and an introduction to data collection.
Prerequisite: None.

CCD 180   Introduction to Family Support (3 - 0) 3 Cr. Hrs.
The fields of early childhood education and family support have become more interconnected as children bring family problems into the variety of centers, nonprofit agencies, and social service organizations that provide care and resources for them. This course is designed to provide an overview of the elements of family support. Included in this overview are: effective communication skills, sensitivity to cultural and familial values and styles, strength based assessment, and observation of parent-child interaction. The review of child development and child management approaches, establishing and maintaining help-giving relationships, and problem-solving in help-giving relationships are also covered.
Prerequisite: CCD 100.

CCD 185   Empowering Families (3 - 0) 3 Cr. Hrs.
This course is designed to identify key principles and strategies for working in partnership with families using an empowerment model approach. In this course students will explore successful partnerships, empowerment processes, the art of collaboration, formal and informal support systems, case management and documentation in addition to parenting education and outcome focused initiatives.
Prerequisite: CCD 180.

CCD 200   Child Care Practicum 2 (1 - 12) 3 Cr. Hrs.
Continued supervised experience working directly with children and youth in child care settings. Students will have increased responsibility as child care workers. Emphasis on working as a contributing member of the child care team.
Prerequisite: CCD 150 or consent of department.
Prerequisite or Corequisite: CCD 101 or CCD 215 or consent of department.

CCD 202   Family Support Field Practicum (1 - 10) 3 Cr. Hrs.
This course is designed to provide students with practical experiences in the field of Family Support. Students will have the opportunity to apply, refine and expand what they have learned in the classroom with on-the-job family support experiences. Students will learn to observe, assess strengths, challenges and family development stages in family support programs. Students will look critically at the family support environment to judge its appropriateness and use of best and innovative practices for working effectively with families. Students will be expected to demonstrate competencies in all 11 family support areas and be able to reflect on their growth in skills and knowledge in the field.
Prerequisite or Corequisite: CCD 180 and CCD 185.

CCD 211   Children and Youth in Groups (3 - 0) 3 Cr. Hrs.
This course is designed to introduce students to the principles of group functioning and techniques of helping children become accepted members of peer groups. Membership of child care workers in professional groups will also be covered.
Prerequisite: None.

CCD 214   Operation and Maintenance of a Child Care Facility (3 - 0) 3 Cr. Hrs.
The course will cover methods of operating and maintaining a child care facility. Included will be current laws and regulations regarding licensing, equipping and maintaining the physical plant, staffing, food services, health and social services, budgeting, and program development.
Prerequisite: None.

CCD 215   Methods and Curricula for Persons with Developmental Disabilities (3 - 0) 3 Cr. Hrs.
The objectives of this course are to familiarize the student with the theoretical approaches to developmental disabilities and to introduce methods of assessing severely handicapped children. A survey of the various curricula used with children and adults with developmental disabilities is included.
Prerequisite: None.

CCD 216   The Child with Special Needs (2 - 2) 3 Cr. Hrs.
This course is designed to introduce the student to children and adults who have special needs. Included are children and adults who have mental retardation, emotional impairment, hearing impairment, visual impairment, learning disabilities, and those who have orthopedic or other health handicaps. Visitations to off- campus institutions and special education classrooms will be made.
Prerequisite: None.

COLLEGIATE SKILLS

Associate Dean: Deborah B. Daiek, PhD
Instructors: Associate Professor Donna Clack, MA
      Adjunct Faculty

Collegiate skills courses may be offered in a format where learning skills and strategies taught are in relation to content from other Schoolcraft courses. The purpose of the learning community offerings is to provide students with the most relevant application of learning skills. See current schedule of classes for current information.

COLLS 050   Learning Power (4 - 0) 4 Cr. Hrs.
The course focuses on developing vocabulary and comprehension skills in group and lab settings. Students will explore and develop reading strategies to improve efficiency.
Prerequisite: None.

COLLS 053   Critical Thinking Applications (4 - 0) 4 Cr. Hrs.
This course is designed to prepare a student to successfully handle college level reading assignments. Reading comprehension techniques and vocabulary development strategies are emphasized using a variety of materials. Techniques will be applied to selected materials and textbooks students are currently using.
Prerequisite: None.

COLLS 055   College Notetaking (1 - 0) 1 Cr. Hr.
This course will prepare students for successful notetaking of lectures. Emphasis will be placed on enhancing listening skills, preparing for lectures and notetaking of lectures. Application of notetaking skills in students' classes will be stressed.
Corequisite: Recommended enrollment in another class requiring notetaking.

COLLS 101   College Success (3 - 0) 3 Cr. Hrs.
This course is designed to increase a student's learning potential and success in college. Each student will explore learning strategies and attitudes that lead to improved grades. Topics in this course include time/task planning, critical thinking, study techniques, and exploring attitudes successful students bring to a learning environment. Each student will learn to apply principles covered in this course to their other college courses.
Prerequisite: COLLS 053 or equivalent.

COLLS 105   Learning Skills 1 (1 - 0) 1 Cr. Hr.
This course is designed to provide students with the learning skills and support necessary to successfully balance academic and other life demands. Students will apply techniques to their personal situations and course load requirements.
Prerequisite: Consent of department.

COLLS 109   Learning Skills 2—Education Majors (1 - 2) 3 Cr. Hrs.
This course is designed for those education transfer students who desire to participate in a Collegiate Skills sponsored pre-student teaching practicum as required by their transfer institution. Affective and cognitive behaviors of young learners are reviewed, as are the characteristics and strategy supports typical of a variety of learners. Program participants learn to properly analyze and journal relevant interactions and explore key issues and controversies in today's educational environment.
Prerequisite: COLLS 53 or equivalent; Math 051 or equivalent. (Twenty-seven or more transfer credits above 100 level)

COLLS 110 **Learning Skills—LD (2 - 0) 2 Cr. Hrs.**
This course is designed to provide students who have learning disabilities with the learning skills and support necessary to successfully balance academic and other life demands. Students will apply techniques to their personal life situations and course load requirements.
Prerequisite: **None.**

COLLS 130 **Applied Learning Theory for Nursing Majors (3 - 0) 3 Cr. Hrs.**
This course is designed to prepare pre-PN and RN students for demands of the nursing program. Emphasis will be placed on developing and applying critical reading, thinking, and learning strategies to nursing content. Topics covered are reading speed/comprehension, reading study system, lecture note taking, time/goal management, test preparing/test taking, and communications skills.
Prerequisite: **COLLS 053 or college level reading placement score and BIOL 050.**

COLLS 210 **Learning Theory (3 - 0) 3 Cr. Hrs.**
This course is designed to familiarize students with the theory and principles of academic skill development. A holistic approach related to tutorial relationships will be emphasized. Students will be required to apply theories, strategies and techniques in tutorial sessions which will be scheduled outside of class.
Prerequisite: **COLLS 053 or equivalent.**

COMMUNICATION ARTS

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor JuJuan C. Taylor, PhD
     Adjunct Faculty

COMA 103 **Fundamentals of Speech (3 - 0) 3 Cr. Hrs.**
Develops essential skills by directed practice in a variety of speech situations and furnishes basic knowledge necessary for intelligent speech improvement; speech research and support; stress on speaker's ideas, attitudes, and audience adjustment.
Prerequisite: **None.**

COMA 200 **Interpersonal Communication (3 - 0) 3 Cr. Hrs.**
Study and practical application exercises in the basic elements of interpersonal communication with emphasis on self-concept, perception, meanings, listening, feedback, defensive communication barriers, and nonverbal communication. Special attention will be given to improving interpersonal communication skills. This course may not be substituted for COMA 103.
Prerequisite: **COMA 103 or consent of instructor.**

COMA 201 **Discussion (3 - 0) 3 Cr. Hrs.**
This course conveys a better understanding of human affairs. The student will review attitudes and skills for effective participation in discussion; including cooperative thinking, exchange of ideas, and problem solving.
Prerequisite: **COMA 103 or equivalent.**

COMA 203 **Contemporary Public Address (3 - 0) 3 Cr. Hrs.**
A study of contemporary American speeches. Analysis of speeches from the 60s, 70s, 80s and 90s. We will explore the form and principles of modern day speeches.
Prerequisite: **COMA 103.**

COMA 205 **Argumentation and Persuasion (3 - 0) 3 Cr. Hrs.**
A selected examination of argumentation and persuasion theory and its application in specialized forms.
Prerequisite: **COMA 103 or equivalent.**

COMA 210 **Communication for Leaders (3 - 0) 3 Cr. Hrs.**
An exploratory examination of leadership roles. Designed as an overview to develop communication awareness in the role of the leader in interviews, group discussions, problem solving, staff meetings, presentations, and an examination of communication barriers.
Prerequisite: **COMA 103 or consent of instructor.**

COMA 230 **Introduction to Mass Communication (3 - 0) 3 Cr. Hrs.**
Explore the history, economics and social influence of the broadcast media. Television, radio, print media, and motion pictures and/or theatre art will be surveyed. One objective is to create a more "critical consumer" of mass media.
Prerequisite: **COMA 103.**

COMPUTER AIDED DESIGN

Associate Dean: Bruce Sweet, MA
Instructors: Professor Gerald Cavanaugh, MA
                Associate Professor Catherine Ferman, MS
                Assistant Professor Lisa Zaccone, BS
                Adjunct Faculty

**CAD 101   Introduction to Computer Aided Drafting
(2 - 2) 3 Cr. Hrs.**
This course is designed for the experienced drafter who wants to obtain some CAD skills. Topics to be covered include 2D drawing creation, drawing, editing and plotting as well as view manipulation. In addition the student will learn the basics about file saving, retrieving and copying.
Prerequisite: Drafting experience, consent of department.

CAD 102   Advanced Topics in CAD (2 - 2) 3 Cr. Hrs.
This course is designed as an advanced course in computer aided drafting for the non-degree seeking design professional. These may be architects, engineers, product designers, or drafters already trained or employed in the field. Topics to be covered include three-dimensional solid modeling, parametric modeling, assembly and software customization. An understanding of two-dimensional commands and basic knowledge of drafting is required for this course. This course does not count towards a degree in Computer Aided Design.
Prerequisite: CAD 101 or equivalent. Industry experience will be considered.

CAD 103   Engineering Graphics (2 - 2) 3 Cr. Hrs.
This course is designed to introduce the student to the basic concepts and standard practices necessary for the graphical communication of technical data. Included is the reading, interpretation and creation of engineering drawings, technical sketching and introduction to computer aided drafting (CAD). Topics introduced include orthographic projection, pictorials, sectioning, auxiliary views, dimensioning, tolerancing, surface finish and fasteners. This course is designed for the transfer Engineering student and as an introductory course for those who are considering a career as a mechanical or tool designer.
Prerequisite: None.

CAD 105   Mechanical Engineering Drawing (3 - 2) 4 Cr. Hrs.
This course is designed to teach the student the concepts and standard practices involved in the creation of drawings/files/models. Sketching and computer aided drafting (CAD) will be the tools for communicating mechanical product information. The student will be expected to create 2D drawings and simple 3D models. Topics to be covered will be projection methods for creating orthographic auxiliary and sectional views, 3 dimensional models and full detail and isometric drawings with untoleranced dimensions, symbols and notes. The focus will be utilizing the CAD system to create mechanical engineering prints. This course is designed for those who have chosen a career as a mechanical or tool designer.
Prerequisite: CAD 103 or equivalent.

CAD 107   Detailing (2 - 4) 4 Cr. Hrs.
This course is designed to teach the student concepts and standard practices involved in the creation of detail and assembly drawings. Geometric Dimensioning and Tolerancing philosophy will be employed for controlling variations. Sketching and computer aided drafting (CAD) will be the tools for communicating mechanical product and tool information. The student will create 3D models and 2D drawings. Simple assemblies will be constructed and analyzed using previously created parts. Topics to be covered will be dimensioning standards and practices, tolerancing methods, tolerance stackup evaluation, G. D. and T. methods, 3 dimensional modeling, 2D and data extraction from 3D models.
Prerequisite: CAD 105 or equivalent.

CAD 201   I-DEAS Level 1 (4 - 0) 4 Cr. Hrs.
This course will introduce students to the modeling and drafting packages in SDRC's I-DEAS Software. Topics will include the user interface, data management, master modeler, solid model creation, geometrical constraints and relations, assembly modeling and system hierarchy.
Prerequisite: CAD 105 or previous industry drafting experience.

CAD 202   I-DEAS Level 2 (1 - 1) 2 Cr. Hrs.
This course is designed to present higher level part modeling and file management commands for SDRC's I-DEAS Master Modeler.
Prerequisite: CAD 201 or equivalent.

CAD 204   I-DEAS Generative Machining (1 - 1) 2 Cr. Hrs.
This course presents the CAM portion of the I-DEAS software. Topics include creating NC jobs and operations, accessing and creating tool definitions, generating machine code for hole cutting, face milling, profiling, turning, and thread cutting. Tool paths are simulated and errors corrected. CL files are created and the machine code will be post processed for specific machines.
Prerequisite: CAD 201 or equivalent.

**CAD 209   I-DEAS Graphical Finite Element Modeling
(1 - 1) 2 Cr. Hrs.**
This course introduces the aspects of finite element analysis that are important to the software user. Theoretical aspects are introduced as they are needed to help better understanding of the operations. Emphasis is on the practical concepts and procedures to using I-DEAS Master Series in performing linear static stress analysis.
Prerequisite: CAD 201 or equivalent.

CAD 211   CATIA Level 1 (4 - 0) 4 Cr. Hrs.
This first level CATIA course will cover the basics of creating, editing and storing 3D models. The construction and constraining of assemblies will be covered as will the creation of detail and assembly drawings using the Drafting package.
Prerequisite: CAD 105 or previous industry drafting and/or modeling experience.

CAD 212   CATIA—Surfacing (2 - 2) 4 Cr. Hrs.
This course is designed to present higher level part modeling commands for CATIA Modeler. Particular attention will be paid to surfacing.
Prerequisite: CAD 211 or equivalent.

CAD 213   CATIA—Knowledgeware (1 - 1) 2 Cr. Hrs.
This course is designed to introduce the student to the capabilities of CATIA Knowledgeware. CATIA Knowledgeware allows the capture and integration of corporate design knowledge within CATIA parametric models.
Prerequisite: CAD 211 or equivalent.

COMPUTER ASSISTED MANUFACTURING

Associate Dean: Bruce Sweet, MA
Instructors: Professor James Kramer, MS
    Adjunct Faculty

**CAM 102   Introduction to Computer Numerical Control (CNC)
(2 - 2) 3 Cr. Hrs.**
This course will provide the basic concepts in converting the dimensional information from a drawing into numerical control coding, G and M, to process a part. NC machine axis systems, coordinate systems, part dimensioning and programming by using incremental and absolute reference system will be taught. The student will learn how to enter G and M coding data, manually, into the CNC machine to process the part. Simulation software will also be used to check if the CNC coding has been entered correctly.
Prerequisite: CIS 170 or equivalent computer experience.
Corequisite: MFG 102 and/or previous machining experience.

**CAM 103   Computer Numerical Control Programming
(2 - 2) 3 Cr. Hrs.**
Students will further their CNC skills by using a CAD/CAM MasterCAM software to generate CNC coding for mills and lathes. Using MasterCAM involves three steps: first, the student will use MasterCAM's CAD program to create the part geometry; secondly, the CAM program will be used to program machine information (feed rate, spindle speed, coolant control command, etc.); and finally, a postprocessor will be used to generate CNC coding. Also, toolpaths will be verified by using a graphical (animation) solid-model toolpath verification to detect potential machining errors. The students will also study drilling, solid modeling, pocketing, and circle boring.
Prerequisite: CAM 102.

**CAM 205   CAD/CAM—Computer Aided Machining
(0 - 4) 3 Cr. Hrs.**
The student will use CNC MasterCAM software program that covers mills, lathes, and solids that address the following machining variables: machining parameters; constructing wireframe models; generating surface models with toolpaths; engraving artworks; and solid modeling. Operational parameters will be calculated to determined operating capacity of a cutting tool, spindle horsepower, the affects of different types of workpiece material, and rigidity of the part and respective fixture. The student will learn how to generate coding for 3D wireframe and multi-axis composite surfaces using various modeling techniques.
Prerequisite: CAM 103.
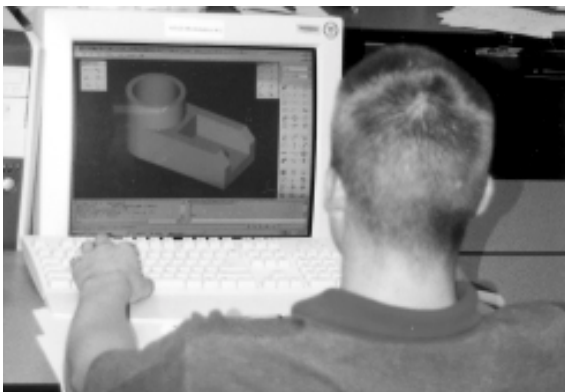
COMPUTER GRAPHICS TECHNOLOGY

Assistant Dean: Dominic Aquila, PhD
Instructors: Associate Professor Colleen Case, MLS
    Associate Professor Stephen Wroble, MA
    Assistant Professor Michael Mehall, MA
    Adjunct Faculty

CGT 107   PowerPoint (2 - 0) 2 Cr. Hrs.
This course introduces the student to the Microsoft PowerPoint presentations software. Emphasis is on learning the software and on applying basic design principles to electronic presentations. Students are expected to have some computer experience and be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 110   Graphics—Current Software (2 - 0) 2 Cr. Hrs.
This course is intended to introduce students to the field of graphic design and illustration using one of the professional computer drawing software packages. Emphasis is on learning the software and on applying basic design skills to the computer generated image. Students are instructed in the fundamentals of drawing on the computer, working with color, and working with type through a series of realistic graphic design projects. Students are expected to be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 113   Page Layout—Current Software (2 - 0) 2 Cr. Hrs.
This course is intended to introduce students to the field of publishing design using another professional page layout software package. Emphasis is on learning the software and on applying basic design skills to computer generated design. Students are instructed in the fundamentals of page layout, typography, working with color and color separations, and preparing camera ready documents. Students are expected to be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 121   Publishing—PageMaker (3 - 0) 3 Cr. Hrs.
This course is intended to introduce students to the field of publishing design using professional page layout software. Emphasis is on learning the software and on applying basic design skills to computer generated design. Students are instructed in the fundamentals of page layout, typography, working with color and color separations, and preparing camera ready documents. Students are expected to have some computer experience and be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 123   Illustration—Illustrator (3 - 0) 3 Cr. Hrs.
This course is intended to introduce students to the field of graphic design and illustration using professional computer drawing software. Emphasis is on learning the software and on applying basic design skills to the computer generated image. Students are instructed in the fundamentals of drawing on the computer, working with color, working with type, and combining type and image for effective communication. Students are expected to be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 125 **Digital Imaging 1—Photoshop (3 - 0) 3 Cr. Hrs.**
This course introduces students to the field of digital imaging and electronic photographic manipulation using Adobe Photoshop. Emphasis is placed on developing strong software and digital imaging skills plus reinforcement of design and creative skills. This will be accomplished through a series of progressively challenging assignments, which mirror professional studio projects. The class will progress the student's skills from basic application knowledge to advanced image manipulation techniques. The assignments will be applicable for both print and screen based imagery. Students are expected to have some computer experience and be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent.

CGT 127 **Publishing—InDesign (3 - 0) 3 Cr. Hrs.**
This course introduces students to the field of publishing design using Adobe InDesign. Emphasis is on learning the software and on applying basic design skills to computer generated design. Students will have the opportunity to learn the fundamentals of page layout, tyography, working with color and color separations, and preparing documents for printing. Students are expected to have some computer experience and be familiar with basic functions of the computer before beginning the class.
Prerequisite: CIS 105 or equivalent experience.

CGT 135 **Web Graphics (3 - 0) 3 Cr. Hrs.**
This course introduces the student to the World Wide Web as a new communications media. The Web has made a global instant publishing media available to those who wish to participate. This course covers techniques for creating graphics, such as GIF, JPG, PNG, and animated GIFs, image maps, rollovers, backgrounds, icons and buttons for the Web. This includes skills in design, optimization compression techniques, color techniques, color theory and an understanding of multiple platforms, operating systems and browser limitations.
Prerequisite: CGT 125.

CGT 141 **Multimedia—Director (3 - 0) 3 Cr. Hrs.**
This course is designed to provide an introduction to multimedia production using the Macromedia Director software. An overview of all the features of Director will be provided with special emphasis on animation techniques, basic scripting, memory management, importing/exporting considerations, and production planning.
Prerequisite: CGT 125.

CGT 150 **Typography (2 - 0) 2 Cr. Hrs. (7 weeks)**
This course introduces the student to the principles of typography by investigating letter forms as both an element of design and as a medium of communication. Concentration is on typeface identification, effective use of type to convey information, measuring systems, and application of typography to computer graphics.
Prerequisite: ART 105 or ART 106.

CGT 151 **Survey of Design (2 - 0) 2 Cr. Hrs. (7 weeks)**
This course introduces the student to the history of graphic design and its application as a form of mass communication. Students examine how social, cultural, and technical considerations have influenced the way information is designed for publication. Students learn how an understanding of historical, cultural and social influences lead to more effective graphic design in the modern world.
Prerequisite: None.

CGT 152 **Screen Design for Electronic Media (2 - 0) 2 Cr. Hrs.**
This course introduces the student to the unique design principles for electronic screen design. Designing for the World Wide Web or for an interactive computer screen or CD-ROM requires a new look at design principles. This course compares traditional paper design to electronic screen design.
Prerequisite: CIS 105 or equivalent.

CGT 153 **Portfolio Preparation (2 - 0) 2 Cr. Hrs.**
This class prepares the student for finding a job in the field of graphic design. In this course students will assemble their previous work into a professional presentation. In doing so, the students' strengths and weaknesses will be discovered and discussed. At least one project will be assigned to specifically address the individual student's portfolio needs. During the course students will create a traditional resume and customize it to attract the attention of a more creative eye. An identity project, including a working logo, business card, letterhead and promotional item which fits the student's style and personality will be designed and created for practical application.
Prerequisite: Completion of at least two CGT courses is required.

CGT 154 **Sound Design (2 - 0) 2 Cr. Hrs.**
This course provides an introduction to the basic concepts of sound design for multimedia delivery systems. It will emphasize necessary hardware, sound formats, MIDI applications, sound editing and synchronization, and aesthetic considerations.
Prerequisite: CGT 141. CGT 206 concurrently recommended.

CGT 155 **Storyboarding (2 - 0) 2 Cr. Hrs.**
This course provides the student a working knowledge of storyboarding. It integrates creative expressions, emotional impressions and production processes into a cohesive conclusion. It provides the student an opportunity to expand a creative understanding of audio, cinematography, lighting, and staging. Storyboarding is a basic need for the student pursing careers in multimedia, interactive and performance arts. The course will use a digital sound editing application and Adobe Premiere to create a final demonstration of this skill set.
Prerequisite: CIS 105 or equivalent.

CGT 156 **Photography (2 - 0) 2 Cr. Hrs.**
The course is designed to instruct the student on photographic principles that affect exposure, image structure, composition, printing and interface with digital media. Student will experience hands-on photography sessions that demonstrate lighting, visual effects and composition development based on contrast and focal point awareness. In conjunction with the camera, the student will explore advanced digital imaging options, the zone system and creative merging techniques. Course materials are designed for the student pursing a graphic technology career. The student will be required to have a 35mm camera and is responsible for film and processing costs.
Prerequisite: CGT 125.

CGT 157 **Prepress (2 - 0) 2 Cr. Hrs.**
Every successful piece of graphic design succeeds on both the technical and conceptual level. This course focuses solely on the technical—or execution—part of graphic design as it relates to printed material. Students will have the opportunity to learn how commercial printing is done and how the printing process imposes limits on graphic design. Students will learn how to work with printers to achieve the best possible results.
Prerequisite: CGT 121, CGT 123, and CGT 125.

CGT 206   Multimedia—Lingo (3 - 0) 3 Cr. Hrs.
This course provides advanced instruction in Macromedia Director with emphasis on the multidisciplinary nature of multimedia. The student is instructed in the vocabulary and syntax of the Lingo scripting language, including scripting to control navigation, animation, sound, video, and memory management.
Prerequisite: CGT 141.

CGT 208   Premiere (3 - 0) 3 Cr. Hrs.
This course will expand the students understanding of digital nonlinear editing. Students will learn how to manipulate digital media: digital video and audio, scanned images, and digitally created artwork and animations stored in several formats. Students will use programs such as Adobe Premiere or other application to arrange digital source files sequentially, add transitions and effects, and create graphics and 2D animation.
Prerequisite: CGT 121, CGT 123, CGT 125, and CGT 155.

CGT 211   Flash (3 - 0) 3 Cr. Hrs.
Flash is a vector-based design program for online display. This course provides the student a working knowledge of Flash. Students will focus on the capabilities for creating motion graphics and interface design for visual communication on the Web.
Prerequisite: CGT 110 or CGT 123 or experience with a vector-art drawing program.

CGT 212   Flash Action Scripting (3 - 0) 3 Cr. Hrs.
This course provides an in-deph exposure to the Flash Action Scripting language. Students will learn to write scripts which extend and enhance the capabilities of the Macromedia Flash software. During the semester, each student will design and produce a complex, highly interactive project— such as a computer game, computer-based training module, or information kiosk. Students should have a working knowledge of Flash before beginning this class.
Prerequisite: CGT 211 or equivalent experience with Flash.

CGT 215   Motion Graphics (3 - 0) 3 Cr. Hrs.
This course develops creative freedom and control for designing sophisticated motion graphics and visual effects for film, video, multimedia and the Web. Students will integrate previously learned applications into motion-graphics using Adobe After Effects and/or related applications. Students will develop an understanding of motion control and keying capabilities plus audio and visual effects.
Prerequisite: CGT 121, CGT 123, CGT 125, CGT 155, and CGT 208.

CGT 226   Digital Imaging 2—Photoshop (3 - 0) 3 Cr. Hrs.
This course will further explore the uses of photography and the digital image in the field of graphic design. Students will learn how object-oriented graphics programs can interface with bitmap oriented programs such as Photoshop. Students will make extensive use of scanners and digital cameras to design and create graphic design projects including artwork for Web pages and multimedia applications.
Prerequisite: CGT 121, CGT 123, and CGT 125.

CGT 231   Electronic Publishing (3 - 0) 3 Cr. Hrs.
This course emphasizes the integration of design and software skills to create more effective layouts for print media. Students will explore photography and digital imaging, illustration, graphic design and page layout. Students learn to use type effectively, create and integrate images and type, set up projects for printing, apply design principles to create effective and readable documents. Instruction in advanced software techniques and in the use of a variety of peripherals is featured. Emphasis will be on the application of software and design skills to a variety of realistic graphic design projects.
Prerequisite: CGT 110, CGT 113, and CGT 226.

CGT 236   Web Design (3 - 0) 3 Cr. Hrs.
This course emphasizes the integration of design principles and software skills to create effective Web sites. Students will focus on advanced design features such as tables, DHTML (Dynamic HTML), stylesheets, frames, forms, layers, and importing images and other media. Students will apply software and design skills to a variety of realistic web design projects. Students will explore the World Wide Web: how the Web works, common browsers, assembling web pages and linking documents. Macromedia Dreamweaver or current HTML software authoring/editor will be used. The student will look at online design considerations, such as download times, optimizing file size and file formats.
Prerequisite: CGT 135 and CGT 152.

CGT 242   Multimedia (3 - 0) 3 Cr. Hrs.
This course provides advanced instruction in multimedia production. The course emphasizes the production process, the multidisciplinary nature of multimedia, integration of components, and design of nonlinear projects. The student is instructed in elements of graphic design, digital sound and music, integrating digital video, and scripting. Each student will produce a large scale multimedia project during the course.
Prerequisite: CGT 206.

CGT 246   2D Animation (3 - 0) 3 Cr. Hrs.
This course will further explore the uses of audio, graphics and video in the field of motion graphics. Students will learn how object motion graphics programs can inter relate to develop informational and promotional media. Students will make extensive use of 2 dimensional, motion and still graphics to design and create projects for video, Web pages and/or multimedia applications.
Prerequisite: CGT 208 and CGT 215.

CGT 247   3D Animation 1 (3 - 0) 3 Cr. Hrs.
This course is designed to increase the student's familiarity with he 3D interface, concepts of 3D space, and animation. It will provide an introduction to primitives, some modifiers and box-modeling techniques. Students will be exposed to lighting, texture mapping concepts, and basic animation techniques. Students will also develop skill sets to create simple animations.
Prerequisite: CGT 121, CGT 123, and CGT 125.

CGT 250   Practical Application (3 - 0) 3 Cr. Hrs.
Students will work in teams to research, develop, and execute graphic design projects for local businesses and corporations. Emphasis is on applying skills to real world projects and on developing a professional portfolio. Students are instructed in team building, project management, research and interviewing techniques. Projects and business partners will change from semester to semester.
Prerequisite: Completion of at least one of the following: CGT 231, CGT 226, CGT 236, or CGT 242.

CGT 251   Practical Application (3 - 0) 3 Cr. Hrs.
Students will work in teams to research, develop, and execute graphic design projects for local businesses and corporations. Emphasis is on applying skills to real world projects and on developing a professional portfolio. Students are instructed in team building, project management, research and interviewing techniques. Projects and business partners will change from semester to semester.
Prerequisite: Completion of at least one of the following: CGT 231, CGT 226, CGT 236, or CGT 242.

CGT 270   Internship (3 - 0) 3 Cr. Hrs.
This internship is designed for the exceptional Computer Graphic Technology student. This course consists of 10–20 hours per week of off-campus work as an intern Graphic Designer with an approved business or company. Students must have completed one Practical Application class (CGT 250 or CGT 251). CGT Internships will be administrated by a full-time faculty member of CGT. The instructor and the business partner will jointly evaluate the student.
Prerequisite: CGT 250 or CGT 251 and consent of department.

CGT 298   Honors Studies (3 - 0) 3 Cr. Hrs.
An opportunity for the talented student to explore individually, in depth, under the guidance of a faculty member, a topic, issue, or problem related to the field of Computer Graphics Technology. Available to Dean's List level students or equivalent and with the consent of the instructor.
Prerequisite: Students must complete (12) twelve hours of course work, Dean's List status (G.P.A. 3.5), and consent of faculty and associate dean.

COMPUTER INFORMATION SYSTEMS

Associate Dean: Bruce Sweet, MA
Instructors: Professor David W. Ruokolainen, MS
                           Professor Jerry Wale, MSEE
                           Associate Professor Doris McPherson, EdD
                           Associate Professor William Schlick, BEE
                           Assistant Professor Timothy Ellis, BBA
                           Assistant Professor Paul Turnage, MS
                           Instructor Rodolfo Santiago, MBA
                           Adjunct Faculty

NOTE: All the CIS courses listed below require the student to spend time outside the classroom in a specialized laboratory situation to complete assignments. State-of-the-art computer facilities are available for student use.

CIS 105   Computer Orientation (1 - 0) 1 Cr. Hr.
This course is designed for students who have had little or no experience with computers. Topics include introduction to the Windows based operating systems and some word processing concepts. Basic word processing concepts will be introduced using the hands-on approach. Successful completion of this course meets the minimum requirement needed to qualify a student to use one of the College's computers during open lab hours.
Prerequisite: None.

CIS 115   Introduction to Computer Based Systems (3 - 0) 3 Cr. Hrs.
This is a three-credit-hour survey course of micro, mini, and mainframe computer systems. Class lectures include the following topics: hardware and software fundamentals; telecommunication; networks; graphics; hypermedia; multimedia; systems design and development; artificial intelligence; computers at work, school, home; the Internet; computer security and risks; computers and the future. Approximately one-third of class time is spent as a hands-on course using personal computers to create web pages using HTML and the Windows Operating System.
Prerequisite: OIS 100 or equivalent and CIS 105 or equivalent.

CIS 120   Software Applications for the Microcomputer (3 - 0) 3 Cr. Hrs.
This course is designed to provide practical, hands-on experience with knowledge for evaluation of popular software packages for the microcomputer. Current software products will be introduced and explored with emphasis in the areas of word processing, electronic spreadsheets and database management. Actual lab experience is planned in these areas. Other software packages that are timely and relevant will be introduced. A culminating project will be the integration of software packages into the overall design of the data processing requirements of a small business.
Prerequisite: OIS 100 or equivalent and CIS 115 or equivalent.

CIS 122   Microsoft Outlook (2 - 0) 2 Cr. Hrs.
This course is designed to provide practical, hands-on experience with Microsoft Outlook which is a flexible messaging and personal information management program used to send and receive e-mail, as well as to manage messages, appointments, contacts, and tasks.
Prerequisite: CIS 120 or equivalent

CIS 123   **Introduction to E-Commerce (3 - 0) 3 Cr. Hrs.**
This course is designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage; managing electronic commerce funds transfer; reinventing the future of business through electronic commerce; business opportunities in electronic commerce; electronic commerce Web site design; social, political and ethical issues associated with electronic commerce; and business plans for technology ventures. The purpose of this course is to educate a new generation of managers, planners, analysts, and programmers of the realities and potential for electronic commerce.
Prerequisite: None.

CIS 129   **Introduction to Programming Logic (3 - 0) 3 Cr. Hrs.**
An introductory programming course where students will learn the fundamentals of program logic and design. Heavy emphasis is placed on program design techniques. Students will develop programs using top-down design, structured programming, and modular development methods.
Prerequisites: None.

CIS 170   **Microsoft Windows (3 - 0) 3 Cr. Hrs.**
This course is designed to explore the features of the Windows operating system. This includes modules such as Paint, Calendar, Notebook, Wordpad etc. In addition to studying the features that are included in Windows, the class will also emphasize customizing Windows to meet the user's needs. The students will learn to work with the Start Menu, Taskbar, Display properties, Control panel, Dialog boxes, Help files, Wizards, and Clipboard. Multi-windows, multi-tasking will be discussed using Windows 32-bit, as well as 16-bit programs. An introduction to MS-DOS Operating Systems will be covered. It is recommended that students have experience using microcomputers and have proficiency in keyboard and mouse usage.
Corequisite: CIS 120 or microcomputer experience.

CIS 171   **NetPrep Introduction to Networking (3 - 0) 3 Cr. Hrs.**
This course introduces students to the key concepts of data communications, telecommunications and networking. It provides a solid introduction to networking fundamentals including key acronyms, protocols, and components that are essential to understanding how networks operate today. Upon completion, the student will have a solid understanding of how information travels from a source computer to a destination computer across a complex network.
Prerequisite: CIS 105 or equivalent experience.

CIS 175   **Visual Basic (3 - 0) 3 Cr. Hrs.**
This course is designed to teach students Visual Basic for the primary purpose of programming Windows applications. The structure and the syntax of the language will be covered which includes forms, projects, objects and events. The course will also cover debugging and error handling, file input and output and object linking and embedding (OLE) methods. It is recommended that students have experience using Microsoft Windows before taking this course.
Prerequisite: CIS 129 and CIS 170 or equivalent Windows experience.

CIS 176   **Visual Basic.NET (3 - 0) 3 Cr. Hrs.**
This course is designed to provide students with the knowledge and skills needed to develop applications in Microsoft® Visual Basic®.NET for the Microsoft .NET platform. The course focuses on user interfaces, program structure, language syntax, and implementation details. It is recommended that students have experience using Microsoft Windows before taking this course.
Prerequisite: CIS 129 and CIS 170, or equivalent Windows experience.

CIS 177   **Visual Basic for Applications (3 - 0) 3 Cr. Hrs.**
Visual Basic for Applications (VBA) is a programming language found in many Microsoft and non-Microsoft products. VBA allows users to customize their applications by creating more convenient ways to perform common tasks. VBA is fast becoming the standard as third-party software publishers license VBA to include in their applications. As a result, rather than learning a separate language for each software application, students need only learn one.
Prerequisite: CIS 129.

CIS 178   **Technical Microsoft Windows (3 - 0) 3 Cr. Hrs.**
This course is designed to serve the needs of students and information systems professionals who are interested in learning more about the features of the Windows 2000 professional operating system, as well as individuals who are interested in obtaining Microsoft certification on this topic. This course includes real world examples, interactive activities, and hands-on projects that reinforce key concepts in preparing for Microsoft certification exam #70-210. It is recommended that students have experience using microcomputers and have proficiency in keyboard and mouse usage.
Prerequisite or Corequisite: CIS 120 or microcomputer experience

CIS 180   **Spreadsheet Applications—Current Software (3 - 0) 3 Cr. Hrs.**
This course teaches how to analyze comprehensive problems and design the worksheet solution in light of established goals. Worksheets will be created and modified that solve problems and that are useful decision-making tools. Emphasis is on designing solutions to problems by thinking through the problems and developing logical solutions to solve the problems using a comprehensive host of features in a popular spreadsheet software package.
Prerequisite: CIS 120.

CIS 182   **Microsoft Office Specialist Excel Core Certification Preparation (2 - 0) 2 Cr. Hrs.**
Students will be introduced to Microsoft Office Specialist Excel certification requirements. The Skill Assessment Manager (SAM) or other computer based testing material will be introduced to help students assess their skills and prepare for Microsoft Certification. Upon completion of this course, students should be ready to take the Microsoft Office Specialist Excel Core Examination. Major topics will include the basic skills covered by the Microsoft Office Specialist Excel Core exam for this application. In addition to the focus on the basic skills necessary to be successful when taking the Microsoft Office Specialist exam, this course will also look at how this application is used in business environments and provide opportunities for students to practice activities with this application as used by business.
Prerequisite: Keyboarding and Windows experience is highly recommended.

CIS 185 **Introduction to HTML (3 - 0) 3 Cr. Hrs.**
This course provides advanced instruction in the most important topics of HTML. The course begins with the basics of creating web pages with graphics and links, using tables, and controlling page layout with frames. Advanced topics include cascading style sheets, an introduction to programming with JavaScript, and working with JavaScript objects and events. The student is instructed in elements of web page design. Each student will produce a large-scale multimedia web page as a semester project.
Prerequisite: CIS 115 or equivalent. (Assumes students have learned basic operating system and browser skills.)

CIS 210 **Programming with "C" (3 - 0) 3 Cr. Hrs.**
The course is designed for those students who are pursuing a career in computer programming. The students will learn this "C" programming language by using actual problems from industry and business. The students will thoroughly examine all the commands, structures and functions of the "C" programming language.
Prerequisite: CIS 129 or equivalent.

CIS 211 **Introduction to C++ (2 - 0) 2 Cr. Hrs.**
This course is an introduction to the C++ Programming language. The student will learn the basics of the C++ language up through and including control structures, functions, and pointers. This course is intended for those who want a general knowledge of the C++ language.
Prerequisite: CIS 129 or equivalent

CIS 212 **Introduction to CGI using Perl (3 - 0) 3 Cr. Hrs.**
This course covers the creation of interactive Web pages, using CGI scripts written in the Perl programming language. The student will learn how to build Web pages that use hyperlinks, forms, data files, and databases. The student will learn the use of subroutines, redirects, cookies, and hidden fields.
Prerequisite: CIS 129 or equivalent.

CIS 215 **Advanced Software Applications for the Microcomputer (3 - 0) 3 Cr. Hrs.**
This course is designed for students who have a working knowledge of the microcomputer and word processing, spread sheet, and database packages. Advanced features of the software are developed building on a foundation of a beginning software applications course.
Prerequisite: CIS 120 or CIS 180 recommended or written approval of the CIS Department.

CIS 221 **Advanced C++ (2 - 0) 2 Cr. Hrs.**
This course is a continuation of the Introduction to C++ Programming language course. The student will learn the advanced concepts of the C++ language up through and including: operator and function overloading, inheritance, virtual functions, polymorphism, stream I/O, templates, exception handling, file processing, and data structures. This course is intended for those who desire an advanced knowledge of the C++ language.
Prerequisite: CIS 211.

CIS 223 **Introduction to C# (3 - 0) 3 Cr. Hrs.**
This course is an introduction to the C# Programming language. The student will learn the basics of the C# language up through Windows programming and including creating Web server form controls. This course is intended for those who want a general knowledge of the C# language, part of the Microsoft VisualStudio.NET.
Prerequisite: CIS 129 or equivalent.

CIS 225 **Database Management Systems for the Microcomputer (3 - 0) 3 Cr. Hrs.**
This course covers a popular relational database, Microsoft Access 2000, in depth. Emphasis is on creating, editing, sorting, linking and querying databases. Forms, switchboards, and custom reports will be created. Advanced topics include designing and creating a complete application system, as well as programming in SQL. Emphasis will also be on understanding the concepts behind database management system design, to prepare students to be both users and developers.
Prerequisite: CIS 115.

CIS 226 **Advanced Database Using PL/SQL with Oracle (3 - 0) 3 Cr. Hrs.**
This course covers the creation of Oracle databases using PL/SQL programming language. The class will also teach the use of Oracle's procedure builder, form builder, report builder, and graphics builder.
Prerequisite: CIS 225 or equivalent.

CIS 233 **Active Server Pages (3 - 0) 3 Cr. Hrs.**
Design and maintain interactive and dynamic web applications within the server-based scripting environment of Active Server Pages. With Active Server Pages, you will learn how to work with arrays, collections, and control structures. Using ASP, you will work with cookies, ADO, ODBC, and OLE Databases.
Prerequisite: CGT 152 or a basic knowledge of HTML or equivalent programming experience.

CIS 235 **Microcomputer Operations (3 - 0) 3 Cr. Hrs.**
Advanced operating systems features including custom batch files, backup and disk organization will be covered. Microcomputer peripherals and upgrade features will also be emphasized. The students will examine the inside of the computer and practice adding upgrades, configuring systems, using diagnostic maintenance programs and installing software packages.
Prerequisite: CIS 170 or equivalent.

CIS 238 **JavaScript (3 - 0) 3 Cr. Hrs.**
JavaScript is a powerful, object-based scripting language that can be embedded directly into HTML pages. It allows you to create dynamic, interactive web-based applications that run completely within a web browser. The class covers JavaScript as a client-side scripting language.
Prerequisite: CGT 152 or a basic knowledge of HTML.

CIS 250 **Systems Development and Design (4 - 0) 4 Cr. Hrs.**
The student is made aware of various tools available to the systems analyst in solving business problems. The more important, basic tools are used by the student in the design of a system for a practical business application. Emphasis is placed on the communication between the systems analyst and other levels of management. "Selling" of new systems and methods is stressed. Detailed steps of each phase of systems design are shown in their relationship to the overall study.
Prerequisite: CIS 120 or equivalent

CIS 251 **IT Project Management (3 - 0) 3 Cr. Hrs.**
This course presents the fundamental principles, practices, and tools necessary to effectively manage Information Technology projects. Nine project management knowledge areas will be applied including integration, scope, time, cost, quality, human resources, communications, risk, and procurement. The five process groups—initiating, planning, executing, controlling, and closing—will be employed in IT projects. Microsoft Project software will be taught and used to manage some of the details of assigned projects.
Prerequisite: Basic knowledge and/or experience in the field of IT.

CIS 255   **Introduction to LINUX (3 - 0) 3 Cr. Hrs.**
This course is designed for students pursuing careers in computer information systems or currently in the industry. This is an introductory course that provides an overview of the LINUX operating system. A hands-on approach to common LINUX applications is used. Topics discussed include the LINUX operating system, basic LINUX desktop and terminology, LINUX utilities, and basic bash programs.
Prerequisite: CIS 170 or equivalent experience.

CIS 256   **Introduction to XML (3 - 0) 3 Cr. Hrs.**
An introduction to XML programming. The student will become familiar with Cascading Style Sheets, Document Type Definitions, Schemas, and Document Object Models.
Prerequisite: CIS 129 and a course in HTML or Java or equivalent.

CIS 260   **Introduction to UNIX (3 - 0) 3 Cr. Hrs.**
This course is designed for students pursuing careers in computer information systems, or are currently working in industry. This is an introductory course that provides an overview of the UNIX operating system. A hands-on approach to common, everyday UNIX applications is used. Topics discussed: the UNIX operating system philosophy, basic UNIX commands and terminology, UNIX utilities, and an introduction to shell programming.
Prerequisite: None.

CIS 265   **Networking 1 (3 - 0) 3 Cr. Hrs.**
This course is designed to introduce the student to communications terminology and technology using telecommunications and a local area network (LAN). The student will practice installing and maintaining a LAN.
Prerequisite: CIS 235.

CIS 271   **NetPrep Local Area Networks (3 - 0) 3 Cr. Hrs.**
This course begins with the basics of Local Area Networks (LAN) concepts, technologies, components and protocols inherent in today's local area networking environments. Students will see how computers are connected together to form peer-to-peer and server-based networks, and discover the functionality and uses of a router, bridge, switch, hub and repeater. The two most commonly used network operating systems today, Microsoft's NT and Novell's NetWare, are also introduced in this course. VLANs and the various forms of Ethernet technology such as Fast Ethernet are also explained.
Prerequisite or Corequisite: CIS 171 or equivalent experience.

CIS 272   **NetPrep Wide Area Networks (3 - 0) 3 Cr. Hrs.**
This course introduces students to fundamental concepts of how information is transported over a Wide Area Network (WAN). Modes of communications used, analog vs. digital transmission will be discussed. Devices such as modems, microwaves, and satellites will be introduced. The lower physical layers of WANs, protocols used and methods employed to format data bits sent will be introduced. Topics on Switched Networks, T-carriers, Synchronous Optical Network (SONET), High-Level Data Link Control (HDLC), Serial Line Internet Protocol (SLIP), Point-to-Point Protocol (PPP), Integrated Services Digital Network (ISDN), Frame Relay, and asynchronous transfer rate (ATM) will be discussed.
Prerequisite or Corequisite: CIS 171 or equivalent experience.

CIS 273   **NetPrep TCP/IP and Network Architectures (3 - 0) 3 Cr. Hrs.**
This course introduces students to the key concepts of Transmission Control Protocol/Internet Protocol (TCP/IP). The world's largest network, the Internet, is also one of the world's most powerful communication tools. Students learn the underlying applications, components and protocols of TCP/IP and its necessary link to the Internet, and how to identify TCP/IP layers, components and functions. Navigation tools, TCP/IP services and troubleshooting methodologies are also reviewed.
Prerequisite or Corequisite: CIS 171 or equivalent experience.

CIS 275   **Advanced Visual Basic (3 - 0) 3 Cr. Hrs.**
This course is designed for students who already have a working knowledge of Visual Basic. The course will cover the fundamental concepts in more detail and at a greater depth, as well as introduce more advanced concepts and techniques. These concepts and techniques will include: error handling and debugging, sequential, random and binary file processing, object-oriented programming, activeX, database management, networking and the Internet, and multimedia.
Prerequisite: CIS 175 or equivalent.

CIS 276   **Networking 2 (3 - 0) 3 Cr. Hrs.**
This course is designed to follow the introduction to networking (Networking 1) course. Students will learn LAN configurations and protocols. Installation, management and troubleshooting Microsoft Windows 2000 Server on a local area network. Additional topics on hardware, clients, domains, user accounts and printers will be covered.
Prerequisite: CIS 265.

CIS 277   **Network Infrastructure (3 - 0) 3 Cr. Hrs.**
This course is designed to serve the needs of students and information systems professionals who are interested in learning more about how to install, configure, and troubleshoot various network services for a Windows® network infrastructure.
Prerequisite: CIS 273 or equivalent experience.

CIS 278   **Network Environment (3 - 0) 3 Cr. Hrs.**
This course is designed to serve the needs of students and information systems professionals who are interested in acquiring the knowledge to implement, manage, and troubleshoot existing network and server environments based on the Microsoft® Windows® operating system.
Prerequisite or Corequisite: CIS 273 or equivalent experience

CIS 281   **Data Structures and Introduction to Windows Programming (3 - 0) 3 Cr. Hrs.**
This course is designed for students pursuing careers in computer information systems or are currently working in industry. This is an advanced course in programming using C++. It will examine the use of abstract data structures in programming. The course is also an introduction to Windows programming.
Prerequisite: CIS 211 and CIS 221 or equivalent.

CIS 282   Microsoft Office Specialist Excel Expert Certification Preparation (2 - 0) 2 Cr. Hrs.

Students will be introduced to Microsoft Office Specialist Excel certification requirements. The Skill Assessment Manager (SAM) or other computer based testing material will be introduced to help students assess their skills and prepare for Microsoft Certification. Upon completion of this course, students should be ready to take the Microsoft Office Specialist Excel Expert Examination. Major topics will include the basic skills covered by the Microsoft Office Specialist Excel Core exam for this application. In addition to the focus on the basic skills necessary to be successful when taking the Microsoft Office Specialist exam, this course will also look at how this application is used in business environments and provide opportunities for students to practice activities with this application as used by business.

Prerequisite: CIS 182 or Microsoft Office Specialist Excel Core Certification.

CIS 283   NetPrep Introduction to Internet Technologies (3 - 0) 3 Cr. Hrs.

The Internet Technologies course begins with an overview of the Internet, its history, organization and structure. Once the general structure is understood, we look at different ways to access the Internet, both as an individual user and as a group of users. Web clients and servers and the underlying protocols used by both are also covered as well as the requirements for building a web server. The final portion of the course reviews the many applications that are used for retrieving information or providing information across this global network of networks. This course is intended for industry professionals that would like an understanding of the structure and function of the Internet.

Prerequisite or Corequisite: CIS 171 or equivalent experience.

CIS 284   NetPrep Internetworking Devices (3 - 0) 3 Cr. Hrs.

This advanced course is intended for networking professionals and other participants who grasp the general concepts of data communications and networking, but would like a more detailed understanding of internetworking and internetworking devices. This course focuses on the issues that are encountered with network growth and the internetworking components that offer solutions to these problems. The components covered in this class include repeaters, hubs, bridges, switches, routers and gateways. Network Management and the Simple Network Management Protocol (SNMP) are also discussed.

Prerequisite: CIS 273 or equivalent experience.

CIS 285   NetPrep Process and Protocols (3 - 0) 3 Cr. Hrs.

This is an advanced course intended for networking professionals and students who already grasp the general concepts of data communications and networking, but would like a more detailed understanding of the processes and protocols used in today's networks. Network architectures will be discussed from an OSI model perspective of the networking protocol stack, and a detailed analysis of the protocol will ensue using traces taken with protocol analyzers.

Prerequisite: CIS 273 or equivalent experience.

CIS 286   NetPrep Network Analysis and Design (3 - 0) 3 Cr. Hrs.

This is an advanced course intended for networking professionals and students who already grasp the general concepts of data communications and networking, but would like a more detailed understanding of network design and analysis. This course will present methods for analyzing, designing and managing computer networks.

Prerequisite: CIS 273 or equivalent experience.

CIS 290   Object-Oriented Programming with Java (3 - 0) 3 Cr. Hrs.

A continuation of object-oriented programming. Students will develop real world application programs and Web-based applets based on object-oriented programming concepts (encapsulation, inheritance, and polymorphism).

Prerequisite: CIS 221 or an introduction to Java course or equivalent.

COMPUTER SERVICE

Associate Dean: Bruce Sweet, MA
Instructors: William Schlick, BEE
                             Jerry Wale, MSEE
                             Adjunct Faculty

COMPS 124   Introduction to Personal Computers and Software (3 - 0) 3 Cr. Hrs.

This course is designed to introduce the student to the hardware and software aspects of the personal microcomputer. The student will learn to identify the key components of the microcomputer. Numbering systems, digital logic, memory devices, digital circuits, and systems will be introduced to the student. An introduction to MS-DOS operating systems will be covered, as well as exploring the features of the Microsoft Windows operating system. The student will learn how a microcomputer operates, how data is organized on a hard drive, how to format disks, how to use zip disks, and how to transfer data. The student will work with batch programs and learn to install commercial software on the microcomputer. The student will gain experience using microcomputers and develop proficiency in keyboard and mouse usage.

Prerequisite: None.

COMPS 126   Technical Programming (3 - 0) 3 Cr. Hrs.

The student will write a series of technical related programs in the Visual Basic language. The student will also use the computer to solve problems relating to his/her degree program.

Prerequisite or Corequisite: COMPS 124.

COMPS 147   Computer and Peripheral Maintenance and Management (2 - 2) 4 Cr. Hrs.

This course is designed to introduce the student to PC and peripheral maintenance and management. The student will learn how to maintain, upgrade, and support a PC system. System improvement will center on topics of hardware, as well as software. Students will examine proper system and component care, failure-prone items, and how to isolate, locate, and identify a failing component within the PC system.

Prerequisite: COMPS 126 and ELECT 127.

CORRECTIONAL SCIENCE

Associate Dean: Robert F. Pearce, MPA
Instructors: Adjunct Faculty

COR 110   Introduction to Corrections (3 - 0) 3 Cr. Hrs.
This course blends theory and operational knowledge for corrections. Students learn about the early development of corrections, sentencing, prisons, probation, parole, prisoner rights, community corrections, the role of the correctional officer and current concerns.
Prerequisite: None.

COR 120   Correctional Facilities—Organization and Administration (3 - 0) 3 Cr. Hrs.
This course covers the organizational and operational methods used in correctional facilities. Students will describe the primary objectives of correctional institutions; distinguish between security levels, co-ed facilities and women's facilities; differentiate between safety and security, prisoner rights, and pre-release programs and recognize human concerns in custodial care.
Prerequisite: None.

COR 150   Client Growth and Development (3 - 0) 3 Cr. Hrs.
This course covers the growth and development of offenders. The student will learn to differentiate between normal and criminal behavior, trace the human development of offenders, identify specific problems related to offenders and identify intervention strategies.
Prerequisite: None.

COR 160   Client Relations in Corrections (3 - 0) 3 Cr. Hrs.
This course covers human behavior as it relates to client relations for offenders. Students learn the meaning and function of culture, the impact of discrimination, the various minorities represented in Michigan, attitude formation, and appropriate professional responses.
Prerequisite: None.

COR 211   Legal Issues in Corrections (3 - 0) 3 Cr. Hrs.
This course is designed to alert students to relevant processes in the state and federal court systems, aspects of constitutional law and due process, search and seizure, and the court processes of arrest, arraignment, trial, and appeal. Students will identify major cases impacting corrections, current topics and American Correctional Association accreditation standards regarding legal responsibilities and court mandates.
Prerequisite: None.

COR 231   Parole and Probation (3 - 0) 3 Cr. Hrs.
This course will cover pre- and post-institutional treatment and alternatives of parole and the activities related to probation. The student will examine the purpose and importance of parole and probation, identify and analyze the rule relative to each and study the functions and supervision of parole and probation as they relate to community programs and services. Parole Board functions, presentence reports and pre-release programs will be discussed in depth.
Prerequisite: None.

COR 251   Prisoner Services—Treatment Program (3 - 0) 3 Cr. Hrs.
This course will cover prisoner services in Corrections involving general programs, education and counseling. The student will learn the various treatment approaches in helping prisoners adapt to the institutional environment, including psychological factors, counseling, group therapy methods, medical and educational programs. The student will discuss administrator influence, custodial control and behavioral change of prisoners and current trends in correctional treatment approaches.
Prerequisite: COR 120.

COR 261   Interviewing and Interrogation Techniques (3 - 0) 3 Cr. Hrs.
The student will identify the objectives of interviewing and interrogation; develop skill building techniques, using the mechanics of questioning; distinguish the finer points of investigation dealing with preparatory work, psychological factors and personal influence; explore in depth the rules of evidence, factors of admissibility, relevancy and competency. The student will describe the law governing the admissibility of this evidence.
Prerequisite: None.

CRIMINAL JUSTICE

Associate Dean: Robert F. Pearce, MPA
Instructors: Associate Professor Orville Kappen, MA
                Adjunct Faculty

CJ 102   Organization and Administration of Law Enforcement Agencies (3 - 0) 3 Cr. Hrs.
Management, operations, communication, budgeting, recruiting, training and public relations in law enforcement.
Corequisite: ENG 100 or 101.

CJ 104   Introduction to Security (3 - 0) 3 Cr. Hrs.
A view into the private side of law enforcement. Career opportunities, history of both private and public law enforcement and their interrelationships. Liabilities of both sides.
Prerequisite: None.

CJ 107   Police Field Operations (3 - 0) 3 Cr. Hrs.
Purpose, methods, types and means of law enforcement patrol. Accident prevention and effective traffic control, interviewing techniques, crimes in progress, stress survival, and the use of force. How to conduct preliminary investigations, unlawful assembly, and riot control.
Prerequisite: None.

CJ 113   Introduction to the Criminal Justice System (3 - 0) 3 Cr. Hrs.
Course covers the overall system of criminal justice from crime detection to the release and revocation of prisoners. The student will examine the role of law enforcement officers, corrections officers, probation officers, defense attorney, prosecutor and judge as they relate to the defendant. The student will analyze the components of the system (law enforcement, courts and corrections) with emphasis on their interrelationships and expectations.
Prerequisite: None.

CJ 201   Criminal Investigation (3 - 0) 3 Cr. Hrs.
Criminal investigation, techniques of surveillance; collection, recording and preservation of evidence. Analysis of evidence and use of science laboratory. Cooperation with other law enforcement agencies.
Prerequisite: None.

CJ 209   Basic Criminalistics (2 - 2) 3 Cr. Hrs.
This course acquaints students with proper techniques of criminalistics. They will have an opportunity to perform investigations in simulated crime scene situations using scientific investigative techniques involving collection, presentation, and interpretation of physical evidence.
Prerequisite: None.

CJ 211   Criminal Law and Procedures (3 - 0) 3 Cr. Hrs.
Elements of criminal law, purposes and function. Laws of arrest, search and seizure, rights and duties of officers and citizens. Elements necessary to establish crime and criminal intent. Sources of criminal law, criminal responsibility and general court procedures.
Prerequisites: CJ 113 and CJ 102.

CJ 212   Criminology (3 - 0) 3 Cr. Hrs.
Theories of crime causation, behavioral systems in crime (organized white collar crime), nature and extent of crime, law as social control, history and philosophy of punishment, contemporary correctional techniques.
Corequisite: ENG 100 or 101.

CJ 221   Juvenile Justice (3 - 0) 3 Cr. Hrs.
Problems of juvenile delinquency, theories which explain juvenile delinquency, work of youth agencies, legislative involvement and new approaches to the prevention of juvenile crime.
Prerequisite: SOC 201 or consent of department.

CJ 286   Police Academy (13 - 25) 21 Cr. Hrs. (40 Hrs. Minimum Weekly)
This course is designed to prepare recruits in the proper techniques of investigation, crime scene process, patrol procedures, operations and techniques, conflict mediation, report writing, detention and prosecution of prisoners, first aid, investigations, evidence collection, disaster control, civil disorders and tactical operations.
Prerequisite: Consent of department before acceptance to the Police Academy.
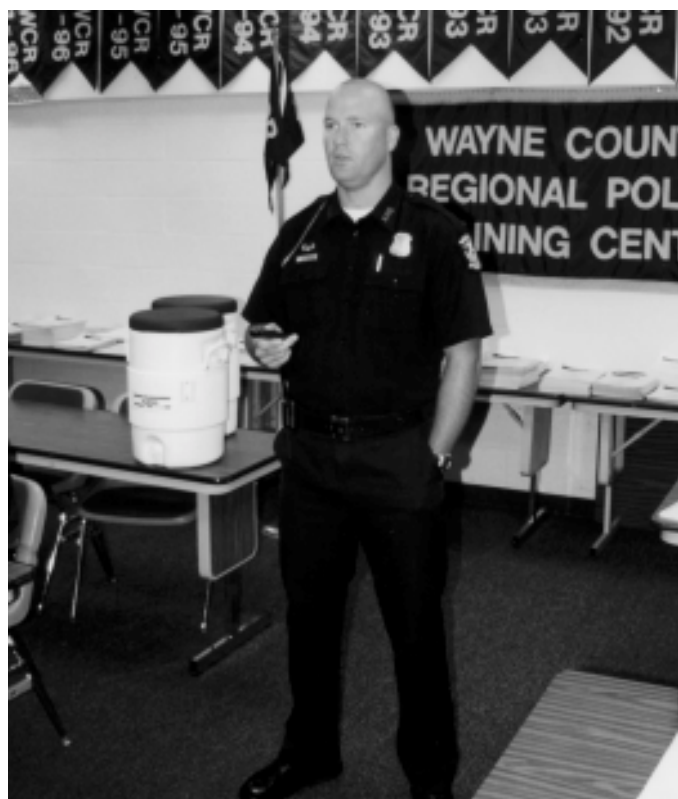
CULINARY ARTS

Assistant Dean: Monica Sullivan, MS
Director: Bruce Konowalow, MA
Instructors: Professor Joseph Decker, CMPC
  Professor Jeffrey Gabriel, CMC
  Professor Kevin Gawronski, CMC
  Professor Daniel Hugelier, CMC
  Assistant Professor Brian Polcyn, CEC
  Adjunct Faculty

Most courses are offered on a five-week, three per semester rotation.

CAP 090 **Introduction to Professional Cooking Skill and Technique (4 - 0) 4 Cr. Hrs. A preprogram requirement.**
This course will provide a broad orientation to the aspiring chefs so that they will better understand what is required to succeed in the industry. Emphasis for discussion will be on professionalism, safety and sanitation, equipment, and identification of food products. Students will be required to purchase an initial set of hand tools for skill development.
Prerequisite: **None.**

CAP 124 **Breakfast and Pantry (4 - 0) 4 Cr. Hrs.**
This course will teach students all the necessary procedures and principles in basic cooking skills as related to breakfast and pantry cookery. Topics covered are egg, potato, meat, and cereal cookery. Buffet setups will be covered. Recipe procedure will be taught. Pantry cookery skills include basic pantry operation: simple and composite salads, salad dressings, fruit trays, and cold sandwich preparation.
Prerequisite: **CAP 090.**

CAP 125 **Pastries 1 (4 - 0) 4 Cr. Hrs.**
This course will teach students all the necessary procedures and principles in the art of creating and producing many variations of beginning pastries. Upon successful completion of the course, the student will be able to: use measuring equipment and understand equivalents and conversions; understand and know proper usage of baking and pastry terminology; learn hand tools and machinery; regulate and use an oven properly; understand health, safety and sanitation of work areas; and make pies, puddings, pastries, cakes, tortes and cookies.
Prerequisite: **CAP 090.**

CAP 128 **Introduction to Food Techniques (4 - 0) 4 Cr. Hrs.**
This course will teach the basic fundamentals of cooking techniques. The student will understand the methods of basic sauces, stocks, coulis' and soup preparation. The student will learn to apply the appropriate cooking methods for specific cuts of meat, fish, poultry and game. Vegetable and starch cookery will be included.
Prerequisite: **CAP 090.**

CAP 141 **Culinary Sanitation (2 - 0) 2 Cr. Hrs.**
The student will understand and apply basic sanitation techniques to the preparation of food products and in addition, will pass the required certification examination of the Educational Foundation. Topics are food borne illness, proper chemical usage, proper dish and pot washing, insect and rodent control, food storage and rotation, hazards in culinary environment, and state and national certification requirements.
Prerequisite: **CAP 090 or equivalent.**

CAP 142 **Butchery (4 - 0) 4 Cr. Hrs.**
Students will learn commercial meat preparation, its fabrication, portion control and the importance of safe sanitary butchery practice. Students will select and prepare quality meats, fish and poultry for industry consumption and retail use. Students will be prepared to perform these important tasks in a safe and sanitary environment.
Prerequisite: **CAP 090.**

CAP 143 **Dining Room Service (4 - 0) 4 Cr. Hrs.**
Upon successful completion of the course, the student will have the understanding to apply dining room procedures which include: identifying the seven service types; basic hot and cold beverage services; professional ethics; good self image; dependability, attitude, dedication, and understanding the art and science of employee relationships and the value of customer relationships.
Prerequisite: **CAP 090.**

CAP 144 **Baking 1 (4 - 0) 4 Cr. Hrs.**
The student who completes this course will be able to understand different varieties of flour; know the purpose and chemical reaction of other ingredients in yeast doughs and quick breads; understand the nutritional value of baked goods; know how to use equipment for baking; understand proofing and fermentation of yeast products; understand different mixing methods; understand how to increase standard recipes, cost out a recipe; and produce French breads and rolls, hard rolls, soft rolls, pan breads, rye breads, whole wheat breads, corn bread, Danish pastry and coffee cakes, muffins, biscuits, quick breads, and cookies.
Prerequisite: **CAP 090.**

CAP 190 **Externship (1 - 15) 3 Cr. Hrs.**
This course is designed to give the student without work experience a firsthand opportunity to gain working experiences in a quality run establishment while rotating through various work stations in that food service work environment. This is an elective course and requires department approval.
Prerequisite: **CAP 090.**

CAP 215 **Charcuterie (4 - 0) 4 Cr. Hrs.**
Students in this course will acquire professional skills in variations of hors d'oeuvres and savories, seasonings, condiments, stuffed meats, curing, pickling, smoking of meat, fish and poultry. Proficiencies in sausage making, garde manger, pates, terrines, galantines and stuffed meats are learned.
Prerequisite: **CAP 090.**

CAP 227 **Restaurant Cooking and Preparation (4 - 0) 4 Cr. Hrs.**
Students will participate in four workstations: Roast-Grill, Saute, Entremetier (middle station) and Garde Manger-Pantry. Students will learn cooking techniques and recipe development and the importance of consistency and clean work methods. Follow-through and plate presentation will also be taught.
Prerequisite: **CAP 090.**

CAP 232 **International Cuisine (4 - 0) 4 Cr. Hrs.**
Students will learn the culture, history, and terminology of various international cuisines, and study their traditional and contemporary cooking techniques.
Prerequisite: **CAP 090.**

CAP 240   Pastries 2 (4 - 0) 4 Cr. Hrs.
This course will cover the intricate methods of producing fine pastries, puddings, mousse, cakes, tortes, ice cream desserts, chocolate work, sugar work, candies, marzipan designs and wedding cakes. Instruction covers recipe expansion, food costs and presentation.
Prerequisite: CAP 090 and CAP 125.

CAP 241   Culinary Nutrition (2 - 0) 2 Cr. Hrs.
Lectures on nutrition and nutrition's relationship to heart disease, cholesterol levels and body metabolism, are supported by actual meal preparation. Students will learn how to apply sound nutritional theories. The course stresses preparation of healthful foods that are pleasing to both the eye and the palate in order to cater to the growing number of health-minded customers.
Prerequisite: None.

CAP 242   A la Carte (4 - 0) 4 Cr. Hrs.
Upon successful completion of this course, the student will understand the basic fundamentals of food cookery, pates, terrines, salads and cold meats. The student will be able to apply modern techniques in the preparation and presentation of food using saute, grill, using and understanding entermetier, garde manger, food storage, and proper lockdown/ clean up procedures.
Prerequisite: CAP 090.

CAP 243   Storeroom Operations (3 - 0) 3 Cr. Hrs.
Upon successful completion of this course, the student will have the basic knowledge of purchasing, receiving and inventory control through the use of the computer and the application of computer software which will enhance his/her ability to run a more effective and profitable kitchen operation.
Prerequisite: CAP 090.

CAP 247   Banquets and Catering (2 - 2) 3 Cr. Hrs.
Upon successful completion of the course, the student will demonstrate his/her ability to display knowledge of a variety of catering operations. This will include planning, organizing, marketing, and executing receptions, parties, and special events. This is an elective course.
Prerequisite: CAP 090.

CAP 260   Competitive Ice Carving (2 - 2) 3 Cr. Hrs.
This course is for students who wish to further their culinary artistry by entering individual or team competitive ice carving events. This is an elective course.
Prerequisite: Proficiency evidenced in CAP/CM courses.

CAP 265   Advanced Competitive Ice Carving (1 - 3) 3 Cr. Hrs.
After completion, the student will be able to discuss safety procedures related to ice handling, describe tools and equipment used in ice carving, identify qualities of carving ice, and discuss proper care - sharpening of tools. Use of templates and production of basic carvings will be accomplished. Advanced carving ability incorporating joining, assembly and multi block will be learned. This is an elective course.
Prerequisite: CAP 260 or consent of department.

CAP 267   Chocolatier (4 - 0) 4 Cr. Hrs.
This course is designed to introduce the student to the handling techniques of chocolate. Students will learn to use artistic pieces to decorate cakes and adorn pastry buffets. Students will also be exposed to modeling and sculpting of chocolate centerpieces, chocolate truffle making, and cocoa paintings. This is an elective course.
Prerequisite: CAP 090 and CAP 125 or consent of department.

CAP 295   Salon Competition 1 (2 - 2) 3 Cr. Hrs.
Students will participate in a class which will build and refine their culinary skills as have been evidenced by the Chef Instructors. This first course will introduce the students to the requirements necessary to successfully compete in culinary competition. Students selected for this class can form the College Culinary Team. A number of field trips and training sessions, off campus, will be scheduled. This is an elective course and it fulfills Goal #8.
Prerequisite: Selection to participate made by the Chef Instructors.

CAP 296   Salon Competition 2 (2 - 2) 3 Cr. Hrs.
A continuation of Salon Competition 1 for students who have been selected to compete at state, national and international level culinary competition(s). The students will have demonstrated a proficiency for competition in Salon Competition 1 to be selected as participants in this advanced course. Selected students form a College Culinary Team and, as such a team, can represent Schoolcraft College in culinary competition(s).
Prerequisite: Selection to participate is made by the Chef Instructors. Satisfactory completion of CAP 295.

CULINARY MANAGEMENT

Assistant Dean: Monica Sullivan, MS
Director: Bruce Konowalow, MA
Instructors: Adjunct Faculty

CM 107   **Culinary Management—Food and Culture**
   (3 - 0) 3 Cr. Hrs.
A cross cultural, interdisciplinary investigation into the relationships between the foods humans prepare and consume and the cultures they build. The course will demonstrate the ways intellectual, social, religious and political events affect the preparation of food in various civilizations and at various periods in human history.
Prerequisite: **None.**

CM 108   **Introduction to Hotel—Hospitality Management**
   (2 - 0) 2 Cr. Hrs.
An introductory course that allows students to investigate hotel operations, systems, and management procedures. Students will explore the differences between classes of hotels and hospitality venues by seeking the manner in which the industry markets to specific guest demographics. Industry professionals will share their real-life expertise. Students with an interest in restaurant and hospitality management will gain a greater understanding of the nations largest industry.
Prerequisite: **None.**

CM 109   **Hospitality Law (3 - 0) 3 Cr. Hrs.**
An overview of the general concepts of law as it relates to hospitality industry. Contract, property, employee, guest, insurance, food and beverage responsibility, and business operating structure issues will be covered. The emphasis will be on restaurant law, but applicability to other aspects of hospitality law, such as catering and hotel management will be explored.
Prerequisite: **None.**

CM 203   **Restaurant Concepts & Design (3 - 0) 3 Cr. Hrs.**
This course will explore new concepts for the entrepreneur in the restaurant industry. It will emphasize the new trends and restaurant decor, along with facility layout and design.
Prerequisite: **Completion of two-year CAP.**

CM 210   **Wine & Spirits (3 - 0) 3 Cr. Hrs.**
Comprehensive, detailed information about the origins, production and characteristics of all types of alcoholic beverages: Wines from all over the world, beers, ales and distilled spirits, including brandies and liqueurs. Attention is given to table, sparkling and dessert wines. The student will gain understanding of purchasing and storing wines, retail merchandising, bar operation and beverage management. Understanding of wine and spirit laws. This is an elective course.
Prerequisite: **None.**

CM 211   **Culinary Marketing for the Restaurant Industry**
   (3 - 0) 3 Cr. Hrs.
Overview of the general concepts of marketing and its relation to the restaurant business. The students will learn about product merchandising, promotion and customer satisfaction. They will explore the different styles of advertising and how to measure their effectiveness.
Prerequisite: **Completion of two-year CAP.**

CM 213   **Culinary Management for Restaurant Operation**
   (3 - 0) 3 Cr. Hrs.
Learn practical applications of restaurant management principles. This course will explore various management styles, focus on the use of financial statements as a management tool, review cost controls and explore techniques in personnel management. In addition, planning and organization skills will be discussed.
Prerequisite: **Completion of two-year CAP.**

CM 222   **Management Accounting in the Restaurant Industry**
   (4 - 0) 4 Cr. Hrs.
Students will learn accounting concepts that match the skills required to manage a restaurant. There will be a review of the preparation of basic accounting statements, including income statements, balance sheets and statements of cash flow. Other concepts discussed include forecasting, break-even analysis and taxes. Students will use computer software applications.
Prerequisite: **Completion of two-year CAP.**

DESIGN

Associate Dean: Bruce Sweet, MA
Instructors: Associate Professor Catherine Ferman, MS
     Adjunct Faculty

DSGN 113   Hydraulic/Pneumatic/Electrical Schematics (2 - 2) 3 Cr. Hrs.
This course uses AutoCAD to design hydraulic, pneumatic, and electrical schematics for industrial control systems which involves motor control drawings, programmable logic controllers, input/output modules, handwiring schematics, panel layout, bill of materials, and layout of the system.
Prerequisite: CAD 101 or consent of department.

DSGN 180   Machine Elements and Design (3 - 2) 4 Cr. Hrs.
This course is designed to introduce the student to the various machine elements and the mechanical/working relationship between elements that make up a mechanism. The machine element concepts covered include fasteners, gears, cams, linkages, and bearings. The introduction to the design process includes problem definition, needs analysis, design performance objectives, cost analysis, design alternatives, feasibility analysis and design selection.
Prerequisite: CAD 107 or equivalent and MATH 113.
Corequiste: DSGN 180 or equivalent.

DSGN 200   Geometric Dimensioning and Tolerancing (2 - 0) 2 Cr. Hrs.
This course provides application of principles in geometric dimensioning and tolerancing. Fundamentals including concepts of maximum material condition, virtual size, geometric symbols and their interpretation, with analysis of mating parts are fully described. Course is based on American Society for Manufacturing Engineers Y14.5M-1994 standards.
Prerequisite: DRFG 102, equivalent work experience or consent of department.

DSGN 240   Tool and Die Design (2 - 4) 4 Cr. Hrs.
This course covers the development of press working tools such as cutting dies, piercing dies, forming dies and drawing dies. From the scrap strip to the assembly drawing, the designing procedure is analyzed. Sketching and AutoCAD will be used to develop and draw the designs.
Prerequisite: CAD 107 or equivalent and MATH 113.
Corequiste: DSGN 180 or equivalent.

DSGN 260   Jig and Fixture Design (2 - 4) 4 Cr. Hrs.
This course covers the development of work holding and tool guiding devices used in manufacturing. Emphasis is placed on the types of tools, supporting and locating principles, clamping methods, construction methods, initial design procedure and working drawing requirements. Design projects are used to reinforce theory and to provide an opportunity to gain practical experience. Sketching and CAD will be used to develop, create and detail designs and assemblies. ANSI/ASME Standards will be followed.
Prerequisite: CAD 107 or equivalent and MATH 113.
Corequiste: DSGN 180 or equivalent.

DRAFTING AND DESIGN

Associate Dean: Bruce Sweet, MA
Instructors: Professor Gerald Cavanaugh, MA
     Adjunct Faculty

DRFG 102   Machine Trades Print Reading (2 - 0) 2 Cr. Hrs.
This course develops a person's ability to interpret manufacturing prints. Topics covered include: third angle projection, type of lines, dimensions, sloping surfaces and angles, tolerances and allowances, thread representation, types of sections, specifications and stock lists, auxiliary views, assembly drawings and details.
Prerequisite: WELD 108 or equivalent.

DRFG 106   Fundamentals of Drafting (2 - 0) 2 Cr. Hrs.
This course introduces the use of lettering, freehand sketching, and technique in drawing with various line conventions. Students learn the proper usage of drawing instruments in mechanical drawing, geometric construction, laying out of orthographic projection, dimensioning of common three views. Shop drawings, sectioning, reference line projection are included as is an introduction to ANSI drafting standards.
Prerequisite: None.

DRFG 114   Descriptive Geometry (2 - 2) 3 Cr. Hrs.
Graphic representation and solution of space problems, basic and advanced orthographic projection, points, lines, planes, solids, auxiliary views, parallelism, perpendicularity, developments and intersections.
Prerequisite: CAD 103 or consent of department.

ECONOMICS

Associate Dean: Bruce Sweet, MA
Instructors: Professor Frederick Galperin, EdS
     Professor Prantosh Nag, PhD
     Associate Professor Cedric Howie, MS

ECON 103   Introductory Economics (3 - 0) 3 Cr. Hrs.
A survey of the macroeconomic concerns of national income determinations, business cycles, unemployment, inflation and both fiscal and monetary policies to stabilize the aggregate economy. A survey of the microeconomic fundamentals of demand, supply, elasticity, consumer choice, the production costs of output and resource allocation of firms operating under various market structures, and the international economy.
Prerequisite: None.

ECON 201   Principles of Economics (4 - 0) 4 Cr. Hrs.
An introduction to the theory of demand and supply models, income determination, business cycles, national income analysis and economic growth. The role of the labor and capital markets in economic activity will be examined to explore the problems of unemployment and inflation. The functioning and impact of the monetary system will be introduced. Government stabilization activity utilizing monetary and fiscal policies will be explored. The mechanics of international goods transactions and the balance of trade will be examined as they influence the domestic economy.
Prerequisite: MATH 053 or equivalent.

ECON 202   Principles of Economics (4 - 0) 4 Cr. Hrs.
An introduction to the theory of consumer behavior, production theory, market structure in product and resource/factor markets, and microeconomic policy.
Prerequisite: MATH 053 or equivalent.

ELECTRICITY, ELECTRONICS, ELECTROMECHANICS

Associate Dean: Bruce Sweet, MA
Instructors: Professor Ronald McBride, MA
                   Assistant Professor William Schlick, BEE
                   Adjunct Faculty

ELECT 119   Basic Measurement and Reporting Skills (3 - 0) 3 Cr. Hrs.
This course is designed for students who are pursuing a career in electronics or electronic related fields. The student will receive instruction on how to conduct career research and in the proper use of basic measuring instruments, such as the Digital Multimeter (DMM), the Volt-Ohm-Meter (VOM), the sinewave generator and the oscilloscope. In the electronics laboratory, the student will make measurements, record data, maintain a log book and develop conclusions based on the results. In the computer laboratory, students will learn how to organize and report their findings utilizing word processing, spreadsheet, and presentation software.
Prerequisite and/or Corequisite: ELECT 127.

ELECT 125   Electrical, Electronics Experience 1 (0 - 40) 3 Cr. Hrs.
This is the first cooperative industrial assignment for a student who has successfully completed 26 credit hours of the program. Employment will be full time outside the college in a meaningful technical capacity with duties approximating those of a beginning technician. The assignment will be made upon consent of the student and mutual approval of both the department and the coordinator. The employer must agree to a rotation policy in which the student is able to alternate college and work every four months. Both the College and the employer will jointly evaluate the student. Evaluation will serve as basis for grade in the course.
Prerequisite: Consent of department.

ELECT 127   DC Circuits and Mathematical Modeling (5 - 0) 5 Cr. Hrs.
This course is the study of basic DC fundamentals and mathematical modeling for the electronics careers which includes: Ohm's law, Power law, and Kirchhoff's laws with application to solving series, parallel, and series-parallel combination circuits. Other topics will include resistors, color code, magnetism, electromagnetism, and test equipment. The mathematics skills needed for an electronics career will also be covered in this course. The student will be prepared to enter the second semester course of ELECT 128 AC Circuits and Mathematical Modeling. Laboratory experiments and projects are utilized to teach the use of test equipment and to demonstrate the principals taught in lecture. Computer assignments are incorporated to enhance learning and to familiarize students with instructional and simulation software.
Prerequisite: High School Algebra 1 or Corequisite of COLLS 101.

ELECT 128   AC Circuits and Mathematical Modeling (5 - 0) 5 Cr. Hrs.
This course is designed to explore the theory and application of AC fundamentals. Sine wave generation and analysis will be studied. The theory of Kirchhoff's laws will be used to solve AC series, parallel and series-parallel circuits using the method of phasors. Other topics covered include: capacitors, inductors, transformers, resonance, passive filters, RC and RL circuits. Laboratory experiments are used to teach the use of common test equipment and to demonstrate the principals taught in lecture. PC's with Electronic Workbench will be used in laboratory experiments for modeling, simulations, and troubleshooting.
Prerequisite: ELECT 127.
Corequisite: ELECT 129.

ELECT 129   Diodes and Transistors (3 - 0) 3 Cr. Hrs.
This course will introduce the students to various semiconductor devices starting with a discussion of internal construction, followed by circuit configurations, applications, and troubleshooting techniques. Diodes will be discussed first and will include signal, rectifier, Zener and, light emitting types. Transistor material will cover NPN and PNP bipolar types, J type FETs, enhancement and depletion MOSFETs. Finally, transistor switching circuits will be examined.
Prerequisite: ELECT 119 and ELECT 127.
Corequisite: ELECT 128.

ELECT 134   Introduction to Microcontrollers (3 - 0) 3 Cr. Hrs.
This course will introduce the student to the concepts of microcontroller architecture, block components, numbering systems and PBASIC2. Representative microcontroller commands and elementary programming of the Parallax BASIC STAMP will be studied. Students will work with hands-on experiments which they will learn to expand and customize for their personal needs.
Prerequisite: COMPS 126.

ELECT 135   Fluid Power (4 - 0) 4 Cr. Hrs.
This course emphasizes the understanding of fundamentals of hydraulics and pneumatics. In this course students will design, analyze, operate, and maintain fluid power systems. Emphasis is placed on understanding the physics of fluids and how energy, power, and force affect the devices that make up a hydraulic and pneumatic system.
Prerequisite: MATH 053 or equivalent.

ELECT 200   Electrical, Electronics Experience 2 (0 - 40) 3 Cr. Hrs.
This is a cooperative industrial assignment for students who are continuing work-study programs on a rotational basis. The conditions for assignment and evaluation and the employer's responsibilities are the same as for ELECT 125—Electrical, Electronics Experience 1. Students are expected to handle technical responsibility and perform tasks like the operation of complicated equipment, taking and presenting data, repair of equipment, assembly and construction of experimental models, electrical drafting, and writing specifications.
Prerequisite: ELECT 125 and ELECT 226.

ELECT 204   Microcomputer Interface (2 - 3) 3 Cr. Hrs.
This course will introduce the student to various microcomputer interfaces by having the student develop programs and verify their operation with the actual interface hardware.
Prerequisite: ELECT 134 completed within the past year, ELECT 226 and ELECT 206.

ELECT 206   Operational Amplifiers and Linear Integrated Circuits (4 - 0) 4 Cr. Hrs.
This course will introduce the student to operational amplifiers (op-amp) and linear integrated circuits. Op-amp circuit configurations, applications, and troubleshooting techniques will be presented. Operational amplifiers will be presented with emphasis on applications and circuits such as inverting and non-inverting amplifiers, integrators, differentiators and filters. The coverage of linear integrated circuits includes voltage comparators, timers, oscillators, voltage regulators special purpose amplifiers, communications circuits and data conversion circuits.
Prerequisite: ELECT 129.

ELECT 225 Electrical, Electronics Experience 3 (0 - 40) 3 Cr. Hrs.
This is a cooperative industrial assignment for a student who has been employed at least eight months as a cooperative student. The conditions for assignment and evaluation and the employer's responsibilities are the same as for ELECT 125 - Electrical, Electronics Experience 1. In this capacity the student can be expected to assume technical responsibility at the level of a technician with six months experience.
Prerequisite: ELECT 200.

ELECT 226 Digital Logic Circuits (4 - 0) 4 Cr. Hrs.
This course acquaints students with Boolean algebra (emphasizing NAND and NOR) and various medium scale integrated circuits like exclusive or encoders, decoders, multiplexors, adders, counters, and shift registers. Also included are memory (core, RAM and ROM) and bidirectional line drivers. The laboratory work coincides with classroom lecture material utilizing integrated circuits almost exclusively.
Coerequisite: ELECT 129.

ELECT 229 Electronics Troubleshooting (3 - 0) 3 Cr. Hrs.
This course covers the technique of troubleshooting along with the application of basic instrumentation used in the process. Laboratory work will offer opportunity for actual troubleshooting experience. This experience will include both reporting failure data and description of parts to be ordered.
Prerequisite: ELECT 206 and ELECT 226.

ELECT 237 Programmable Logic and Industrial Controls (4 - 0) 4 Cr. Hrs.
This course will introduce the student to control circuits that receive input information and process this information to energize output devices, such as solenoids, lights, motors, and control relays. Emphasis will be placed in using Allen-Bradley RSLOGIX software as the system's decision-maker, which is carried out by coded instructions that are stored in a memory chip and executed by a microprocessor. The student will learn how a system uses self-correcting action through self-monitoring by a closed-loop system. Various PLC commands will be used: internal relays, ON and OFF timers, UP and DOWN counters, subroutines, program control and math instructions.
Prerequisite: CIS 170 or equivalent computer experience.

ELECT 240 Electronic Data Communication (3 - 2) 4 Cr. Hrs.
The student will first study the basics of communications which include AM, FM and PM (modulation), receivers and transmitters, antennas and transmission lines. Then the data communication concepts will be covered, starting with the telephone line equipment, MODEMS and RS standards, and finally fiber communication links.
Prerequisite: ELECT 226 and ELECT 206.

ELECT 241 Electronics Projects (3 - 0) 3 Cr. Hrs.
Advanced use of electronics and a microcomputer to design, build and operate a real-time system. The student will apply the concepts learned in prior electronics classes involving digital and analog signal processing (hardware) with the concepts learned in prior programming classes (software) in order to control real world devices using a microcomputer. The student will design and build the hardware interfacing needed to accomplish the goal of data acquisition. The student will design and program the necessary software to control the hardware, as well as process and display data on a microcomputer. The final project will permit the student to create a system which involves data acquisition, hardware control and data processing to produce an intelligent system.
Prerequisite: ELECT 229 or equivalent.

ELECT 250 Individual Student Project (3 - 0) 3 Cr. Hrs.
Students will plan, organize, assemble or fabricate and test the project of their choice or one suggested by instructor. Under guidance of the instructor, the electronic laboratory will be made available three hours a week in which time the student may perform tests.
Prerequisite: By midterm of the previous semester, the student submits a written proposal for approval by department.

EMERGENCY MEDICAL TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA
Program Coordinator: Thomas Ayers, P I/C
Instructors: Adjunct Faculty

**EMT 107   Emergency Medical Technology—Basic
(8.5 - 4) 10.5 Cr. Hrs.**
The Basic Emergency Medical Technician course is a Department of Consumer and Industry Services, Licensing Division Bureau of Health Services, Division-approved course that provides the information and experience necessary to prepare the student to take the State of Michigan Basic EMT licensing examination. Students learn the role and responsibilities of an emergency medical technician in providing emergency care. Content areas are covered in lectures, practical skills practiced in a laboratory, and observations and applications experienced in a clinical setting.
Prerequisite: None.

**EMT 113   Emergency Medical Technology—Specialist
(3 - 4) 5 Cr. Hrs.**
Emergency Medical Technology-Specialist is a Department of Consumer and Industry Services Licensing Division Bureau of Health Services, Division-approved course that provides the information and experience necessary to prepare the student to take the State of Michigan EMT Specialist licensing examination. All procedures for the course are evaluated by a physician advisor. This course is designed to teach students how to deal with more complex medical emergency situations than are handled in the basic EMT course (EMT 107). Students develop advanced skills in diagnosis and emergency treatment short of those rendered by physicians or by allied health personnel under the direct supervision of the physician.
Prerequisite: EMT 107.

EMT 156   Paramedic Technology 1 (14 - 4) 16 Cr. Hrs.
This 15-week course provides the information and experience necessary to prepare the student for EMT 157 and to take the National Registry of Emergency Medical Technician-Paramedic licensing examination, following the completion of EMT 158. EMT 156 is designed to give students extensive practical application of the knowledge and skills acquired in EMT 107 and/or EMT 113 in complex medical situations. The course focuses on state-of-the-art medical technologies and medical emergency management.
Prerequisite: EMT 107.

EMT 157   Paramedic Technology 2 (9 - 3 - 18) 12 Cr. Hrs.
This 15-week course provides the information and experience necessary to prepare the student for EMT 158 and to take the National Registry of Emergency Medical Technician-Paramedic licensing examination for State and National certification as an Emergency Medical Technician-Paramedic, following the completion of EMT 158. EMT 157 is designed to give students extensive practical application of the knowledge and skills acquired in EMT 107 and EMT 156 in complex medical situations. The course focuses on state-of-the-art medical technologies and medical emergency management. Students apply their skills in both hospital emergency rooms and ambulances under the guidance of professionals.
Prerequisite: EMT 156.

EMT 158   Internship Experience (2 - 3 - 11) 5 Cr. Hrs.
This 12-week course provides the field experience necessary to prepare the student to function as an entry-level paramedic, and to take the National Registry of Emergency Medical Technician-Paramedic licensing examination for State and National certification as an Emergency Medical Technician-paramedic. EMT 158 is designed to give students extensive practical application in complex medical situations. The course focuses on state-of-the-art medical technologies and medical emergency management. Students apply their skills under the guidance of professionals in their ambulance internship.
Prerequisite: EMT 157.

ENGINEERING

Associate Dean: Bruce Sweet, MA
Instructors: Assistant Professor Lisa Zaccone, BS
                   Adjunct Faculty

**ENGR 100   Introduction to Engineering and Technology
(3 - 0) 3 Cr. Hrs.**
This course is designed to introduce students to the fields of engineering and engineering technology. Students will learn about the different engineering disciplines, and will participate in projects related to engineering. Electronic portfolios will be introduced in this course.
Prerequisite: None.

ENGR 201   Statics (3 - 0) 3 Cr. Hrs.
This course is designed to teach the student vector analysis of forces and moments in 2 and 3 dimensions. Equilibrium of particles and rigid bodies will be determined. Beams and trusses will be analyzed. Problems involving friction, center of gravity, moments of inertia and virtual work will be solved. This course is designed as an engineering transfer course. Transferability of this course into the desired engineering program should be confirmed with the transfer office.
Prerequisite: PHYS 211.

ENGR 202   Mechanics of Materials (3 - 0) 3 Cr. Hrs.
This course is designed to teach the students the fundamental concepts related to stress and strain of deformable bodies and their application to mechanical structures. This course is designed as an engineering transfer course. Transferability of this course into the desired engineering program should be confirmed with the transfer office.
Prerequisite: ENGR 201.

ENGR 203   Dynamics (4 - 0) 4 Cr. Hrs.
This course is designed to teach the student kinematics and kinetics of particles and rigid bodies including methods of; motion relative to translating and rotating reference frames; force and acceleration; work and energy; impulse and momentum; and vibrations. This course is designed as an engineering transfer course. Transferability of this course into the desired engineering program should be confirmed with the transfer office.
Prerequisite: ENGR 201.

ENGLISH

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor Sumita Chaudhery, PhD
          Professor Steven Dolgin, DA
          Professor Richard Gordon, MA
          Professor Mark Harris, MA
          Professor John Nathan, PhD
          Professor Mary Powell, MA
          Professor Gordon Wilson, MA
          Associate Professor Omar Addi, MA
          Associate Professor Mary Alice Palm, MA
          Associate Professor Faye Schuett, PhD
          Associate Professor Ida Simmons-Short, MA
          Instructor Archana Maheshwari, MA
          Adjunct Faculty

ENGLISH GENERAL NOTE- Word Processing skills will assist students in the preparation of writing assignments.

ENG 050   **Modern English Grammar (3 - 0) 3 Cr. Hrs.**
This is the first of a two-part course (ENG 050/055) designed to prepare students for composition courses. The content focuses on major grammatical concepts: parts of speech, sentence functions, sentence patterns, clauses, sentences with multiple clauses and punctuation. A grade of 2.0 or better in ENG 050 is necessary to enter ENG 055.
    Prerequisite: **None.**

ENG 052   **English Grammar for Second Language Students (3 - 0) 3 Cr. Hrs.**
An English course designed to aid the foreign student in developing skills in written communication. It is specifically for nonnative writers who have difficulty with English composition.
    Prerequisite: **None.**

ENG 055   **Building Writing Skills (3 - 0) 3 Cr. Hrs.**
This is the second of a two-part course (ENG 050/ 055 or ENG 052/055) designed to prepare students for composition courses. The major goals are mastering basic paragraph structure and writing clear, efficient sentences. In connection with paragraph structure, students will study topic sentences, ways to improve paragraph content, and strategies for organizing paragraphs. In studying sentences, students will work on better word choices, spelling, and sentence patterns. Accurate spelling and appropriate grammatical concepts will be emphasized. A grade of 2.0 or better in ENG 055 is necessary to enter ENG 101.
    Prerequisite: **Satisfactory placement test score or minimum grade 2.0 in ENG 050 or ENG 052.**

ENG 100   **Communication Skills (3 - 0) 3 Cr. Hrs.**
In addition to basic writing skills related to general communication and to specific work experience, this course may include the study of advertising, general semantics, oral communications, visual presentation, interviews, and the influence of modern technology in various career areas. Each student will be expected to do a number of writing, reading and speaking assignments. (ENG 100 is not intended as a prerequisite or a substitute for English 101 or any other English course.)
    Prerequisite: **None.**

ENG 101   **English Composition (3 - 0) 3 Cr. Hrs.**
This course teaches students to prepare and write a number of clear, well-developed essays, using exposition and other rhetorical modes. Students submit essays which the instructor reads, evaluates and returns. This process assists students to build on strengths and eliminate weaknesses.
    Prerequisite: **Satisfactory high school English background or ENG 055 with a minimum grade of 2.0.**

ENG 102   **English Composition (3 - 0) 3 Cr. Hrs.**
Continuation of ENG 101. Includes practice in preparation and writing of a research paper.
    Prerequisite: **ENG 101 with a minimum grade of 2.0.**

ENG 106   **Business English (3 - 0) 3 Cr. Hrs.**
Business English deals with a variety of written communications relating to business. In addition to a study of the psychology and planning of business documents, specific types of letters, reports and memos will be prepared and written. Methods of collecting, preparing and presenting data will also be studied.
    Prerequisite: **ENG 101, OIS 100 with a minimum grade of 2.0.**

ENG 107   **Introduction to Journalism (3 - 0) 3 Cr. Hrs.**
Introductory survey in mass media - newspaper, magazines (consumer and small), radio, TV, advertising, and public relations; emphasis on newspapers and magazines - recognizing news and feature values, discovering audience, reporting, writing, planning content and format.
    Prerequisite: **ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.**

ENG 116   **Technical Writing (3 - 0) 3 Cr. Hrs.**
Provides practical instruction in speaking, listening, and writing for business and industry. Focuses on writing memorandums and a variety of business letters. Gives detailed instruction for job hunting, resume writing, and successful participation in job interviews. Covers the entire writing procedure from single sentences of facts, inferences, and opinions to different types of supporting paragraph development and their inclusion in some of the more common short technical reports. Practical tips are given related to procedures for conducting reliable research in qualified technical sources, gathering and organizing findings, arriving at logical conclusions, and submitting sound recommendations. Gives specific instruction and practice in preparing tables, charts, graphs, drawings, and photographs that are usually used in technical communication.
    Prerequisite: **ENG 100, ENG 101 with a minimum grade of 2.0.**

ENG 200   **Introduction to Film (4 - 0) 4 Cr. Hrs.**
The study of film in terms of how it accomplishes what it does, whether as simple entertainment, social comment or complex art. A look at the history, criticism, aesthetics and technique of film. Emphasis on viewing and discussing selected films.
    Prerequisite: **ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.**

ENG 203   **Children's Literature (3 - 0) 3 Cr. Hrs.**
Survey of literature for children of elementary school age. Through reading, observation and research the student is able to establish standards of critical evaluation.
    Prerequisite: **ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.**

ENG 205   **Creative Writing (3 - 0) 3 Cr. Hrs.**
Student creative writing may include work in poetry, short stories and drama. Some assignments will reflect student interests and abilities, while others may encourage students to expand their skills and discover new topics. Class activities will include critical evaluation of student work in individual conferences and writing workshops.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 206   **Creative Writing (3 - 0) 3 Cr. Hrs.**
Student creative writing may include work in poetry, short stories and drama. Some assignments will reflect student interests and abilities, while others may encourage students to expand their skills and discover new topics. Class activities will include critical evaluation of student work in individual conferences and writing workshops. The course may include work on individual writing projects.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 221   **Advanced Composition (3 - 0) 3 Cr. Hrs.**
This course provides theory and practice for students to develop their writing skills beyond what they can accomplish in English 101 and English 102. The course will emphasize a writing process approach, a variety of revision strategies, and standard research techniques.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 222   **Tutoring English Composition (3 - 0) 3 Cr. Hrs.**
This course trains students to be effective peer tutors of English composition by giving them a background in writing/tutoring theory combined with practical application of what they learned. A significant component of the course is a practicum in the Learning Assistance Center where students will spend time working as tutors.
Prerequisite: ENG 101 with a 3.5 or ENG 102 with a 3.0 and permission of the Instructor

ENG 243   **Introduction to Literature—Short Fiction (3 - 0) 3 Cr. Hrs.**
Reading and discussion of short fiction, especially fiction written since 1850. Designed to develop standards for critical evaluation and to increase understanding and appreciation of prose fiction.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 244   **Introduction to Literature—Poetry (3 - 0) 3 Cr. Hrs.**
Reading and discussion of poetry, especially that written since 1850. Designed to develop standards for critical evaluation and to increase appreciation for poetry.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 245   **Introduction to Literature—Drama (3 - 0) 3 Cr. Hrs.**
Reading and discussion of a number of plays, especially those written since 1850. Designed to develop standards for critical evaluation and increase understanding and appreciation of drama as a literary form.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 246   **Introduction to Literature—Novel (3 - 0) 3 Cr. Hrs.**
Reading and discussion of novels, especially those written since 1850. Designed to develop standards for critical evaluation and to increase understanding and appreciation of prose fiction.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 248   **Introduction to Literature—Shakespeare (3 - 0) 3 Cr. Hrs.**
Reading and discussion of selected Shakespearean works. Designed to develop standards for evaluation and increased understanding of one of Western Civilization's greatest playwrights.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 251   **American Literature from Colonial Times to the Civil War (3 - 0) 3 Cr. Hrs.**
This course examines significant literary works that best illustrate the changing currents of thought and expression that dominated American life from colonial times to the Civil War.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 252   **American Literature from the Late Nineteenth Century to the Present (3 - 0) 3 Cr. Hrs.**
Continuation of ENG 251. Significant literary works that best illustrate the changing currents of thought and expression that have dominated American life from the Civil War to the present.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENG 280   **The Nature of Language (3 - 0) 3 Cr. Hrs.**
An investigation of the historical background and current status of the English language, including problems such as the changing nature of language dialect differences, origins of standards for "correctness" and attempts to describe the language grammatically.
Prerequisite: ENG 101 required; ENG 102 recommended. Minimum grade of 2.0 or consent of instructor.

ENVIRONMENTAL TECHNOLOGY

Assistant Dean: Monica Sullivan, MS
Instructors: Associate Professor Diane O'Connell, MS
                  Adjunct Faculty

ENVR 107   **Soil Mechanics (3 - 2) 4 Cr. Hrs.**
This course provides an introduction to soil mechanics and foundations, and emphasizes practical applications that are supported by theory. The course concentrates on analytical techniques currently used by the environmental industry to understand the behavior of soils and to classify soils. Soil characteristics are explored by means of laboratory examination and testing techniques.
    Prerequisite: **A background in algebra, trigonometry and GEOG 212.**

ENVR 202   **Environmental Microbiology (4 - 2) 5 Cr. Hrs.**
Study of the basic principles of environmental microbiology, including the nutritional requirements of microbes and their metabolism. Emphasis will be on microbes of environmental significance in soil, water, and air. Processes used for water purification, sewage treatment and monitoring microbial quality will be discussed. Nutrient cycling in the soil by microbes quality will be discussed, including bioremediation. The course will include at least one field trip.
    Prerequisite: **BIOL 101, CHEM 111 and GEOG 212.**

ENVR 204   **Introductory Surveying (3 - 0) 3 Cr. Hrs.**
Introduction to field survey techniques and computer applications related to surveying. Comprehensive study of the techniques and procedures used to locate and measure features. Includes the use of surveying total station and data collector in the gathering of field data for planimetric and topographic maps.
    Prerequisite: **GEOG 212 and CIS 115.**

ENVR 206   **Environmental Law and Regulations (3 - 0) 3 Cr. Hrs.**
This course provides an introduction to both federal and state environmental laws and regulations. Review the historical context of United States environmental legislation. Provide an introduction to major environmental legislation, including Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/SARA), Clean Water Act (CWA), Clean Air Act (CAA), and Toxic Substances Control Act (TSCA). Companion State of Michigan legislation and rules are included. Conclude with a discussion of environmental ethics.
    Prerequisite: **POLS 105 should be taken concurrent with ENVR 206 and GEOG 212.**

ENVR 211   **Health and Safety Training for Handling Hazardous Materials (40-Hour OSHA Training) (3 - 0) 3 Cr. Hrs.**
A health and safety training course for individuals who may be involved in the investigation, remediation and operation of hazardous waste sites. Topics include hazardous materials chemistry, toxicology, air monitoring instrumentation, air purifying respirators, self-contained breathing apparatus, protective clothing, decontamination, simulated hazardous materials response incidents, and problem sets. This course satisfies CFR Part 1910.120(e) under SARA.
    Prerequisite: **ENVR 206 and GEOG 212.**

ENVR 215   **Environmental Seminar (1 - 0) 1 Cr. Hr.**
This lecture course addresses current environmental issues, such as groundwater contamination, air pollution, acid rain, environmental health, and urban design. Environmental professionals and researchers provide guest lectures concerning current and emerging technologies and trends, such as electronic communication, geosynthetic properties and applications, and quality control in environmental technology. Students have the opportunity to learn about careers in the environmental field, and meet local environmental professionals.
    Prerequisite: **GEOG 212 and the completion of one year in the Environmental Technology program or consent of the instructor..**

ENVR 231   **Field Co-op Experience (1 - 4) 5 Cr. Hrs.**
The field co-op experience provides students with off-campus work experience in the environmental technology field. Students are employed as environmental technicians for engineering firms and government agencies. This work experience will allow students to build upon skills learned during the formal education of the Environmental Technology Program. Students will complete a one credit hour preparation class before field placement.
    Prerequisite: **Successful completion of two years of the Environmental Technology Program.**

FIRE TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA
Program Coordinator: Clyde Rivard, State Certified I/C
Instructors: Adjunct Faculty

FIRE 112 Firefighter 1—Basic Fire Suppression (6 - 4) 10 Cr. Hrs.
This course provides an introduction to basic fire suppression, prevention procedures and skill development. FIRE 112 is provided as the first of two courses which constitute the equivalent of the Basic Fire Academy and is offered for students who prefer to attend on a part-time basis. FIRE 112 is for students who are currently employed by a Michigan Fire Marshal recognized fire department, are currently seeking employment, and/or are a volunteer in a recognized fire district. This course meets the State-mandated requirements for preparing students to take the exam for State certification for entry-level on-call or volunteer firefighters.
Prerequisite: **Michigan State law mandates that persons taking this course must be at least 18 years of age and have a valid Michigan Driver's License.**

FIRE 119 Firefighter 2—Advanced Fire Suppression (7 - 3) 10 Cr. Hrs.
This course is the second of two courses, which together make up the equivalent of the Basic Fire Academy and is offered for students who prefer to attend on a part-time basis. This course deals with advanced fire suppression techniques, including prevention procedures and skill development. This course is for students who are currently employed by a Michigan Fire Marshall recognized fire department, are currently seeking employment, and/or are a volunteer in a recognized fire district. FIRE 118 meets the State mandated requirements for preparing students to take the exam for state certification for entry-level career firefighters.
Prerequisite: **Fire 112. Michigan State law mandates that persons taking this course must be at least 18 years of age and have a valid Michigan Driver's License.**

FIRE 124 Fire Academy (13 - 7) 20 Cr. Hrs.
The Fire Academy combines FIRE 112 (Firefighter 1) and FIRE 119 (Firefighter 2), providing comprehensive training in fire suppression, prevention procedures and skill development. This course is for students who are currently employed by a Michigan Fire Marshall recognized fire department, are currently seeking employment, and/or are a volunteer in a recognized fire district. Students must be able to attend on a full-time basis. FIRE 124 meets the State-mandated requirements for preparing students who intend to become professional Michigan firefighters to take the State certification exam for entry-level career firefighters.
Prerequisite: **Michigan State law mandates that persons taking this course must be at least 18 years of age and have a valid Michigan Driver's License.**

FIRE 128 Firefighting Hydraulics & Water Supply (4 -0) 4 Cr. Hrs.
This course is a study of the principles of fluid in motion. More specifically, it concentrates on water and its use as a fire extinguishing agent. It is a course of solving problems of water delivery application for fire fighting situations, along with the theory that is necessary in finding correct solutions. Studies will include the physical laws of liquids as they apply to water for fire fighting, the characteristics of water, and its controlled delivery through highly technical machinery and equipment. It will include a study of the safe and efficient operation of that equipment during training and/or actual fire fighting operations. Students will be required to solve sample problems in writing. They will also be required to complete a brief study of a local water system.
Prerequisite: **None.**

FIRE 130 Firefighting Tactics and Strategy (3 - 0) 3 Cr. Hrs.
This course examines new technology, firefighting techniques and improved equipment. Provides a guide for firefighters and fire officers who need methods for handling specific situations. Also covers general principles of firefighting, engine company operations, search and rescue, structure fires, and fire-related emergencies.
Prerequisite: **None. Fire 112 recommended.**

FIRE 135 Fire Protection Systems (3 - 0) 3 Cr. Hrs.
This course is designed to provide the student with an understanding of the basic principles involved in the design and operation of existing suppression and detection systems found in most structures. Specific topics of discussion include: portable extinguishers, dry chemical systems, extinguishing foams, fire detection systems, smoke detection systems, and other related topics.
Prerequisite: **None.**

FIRE 140 **Special Topics (1 - 0) 1 Cr. Hr.**
This course is designed to educate the student in a recognized system used for managing available resources in emergencies such as fires, civil disturbances, earthquakes, explosions, acts of terrorism or other natural or man-made incidents. Provides students with basic guidelines and procedures for controlling personnel, facilities, equipment and communication that can be adapted to any emergency situation as mandated by Federal and State Laws and Standards.
Prerequisite: None.

FIRE 141 **Special Topics—Incident Command System (1 - 0) 1 Cr. Hr.**
This course is designed to educate the student in a recognized system used for managing available resources in emergencies such as fires, civil disturbances, earthquakes, explosions, acts of terrorism or other natural or man-made incidents. Provides students with basic guidelines and procedures for controlling personnel, facilities, equipment and communication that can be adapted to any emergency situation as mandated by Federal and State laws and standards.
Prerequisite: None.

FIRE 142 **Special Topics—Terrorism Awareness (1 - 0) 1 Cr. Hr.**
Terrorist incidents or those suspected to be terrorist related pose special hazards to public safety personnel and require unique considerations and actions. This course will provide students with the abilities to recognize potential targets, identify incidents, and establish priorities and safe response procedures.
Prerequisite: None.

FIRE 200 **Fire and Arson Investigation (4 - 0) 4 Cr. Hrs.**
Designed to acquaint student with data on fire dynamics, explosions and fire behavior. Course is for students interested in learning fundamentals of collection, preservation and analysis of physical evidence. Also covers new laws and court decisions controlling investigator's access to scene and admission of evidence. Prepares students for on-scene investigation as well as in-service or promotional exams.
Prerequisite: FIRE 112 or FIRE 123.

FIRE 205 **Fire Department Organization and Administration (3 - 0) 3 Cr. Hrs.**
Designed to equip the student with knowledge to effectively tackle challenging management problems and deliver practical solutions for managing today's fire departments. Provides guidance on leadership skills: motivating and disciplining personnel, accepting cultural diversity and unity, managing human resources, the use of computer technology for information management and strategic planning and budgeting.
Prerequisite: None.

FIRE 207 **Fire Company Officer (3 - 0) 3 Cr. Hrs.**
It is essential that Fire Company Officers be well versed in the areas of management, leadership, and human relations. This course will examine the skills required to function as a Fire Company Officer. Students will cover both traditional and contemporary methods of supervision, planning, staffing, and training. The course objectives will parallel NFPA 1021, *Fire Officer Professional Qualifications*. Combined with the knowledge of essential fire fighting skills, this course provides students with the competencies required for a first-line fire company officer.
Prerequisite: FIRE 118 or FIRE 123.

FRENCH

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor Roberta Holtzman, MA
                     Adjunct Faculty

FR 101 **Elementary French 1 (4 - 0) 4 Cr. Hrs.**
Fundamentals of pronunciation, basic grammar structure and essential vocabulary; particular emphasis placed on speaking and understanding French; practice in written French given by means of dictation and easy translation.
Prerequisite: None.

FR 102 **Elementary French 2 (4 - 0) 4 Cr. Hrs.**
Continuation of FR 101. Continued emphasis on the spoken language and reading of graded materials in French for comprehension without translation; extensive use of French in the classroom.
Prerequisite: One year of high school French or a grade of 2.0 or better in FR 101 or consent of instructor.

FR 201 **Intermediate French 1 (4 - 0) 4 Cr. Hrs.**
Continuation of FR 102. Review and application of essential principles of French grammar structure and training, idiomatic usage through oral and written exercises; intensive practice of the spoken language; reading of representative French prose for comprehension; development of ability to read rapidly without translation.
Prerequisite: Two years of high school French or a grade of 2.0 or better in FR 102 or consent of instructor.

FR 202 **Intermediate French 2 (4 - 0) 4 Cr. Hrs.**
Continuation of FR 201. Emphasis on oral skill, conversation, and reading without translation.
Prerequisite: Three years of high school French or a grade of 2.0 or better in FR 201 or consent of instructor.

GEOGRAPHY

Assistant Dean: Monica Sullivan, MS
Instructors: Associate Professor Diane O'Connell, MS
Adjunct Faculty

GEOG 105 **Earth Science for Elementary Teachers (3 - 2) 4 Cr. Hrs.**
The course introduces earth science and integrates pedagogical methods appropriate for elementary teachers. The course will help prospective teachers create a resource base of knowledge and activities for teaching earth science and develop teaching strategies based on how children learn science. Included are lecture, peer teaching, selecting textbooks, demonstrations, and indoor/outdoor lesson plans.
Prerequisite: **None.**

GEOG 130 **Physical Geography (4 - 0) 4 Cr. Hrs.**
This course is designed to introduce the student to the environment by examining meteorological, climatic, geologic, and geographic processes. The environment is divided into four spheres (atmosphere, hydrosphere, biosphere, lithosphere) for purposes of study; human impact in each sphere is emphasized. Students study earth patterns and distributions of soil, vegetation, climate, and water resources. The course includes study and use of maps, atlases, aerial photographs, and satellite imagery.
Prerequisite: **None.**

GEOG 133 **World Regional Geography (4 - 0) 4 Cr. Hrs.**
World Regional Geography includes a systematic study of the world's geographic regions, including Europe, United States-Canada, Russia, Latin America, Southwest Asia, Southeast Asia, East Asia, Subsaharan Africa, and Australia-New Zealand. Geographic concepts, such as map reading and spatial analysis, are first introduced. Then, the world is classified into geographic regions using both physical and social criteria. Each region results from a unique interaction between the human societies and the physical and biological environment. The physical, cultural, political, and social features of each region are studied, along with any special regional concerns or problems.
Prerequisite: **None.**

GEOG 212 **Environmental Science (3 - 0) 3 Cr. Hrs.**
This course offers a general background of a variety of environmental concerns to students who possess a wide range of interests. The course begins with a discussion of population, and the problems related to the current population explosion. Then, the focus shifts to a study of natural resources, including land, groundwater, surface water, and air quality. Land resources are examined, with special attention to soil erosion and deforestation. The groundwater is defined and areas susceptible to groundwater contamination are identified. The next issue is the overuse and misuse of surface waters. The course ends with a discussion of the waste management problems, including solid waste, hazardous waste, and low-level radioactive waste landfills. Other issues will be determined by class interests. This is a Science Course.
Prerequisite: **None.**

GEOG 217 **Water Resources (3 - 0) 3 Cr. Hrs.**
Survey of water resources which includes a study of the occurrence, movement, and behavior of water in the hydrologic cycle. Discussions on the ways in which these resources can be contaminated and remediated. Includes a study of watershed management, which is a holistic, integrated method of managing all water resources located within a naturally occurring watershed. Data and hydrologic studies completed for the Rouge River Watershed provide a model for watershed management. The course offers demonstrations of hydrologic computer models and limited field experience.
Prerequisite: **GEOG 130 or GEOL 133, and GEOG 212.**

GEOG 236 **Geography for International Business (3 - 0) 3 Cr. Hrs.**
Geography for Business is a geography course that examines the concepts and forces that affect international business. The course includes readings and discussions concerning economic policies of nations and economic relationships nations form with each other. Topics include trade policy and regional trade blocs, multinational corporations, economic policies in developing countries, economic transition for former Communist countries, and economic polices and the environment.
Prerequisite: **None.**

GEOLOGY

Assistant Dean: Monica Sullivan, MS
Instructors: Professor James Rexius, MS
                 Adjunct Faculty

GEOL 120   **Geology of Michigan (3 - 0) 3 Cr. Hrs.**
The Geology of Michigan is a history of the geological evolution of the state. Emphasis is on the identification and description of the most important and popular geological features of Michigan and the formation of our important natural resources such as iron, copper, salt, oil and gas. Two field trips, one of which is three days in Michigan's western upper peninsula, are optional.
Prerequisite: **None.**

GEOL 133   **Physical Geology (3 - 3) 4 Cr. Hrs.**
Physical Geology is the study of the geological processes that affect the earth. This includes a survey of what the earth is made of (rocks, minerals, etc.), how it works on the inside (plate tectonics, earthquakes, volcanic eruptions) and the processes that act upon it from the outside (streams, glaciers, wind, etc.). Identification of common rocks and minerals and the interpretation of topographic maps are part of the required laboratory exercises. An all-day Saturday field trip is optional.
Prerequisite: **None.**

GEOL 134   **Historical Geology (3 - 3) 4 Cr. Hrs.**
Historic Geology is the study of the history of the earth. Geologic principles and advanced plate tectonic concepts are applied to the interpretation of earth history from its early beginnings to the present time. The development of the North American continent through geologic time is presented as a case history. Geologic dating methods, interpretation of sedimentary rocks, structures, fossils and geologic maps are studied during lab exercises. One all-day field trip and a field project are required.
Prerequisite: **GEOL 133.**

GEOL 140   **Regional Geology (2 - 0) 2 Cr. Hrs. each**
GEOL 141   **(Spring and/or Summer Sessions only)**
GEOL 142
GEOL 143   A different selected geologic region of interest in
GEOL 144   the United States or Canada will be studied each
GEOL 145   spring or summer in detail. A field trip to each area
GEOL 146   can be taken to observe first hand the rocks, fossils,
GEOL 147   structures and significant depositional and erosional
GEOL 148   processes at work in that particular region. Areas
GEOL 149   to be considered include the Canadian shore of Lake Superior, southern Appalachians, northern Arizona, Black Hills, Adirondack Mountains, Yellowstone area, Costa Rica or others as requested. Check with department for next area to be studied. A student may enroll in any regional course or in more than one, in subsequent years.
Prerequisite: **GEOL 133.**

GEOL 237   **Mineralogy (3 - 2) 4 Cr. Hrs.**
Mineralogy teaches the basics of crystal formation, crystal symmetry and crystal chemistry of the most important rock forming and economic minerals of the earth's crust. Also included is the formation of minerals, mineral occurrences and associations. Laboratory periods concentrate on the methods used in the identification of about 100 minerals.
Prerequisite: **GEOL 133.**

GERMAN

Assistant Dean: Dominic Aquila, PhD
Instructors: Adjunct Faculty

GER 101   **Elementary German 1 (4 - 0) 4 Cr. Hrs.**
Fundamentals of pronunciation, basic grammar structure, and essential vocabulary with particular emphasis placed on speaking and understanding German; practice in written German given by means of dictation and easy translation. Workbook exercises required.
Prerequisite: **None.**

GER 102   **Elementary German 2 (4 - 0) 4 Cr. Hrs.**
Continuation of German 101 with emphasis on German business culture and introductory terminology, focus on formal address. Continued emphasis on the listening, speaking, reading of graded materials, writing and understanding German through extensive use in the classroom as well as vocabulary extension and sentence structure/composition. Workbook exercises required.
Prerequisite: **Minimum one year of high school German, or a grade of 2.0 or better in GER 101 or with consent of instructor.**

GER 201   **Intermediate German 1 (4 - 0) 4 Cr. Hrs.**
Continuation of GER 102. Review and application of essential principles of German structure and basic application of Business German terminology. Continued emphasis on listening, speaking, reading of selected business and grammar sections. Understanding advanced grammatical structures through writing and speaking in the classroom. Workbook exercises required.
Prerequisite: **Two years of high school German or a grade of 2.0 or better in GER 102 or with consent of instructor.**

GER 202   **Intermediate German 2 (4 - 0) 4 Cr. Hrs.**
Continuation of GER 201. Review and application of essential principles of German structure and more elaborate application of Business German terminology. Continued emphasis on listening, speaking, reading of selected business sections. Understanding advanced grammatical structures through writing and speaking in the classroom. Workbook exercises required.
Prerequisite: **Three years of high school German or a grade of 2.0 or better in GER 201 or with consent of instructor.**

HEALTH INFORMATION TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA
Coordinator/Instructor: Professor Patricia Rubio, MSA
Instructors: Associate Professor Jody Scheller, MS
                          Adjunct Faculty

HIT 104   Medical Terminology (4 - 0) 4 Cr. Hrs.
Fundamentals of the language of the medical profession. Definitions, pronunciations, spelling and abbreviations of anatomical, symptomatic, diagnostic and operative terms pertaining to each anatomical system of the body. Medical terms will also include those pertaining to pharmacy, clinical laboratory, radiology and pathology.
Prerequisite: None.

**HIT 109   Principles of Health Information Management 1
(2 - 2) 3 Cr. Hrs.**
The health information management profession. The health information management department, its functions and how it relates to other departments. The health/medical record and its format, content and various agency requirements. Techniques used in the storage and maintenance of health/medical records. Laboratory assignments utilizing the health/medical record as seen in healthcare facilities.
Prerequisite: None.

HIT 909   LAB (Concurrent with HIT 109) 0 Cr. Hrs.
No added cost; allows for personal attention.

HIT 111   ICD-9-CM Classification (2 - 2) 3 Cr. Hrs.
This course is designed for the classification of patient morbidity and mortality information for statistical purposes and for the indexing of health/medical records by disease and operation for data storage and retrieval. Diagnostic coding and reporting guidelines for hospital inpatient and outpatient services will be utilized.
**Prerequisite: HIT 104, HIT 109, and BIOL 236 or
                    consent of department.**

HIT 112   Basic Laboratory and Diagnostic Tests (2 - 0) 2 Cr. Hrs.
This course is designed to prepare an allied health student to identify clinical laboratory and diagnostic tests. The student will develop an understanding of what the laboratory and diagnostic test is used for; diseases, diagnoses or disorders associated with the test; and the normal range or results of the test. Students will complete case studies to demonstrate a working knowledge of laboratory and diagnostic tests.
Prerequisite: HIT 104 or consent of department.

HIT 114   Pharmacology for Health Professionals (2 - 0) 2 Cr. Hrs.
This course is designed as an introduction to the principles of pharmacology, with a comprehensive review of drug action, routes of administration, indications for use of generic drugs, and trade name drugs. The course will provide practice in pronunciation, spelling, and utilizing drug references. Class activities will assist the student in identifying drugs used to treat various body systems.
Prerequisite: HIT 104.

HIT 154   Health Record Practicum (0 - 4) 3 Cr. Hrs.
Hands on experience using a chart management system that allows for chart tracking, chart deficiency, coding and abstracting, master patient index, and admission/discharge/transfer functions. Simulation of health information management activities utilizing health/patient records, software applications and manual systems.
Prerequisite: HIT 104 and HIT 109.
Corequisite: HIT 156.

HIT 156   Clinical Affiliation 1 (0 - 4) 2 Cr. Hrs.
Provides professional practice assignments for the student in a Health Information Management/Services department under the supervision of a qualified Health Information Management professional. The student will have the opportunity to observe and interact with the Health Information Management professional in a variety of healthcare facilities at off-campus sites. The student will observe, perform and report on the procedures in health information systems in a variety of healthcare facilities.
**Prerequisite: HIT 104, HIT 109, BIOL 236 and
                    consent of department.**
Corequisite: HIT 154.

**HIT 210   Principles of Health Information Management 2
(2 - 2) 3 Cr. Hrs.**
This course introduces students to terminology, definitions and computational methodology of the basic and most frequently used health statistics. Topics include healthcare data collection, preparation, analysis and interpretation; cancer program requirements; vital statistics reporting.
Prerequisite: HIT 104, HIT 111, and HIT 154.

HIT 213   Health Information Technology Seminar (1 - 0) 1 Cr. Hr.
This course will assist the student in preparation for the registered health information technician examination. The student will develop a study plan to be utilized on an individual and/or group basis. The student will complete a mock examination. The student will also begin preparation for a job search. A research of job opportunities that are currently available will be identified. The impact of continuing education upon the health information management profession will be discussed and a plan for maintaining certification will be developed.
Corequisite: HIT 258.

HIT 216   Health Care Delivery Systems (2 - 0) 2 Cr. Hrs.
A comprehensive review of the health care industry. The course will incorporate trends and changes related to health care facilities such as acute care hospitals, specialty hospitals, nursing homes, managed care organizations, hospice and home health care. The course will also deal with the impact and use of computers in the delivery and documentation of health care and the role of the health information professional in response to the health care delivery systems.
Prerequisite: HIT 104, HIT 111, and HIT 154.

HIT 217   Quality Management in Health Care (2 - 0) 2 Cr. Hrs.
Designed for the health information technology student, this course reviews methods by which a healthcare organization measures, assesses and improves the quality of healthcare services. Topics include traditional quality assessment performance improvement, utilization/resource management, risk management, infection control, credentialing and the role of oversight agencies.
Corequisite: HIT 257.

HIT 218   Basic Ambulatory Coding (3 - 0) 3 Cr. Hrs.
This course is designed to prepare a student to code in the ambulatory setting using Current Procedural Terminology (CPT). The course will emphasize the reporting requirements for codes and rules that apply to the reimbursement systems used by government payers and other health plans. The student will be introduced to computerized coding systems utilized in healthcare. The emphasis of the course will be coding for facility services and procedures.
**Prerequisite: HIT 104, HIT 109, HIT 111, HIT 271, and
                    BIOL 236.**

HIT 219 **Organization and Management (1 - 2) 2 Cr. Hrs.**
Health information professionals make decisions that demand effective planning, organization, motivation and communication skills. Effective supervision of human and other resources is also essential in today's changing world of healthcare. This course provides the health information technology student with basic management concepts and theories that are applied in the Health Information Services/Management environment.
Corequisite: HIT 258.

HIT 220 **Legal Aspects of Health Information (3 - 0) 3 Cr. Hrs.**
This course provides the health information technology student with the legal requirements concerning the compilation and maintenance of patient health/medical records. Additional topics include how health information is used and when it can be disclosed; state and federal regulations, statutes, including the privacy rules resulting from the Health Insurance Portability and Accountability Act (HIPAA).
Prerequisite: HIT 210, HIT 216, and HIT 257.

HIT 226 **Intermediate ICD-9-CM Coding (3 - 0) 3 Cr. Hrs.**
This course is designed to prepare a student to code in the hospital setting using ICD-9-CM. The course will emphasize the reporting requirements for codes and rules that apply to the reimbursement systems used by government payers and other health plans. The student will be introduced to computerized coding systems utilized in health care. The emphasis of the course will be the development of intermediate skills to code accurately and ethically. Students will assign codes for diagnoses, services and procedures that are documented in the health/medical record.
Prerequisite: HIT 111, HIT 271, and BIOL 236.

HIT 228 **Intermediate Ambulatory Coding (3 - 0) 3 Cr. Hrs.**
This course is designed to prepare a student to code in the ambulatory setting using Current Procedural Terminology (CPT) and Healthcare Financing Administration Common Procedure Coding System (HCPCS). The course will emphasize where documentation can be located within the various reports in the health/medical record as needed to apply CPT guidelines for accurate CPT/HCPCS coding. Students will apply the principles and conventions of CPT coding to exercises based on actual case documentation and health/medical records. The student will analyze clinical data for the purpose of coding and reimbursement in the ambulatory setting including the physician office.
Prerequisite: HIT 111, HIT 218, HIT 271, and BIOL 236.

HIT 230 **ICD-9-CM Coding Practicum (1 - 1) 2 Credit Hours**
This course will provide practical hands-on experience with ICD-9-CM coding of health/medical records. The student will apply official coding guidelines to a variety of clinical cases and record types such as hospital inpatient, outpatient, and physician office or service. The student will utilize the computerized encoding systems for diagnosis and procedure coding. The student will research references in solving coding problems.
Prerequisite: HIT 226 and HIT 228

HIT 231 **Ambulatory Coding Practicum (1 - 1) 2 Credit Hours**
This course will provide practical hands-on experience with Current Procedural Terminology (CPT) coding of health/medical records. The student will apply official coding guidelines to a variety of clinical cases and record types such as ambulatory, emergency, outpatient, and physician office or service. The student will utilize the computerized encoding systems for ambulatory and procedure/services coding. The student will research references in solving coding problems.
Prerequisite: HIT 226 and HIT 228

HIT 257 **Clinical Affiliation 2 (0 - 8) 4 Cr. Hrs.**
Provides professional practice assignments for the student in a Health Information Management/Services department under the supervision of a qualified Health Information Management professional. The student will have the opportunity to observe and interact with the Health Information Management professional in a variety of healthcare facilities at off-campus sites such as a large, medium or small acute care hospital. The student may be assigned to other types of healthcare facilities such as rehabilitation, mental health or governmental type of organization. The student will observe, perform and report on the procedures utilized within health information systems.
Prerequisite: HIT 111, HIT 154, HIT 156, and HIT 271.

HIT 258 **Clinical Affiliation 3 (0 - 8) 2 Cr. Hrs.**
Provides professional practice assignments for the student in a Health Information Management/Services Department under the supervision of a qualified Health Information Management professional. The student will have the opportunity to observe and interact with the Health Information Management professional in a variety of healthcare facilities at off-campus sites. The student will observe, perform, and report on the procedures/functions utilized within health information systems in facilities, organizations or agencies related to healthcare. The student may be assigned to a hospital, cancer registry, cancer center, research department, ambulatory center or other related healthcare organization
Prerequisite: HIT 210, HIT 216, HIT 217, HIT 257 and consent of department.

HIT 271 **Human Diseases (4 - 0) 4 Cr. Hrs.**
This course is designed to build on the knowledge of anatomy and physiology, and medical terminology. It will introduce the student to the disease processes and their effect on the individual body systems. The student will develop an understanding of the types of treatments for diseases which may include pharmacology, surgery and other therapies.
Prerequisites: BIOL 105 or BIOL 236 or BIOL 237 and BIOL 238 and HIT 104.

Health Information Management Technology
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edited by Merida L. Johns, PhD, RHIA
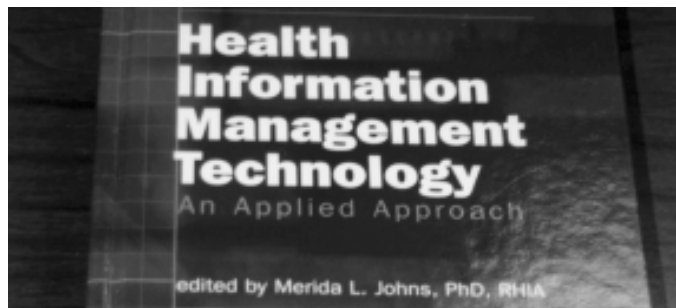
HISTORY

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor Robert Briggs, MAT
                   Professor Evan Garrett, MA
                   Assistant Professor Steven Berg, PhD
                   Assistant Professor Alexander Thomson, MA
                   Adjunct Faculty

HIST 134   Ancient World (4 - 0) 4 Cr. Hrs.
A survey of prehistoric and ancient times: origins of human nature and culture; early gathering-hunting and planting-herding societies; origins of civilization in the Middle East, India, China, the Mediterranean and elsewhere; civilized-barbarian interaction and the rise of early Old World empires; rise of classical civilizations, especially Greece and Rome; rise of the higher religions, especially the Judaeo-Christian traditions; decline of classical civilizations, with emphasis on the fall of Rome and the rise of medieval Europe, Byzantium and Islam.
Prerequisite: None.

HIST 137   Early Modern World (4 - 0) 4 Cr. Hrs.
A survey of the balance of world civilizations in medieval and early modern times: American and African peripheral regions; major civilizations of Asia and Europe in the Middle Ages; 14th-16th century crisis and renewal; expansion of Europe in the age of Renaissance, Reformation and discovery; rise of the Great-Power system; the scientific revolution and Enlightenment; the democratic and industrial revolutions; emergence of modern ideologies and nations; climax of European expansion in the age of imperialism, to the late 19th century.
Prerequisite: None.

HIST 138   Contemporary World (3 - 0) 3 Cr. Hrs.
A survey of the main themes in the history of the world in the last hundred years: the Eurocentric world order of 1900; World War I, communist revolution and fascist counterrevolution; the settlements of the 1920s and the renewal of world crisis in the 1930s; World War II and the onset of the Cold War in the 1940s–1960s; erosion and collapse of the postwar order in the 1970s–1980s; the contemporary world order in the historical context.
Prerequisite: None.

HIST 141   History of Michigan and the Great Lakes (3 - 0) 3 Cr. Hrs.
A general survey of the historical development of Michigan from the primitive wilderness to the present; growth of certain political, economic, social and cultural institutions which contribute to understanding Michigan and the Great Lakes area today; emphasis on relating the history of the state to that of both the area and the nation.
Prerequisite: None.

HIST 151   Early America—U.S. History (3 - 0) 3 Cr. Hrs.
A survey of the origins of American civilization: Native American societies in pre-Colombian and colonial times; European discovery, exploration, conquest and settlement of the Americas; Iberian, French and African elements in the early Americas; 17th and 18th century English colonial development; the Revolutionary era and the founding of the U.S.; Federalist and Jeffersonian America, to the early 19th century.
Prerequisite: None.

HIST 152   19th Century America—U.S. History (3 - 0) 3 Cr. Hrs.
A survey of the expansion, crisis and renewal of the U.S. in the 19th century: demographic, economic, social and cultural change in Jacksonian America; the North and antebellum reform movements; the South and slavery; the West and territorial conquest and settlement; sectional struggle, the Civil War and Reconstruction; emergence of modern, urban, industrial America, to the beginning of the 20th century.
Prerequisite: None.

HIST 153   Contemporary America—U.S. History (3 - 0) 3 Cr. Hrs.
A survey of American civilization within the last hundred years: turn-of-the-century growth and crisis; the Progressive Era and World War I; the 1920s, the Great Depression and the New Deal; World War II and the emergence of the United States as a superpower; affluence, consensus and confrontation in the 1950s–1960s; malaise, drift and fragmentation in the 1970s–1980s; the U.S. in the world of the late 20th century.
Prerequisite: None.

HIST 230   U.S. Business History (1865-Present) (3 - 0) 3 Cr. Hrs.
An examination of major business and economic development in the U.S. from the Civil War to the present. Emphasis will be placed on the ideas, forces and personalities in the ever changing role of business and economics and their impact on the nation and its citizens. Recommended for students majoring in business, economics and history.
Prerequisite: None.

HUMAN DEVELOPMENT SERVICES

Director: Donna Nordman, MA
Instructors: Adjunct faculty

HDS 110   Career Decision Making (2 - 0) 2 Cr. Hrs.
This class assists the student in examining the components of career/job choice. The focus is on career awareness, personal awareness, and education/training awareness as they relate to the process of occupational choice. Self-assessment instruments will help students identify tentative career options, decision-making strategies, obstacles and planning skills.
Prerequisite: None.

HUMANITIES

Assistant Dean: Dominic Aquila, PhD
Instructors: Associate Professor James Nissen, DMA
    Instructor Holly Stevens, MA
    Adjunct Faculty

HUM 106   Introduction to Art and Music (1 - 0) 1 Cr. Hr.
This course provides an overview of music and art including major composers, painters, sculptors and styles. The focus will be on the basic elements underlying the visual and aural arts. The course also prepares students to begin to develop an understanding of how to perceive music and art, both aesthetically and historically. Outside attendance at one live concert and one visual media exhibition is required. No prior technical knowledge is needed.
Prerequisite: None.

HUM 150   World Masterpieces (3 - 0) 3 Cr. Hrs.
This course serves as an introduction to some of the great works of art and music in the western world, from Greek civilization to the present. The course will cover the major periods/styles in art and music history: Greek, Roman/Early Christian, Romanesque, Gothic, Renaissance, Baroque, Classical, Romantic, Modern (1900–1945) and Post-Modern (1945–present). Art and music masterpieces to be studied will be selected from the main repertoire of significant works of the western world. The course will also cover fundamentals of integrative art and music appreciation. A background in art and/or music is not required.
Prerequisite: None.

HUM 190   Individual Humanism—An Honors Colloquium (3 - 0) 3 Cr. Hrs.
A required introduction to the Schoolcraft Scholars honors program, this colloquium studies the individual and the community through multiple disciplines. Topics of the colloquium may include, but are not limited to, the human condition; individual renaissance and enlightenment; the role of individuals in a society of change, transition and revolution; the unanswered question; and taking an active role on the social stage. Additionally, students in this course collaborate, practice critical thinking, and explore both community issues and community-based organizations.
Prerequisite: Acceptance to the Schoolcraft Scholars honors program.

HUM 201   Art and Music in Western Civilization: Field Study—England (3 - 0) 3 Cr. Hrs.
Field Study; A humanistic study of music and art in concentrated form. Includes art forms and functional styles of historical periods as they relate to universal principles. The course will include studies in English history, culture and geography. The course will conclude with a ten-day trip to London, England, with day trips to Cambridge, Canterbury, Bath, Stonehenge, Ely, and other satellite locations. The tour will include visits in the National Gallery and the British Museum as well as other museums, and will include visits to several palaces, castles, cathedrals, and performing arts centers to facilitate a live, firsthand encounter with English arts and culture.
Prerequisite: HUM 106 or HUM 150 or consent of Instructor.

HUM 202   The Humanities in Western Civilization: Field Study—France (3 - 0) 3 Cr. Hrs.
Field Study; A humanistic study of the arts, culture, and history in concentrated form. Includes art forms and functional styles of historical periods as they relate to universal principles. The course will include studies in French history, culture and geography. The course will conclude with a ten-day trip to Paris, France, which will include visits to the Louvre Museum, Musee D'Orsee (and other museums/galleries), Notre Dame Cathedral (and other cathedrals), day trips to Versailles, Giverny, St. Germain, St. Denis, and other culturally and historically significant centers to facilitate a live, firsthand encounter with French arts and culture.
Prerequisite: HUM 106 or HUM 150 or consent of Instructor.

HUM 203   Art and Music in Western Civilization: Field Study—Italy (3 - 0) 3 Cr. Hrs.
This course will serve as an in-depth look at the history, culture and people of Italy, with specific concentration on Roman art, architecture and civilization, and the early Renaissance Florentine art and music masterworks. The course will include studies in Italian history, culture, geography and language. Basic Italian language skills will be taught to facilitate the rigors of tourism in a foreign country. The course will culminate in a 12-day tour to Italy and will include stays in Rome, Venice and Florence, with day trips to satellite cities such as Sienna, Padua and Ravenna. The tour will include visits to the Colosseum, the Pantheon, St. Peter's and the Vatican Museum in Rome, the Florence cathedral, St. Mark's in Venice, as well as several museums and performing arts centers to facilitate a live, firsthand encounter with Italian arts and culture.
Prerequisite: HUM 106 or HUM 150 or consent of instructor.

HUM 204   Art and Music in Western Civilization: Field Study—Spain (3 - 0) 3 Cr. Hrs.
This course will serve as an in-depth look at the history, culture and people of Spain, with specific concentration on painting, architecture, and music of the Spanish masters from the Renaissance to the present. The course will include studies in Spanish history, culture, geography and language. Basic Spanish language skills will be taught to facilitate the rigors of tourism in a foreign country. The course will conclude with a ten-day trip to Madrid, Spain, with day trips to satellite cities such as Segovia, Toledo, Aranjuez, and El Escorial. The tour will include visits to the Prado Museum and the Museum of Contemporary Art, as well as other museums, and will include visits to several palaces, castles, cathedrals, and performing arts centers to facilitate a live, firsthand encounter with Spanish arts and culture.
Prerequisite: HUM 106 or HUM 150 or consent of instructor.

HUM 210   The Art of Being Human (3 - 0) 3 Cr. Hrs.
Surveys art, drama, music, literature, and philosophy. Each art form is examined from four perspectives: historical context, elements of the art, form/meaning, and criticism/evaluation.
Prerequisite: None.

HUM 212 **Mass Media and Popular Culture (3 - 0) 3 Cr. Hrs.**
An introduction into the nature of mass communication and their relationship with the public. The course will analyze, assess, and evaluate popular culture and mass media. Focus will be on the various forms of media, to include radio, television, film, newspaper, and advertising to determine how they influence and manipulate the ways you relate to yourself and others. Examination will include the history, economics, power, and ethical consideration of media outlets.
Prerequisite: **ENG 101.**

HUM 215 **Humanities Through the Arts (3 - 0) 3 Cr. Hrs.**
This course represents an exploratory approach to the humanities that focuses on the special role of the arts. The relation of the humanities to values is central to the purpose of the course. This approach provides a self-contained program for studying values as revealed in the arts.
Prerequisite: **None.**

HUM 231 **Humanities in Western Culture—Antiquity Through the Renaissance (3 - 0) 3 Cr. Hrs.**
An introduction to the Integrated Humanities. Culture has sometimes been defined as that which remains after the civilization has vanished. What is left behind amounts to much more than just artifacts; we are left with a legacy of the humanistic spirit. This course takes an in-depth look at culture, civilization, values and qualities inherent in Western art, architecture, music, literature and philosophy. It is also a study in Western thought and its resultant social and political institutions. The first of two-semester sequence, this course will cover Ancient River-Valley, Greek, and Roman civilizations, the Middle Ages, and the Renaissance.
Prerequisite: **HUM 106 or HUM 150 or consent of instructor.**

HUM 232 **Humanities in Western Culture—Baroque to the Present (3 - 0) 3 Cr. Hrs.**
An introduction to the Integrated Humanities. Culture has sometimes been defined as that which remains after the civilization has vanished. What is left behind amounts to much more than just artifacts; we are left with a legacy of the humanistic spirit. This course takes an in-depth look at culture, civilization, values and qualities inherent in Western art, architecture, music, literature and philosophy. It is also a study in Western thought and its resultant social and political institutions. The second of two-semester sequence, this course will cover Baroque, Classical and Romantic periods, as well as the major historical, philosophical, and artistic "isms" of the modern and post-modern Western world.
Prerequisite: **HUM 106 or HUM 150 or consent of instructor.**

INTERNATIONAL EDUCATION

Assistant Dean: Dominic Aquila, PhD
Instructor: Adjunct Faculty

INTED 201 **The French Experience (3 - 0) 3 Cr. Hrs.**
This course provides students with an introduction to modern France. The class will cover modern civilization, history, art, literature and language. Special emphasis will be placed on the American expatriate experience. The highlight of the course will be a two- week trip to Paris, France and environs with optional excursions to surrounding areas.
Prerequisite: **None.**

LASER TECHNOLOGY

Associate Dean: Bruce Sweet, MA
Instructors: Professor James Kramer, MS
Adjunct Faculty

LASR 103 **Laser Concepts (4 - 0) 4 Cr. Hrs.**
A basic course designed for laser technicians which covers laser operation and the technical principles and equations needed to understand them and modify their output. It also deals with optical system construction, including lenses, mirrors, prisms, optical flats, etalons, bean expanders, collimators, optical tables, optical supports, and photographic components. Associated laboratory experiments will allow the technician to get "hands-on" experience with the setup, operation and analysis of laser/optic systems.
Prerequisite: **One year of high school algebra.**

LASR 104 **Laser Optics and Components 1 (5 - 0) 5 Cr. Hrs.**
This course applies graphical and mathematical techniques to the reflection/refraction of light at typical optical interfaces. The student analyzes and uses optical components typically found in geometrical optics. Topics include ray tracing, imaging with lenses, mirrors, prisms, windows optical flats, etalons, beam expanders, collimators, optical tables, optical supports, optical systems, and photographic components and supplies. Associated laboratory stresses hands-on experience with setup, operation and analysis of typical optical systems.
Prerequisite: **Two years of high school algebra.**

LASR 232 **Laser Systems and Applications 1 (4 - 0) 4 Cr. Hrs.**
A comprehensive examination of ion lasers, molecular lasers and solid-state lasers, with particular attention given to argon ion CO_2 gaseous and Nd: YAG laser systems. Considers typical power sources for all lasers and flash lamps and power supplies for pulsed laser systems. Treats applications of the ion and CO_2 laser systems to welding, cutting and drilling. Project experiments stress hands-on experience with operation, troubleshooting and evaluations of current laser systems and power sources.
Prerequisite: **LASR 103.**
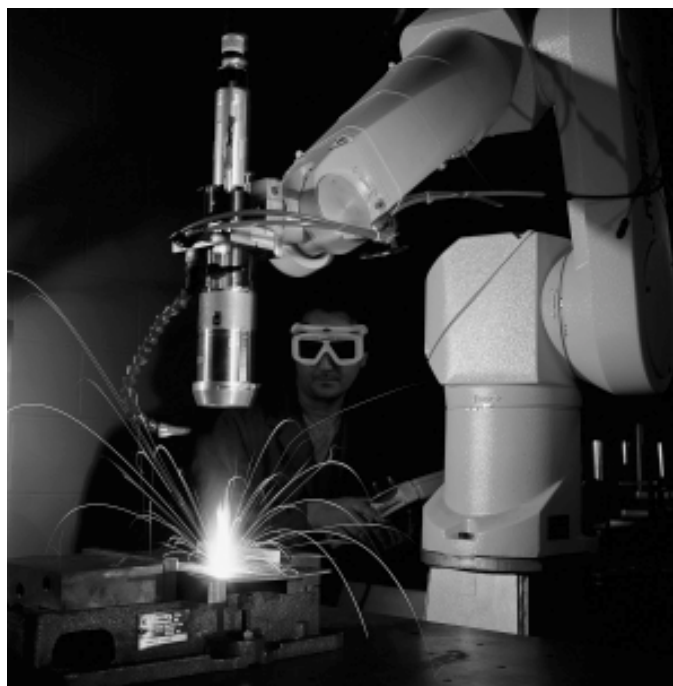
LEARNING RESOURCES

Assistant Dean: Dominic Aquila, PhD
Instructor: Professor Roy Nuffer, MSLS

LR 110   **Electronic Research (1 - 0) 1 Cr. Hr.**
This course is a basic introduction to the conduct of research. To assist them in completing their class assignments, research and term papers, students will learn to use electronic catalogs, databases, and the Internet effectively, with traditional search techniques extrapolated into the increasingly electronic environment.
Prerequisite: None.

MANUFACTURING

Associate Dean: Bruce Sweet, MA
Instructors: Adjunct Faculty

MFG 102   **Basic Machining, Measurements and Manufacturing (2 - 4) 3 Cr. Hrs.**
Fundamental manufacturing processes. This course will teach fundamentals only, not machine operator skills. Particular emphasis will be on machines, tools and measurements to produce an end product.
Prerequisite: None.

MFG 103   **Manufacturing Theory and Machine Operation (2 - 4) 3 Cr. Hrs.**
Operation of the tool room lathe, horizontal mill, vertical mill, surface grinder, shaper and other machine tools, tool room and mass production procedures.
Prerequisite: MFG 102.

MFG 165   **Machinery Handbook (2 - 0) 2 Cr. Hrs.**
This course teaches industrial workers how to use and apply handbook data to their occupation. Attention is focused on the handbook as a valuable reference for succeeding courses and shop applications.
Prerequisite: Weld 109 or equivalent.

MFG 241   **Quantitative Metrology (1 - 2) 3 Cr. Hrs.**
Metrology, the foundation for interdisciplinary scientific measurement, serves as the basis for applied dimensional accuracy traceable to national and international standards. Accuracy and precision measurements are required in all facets of science, engineering and technology including product development, production and analysis. Topics include systems of measurements, evolution of standards, mandatory traceability, precision measuring equipment, gages and dimensional indicators, calibrations and methods of surface, linear, depth and height measurement.
Prerequisite: MET 102, MATH 113 or consent of department

MFG 243   **Manufacturing Systems Analysis (3 - 0) 3 Cr. Hrs.**
Principles of plant layout, process and flow charts, tools and aids for effective plant layout. Materials handling equipment, systems, and procedures and their relationship to production control.
Prerequisite: MFG 102.

MATHEMATICS

Assistant Dean: Monica Sullivan, MS
Instructors: Professor Edward Kavanaugh, MA
                         Professor Randy Schwartz, MA
                         Professor Janina Udrys, MA
                         Professor Larry Williams, MA
                         Associate Professor Janet Arsznov, MA
                         Associate Professor Linda Balfour, MA
                         Associate Professor Lois Bearden, MA
                         Associate Professor Sandra Kerr, MA
                         Assistant Professor Audrone Mingela, MA
                         Instructor Kathy Jankoviak, MS
                         Adjunct Faculty

The topics listed for each of the following courses do not constitute a precise syllabus for that course. Each list is intended to describe, in a broad and general way, the main content of each math course. It is possible that a topic not listed may be added to a course, or a listed topic may be replaced with one more current.

CALCULATOR REQUIREMENTS:

MATH 113: A scientific calculator is required. (If continuing in mathematics, a TI-83 Plus is recommended.)

MATH 119, 128 through 151: TI-83 Plus is required.

MATH 122, 230 and 240: TI-83 Plus is recommended.

MATH 252: TI-86 is required.

No devices with computer algebra systems, such as the TI-89 or TI-92, are permitted on exams or other graded work in any math class. For more details you may wish to consult your instructor.

For appropriate sequence of math courses, consult with a member of the Math or Counseling Department, or refer to the Mathematics Course Sequence Chart.

MATH 045   **Basic Mathematics (4 - 0) 4 Cr. Hrs.**
The fundamental operations with whole numbers, fractions, decimals, percentages, exponents and square roots.
Prerequisite: None.

MATH 047   **Prealgebra (3 - 0) 3 Cr. Hrs.**
This course is intended for the student who is competent in arithmetic. Topics include an introduction to variables, signed numbers, and algebraic expressions; a review of the arithmetic operations on fractions, decimals and percents; solving equations and applications; ratio and proportions; and applications using simple geometry measurement formulas.
Prerequisite: A grade of 2.0 or better in MATH 045 or equivalent.

MATH 053   **Beginning Algebra (4 - 0) 4 Cr. Hrs.**
Real number system, fundamental operations with real numbers, graphing, linear equations, factoring polynomials, rational expressions, exponents, quadratic equations, applications, and introduction to function concept.
Prerequisite: A grade of 2.0 or better in MATH 047 or equivalent.

MATH 055 **Plane Geometry (3 - 0) 3 Cr. Hrs.**
Basic elements of geometry including deductive reasoning and formal proofs; elementary construction with straightedge and compass.
Prerequisite: A grade of 2.0 or better in MATH 053 or equivalent.

MATH 105 **Mathematics for Elementary Teachers 1 (4 - 0) 4 Cr. Hrs.**
This is the first of a two-course sequence designed for students who plan to enter elementary school teaching. The course covers problem solving, number theory, sets, functions, numeration, the real numbers and their properties and operations.
Prerequisite: A grade of 2.0 in MATH 053 or equivalent.

MATH 106 **Mathematics for Elementary Teachers 2 (4 - 0) 4 Cr. Hrs.**
This is the second of a two-course sequence designed for students who plan to enter elementary school teaching. The course covers geometry, measurement, statistics, and probability.
Prerequisite: A grade of 2.0 in MATH 105 or equivalent.

MATH 111 **Applications: Utility of Math (4 - 0) 4 Cr. Hrs.**
This course is intended for students who do not wish to pursue the study of mathematics by following the standard sequence of courses, but who need to develop some competency in mathematics for an Associate of Arts degree. This course includes the practical application of mathematics. Topics include geometry and measurement, managing money, interest, installment buying, credit cards, inflation, loans, sets, probability, statistics and graphing.
Prerequisite: A grade of 2.0 or better in Math 045 or equivalent.

MATH 113 **Intermediate Algebra for College Students (4 - 0) 4 Cr. Hrs.**
Review of algebraic operations, problem solving strategies, integer and rational exponents; complex numbers; solving equations; function concept; graphs and applications of linear, quadratic, exponential, and logarithmic functions; and systems of equations.
Prerequisite: Minimum grade of 2.0 in MATH 053 or equivalent. (Placement test available in LAC-MC220)

MATH 119 **Trigonometry (3 - 0) 3 Cr. Hrs.**
NOTE: Business and social science majors should take MATH 128 instead of MATH 119.
Trigonometric functions and their graphs, identities, equations, and inverse functions; solutions of right and oblique triangles.
Prerequisite: A grade of 2.0 or better in MATH 055 and MATH 113, or equivalent.

MATH 122 **Elementary Statistics (4 - 0) 4 Cr. Hrs.**
NOTE: The Math department recommends that business and social science majors take MATH 122 following MATH 135.
Introduction to statistics, statistical descriptions, frequency distributions, possibilities and probabilities, probability distributions, sampling and sampling distributions; testing hypotheses based on measurements, count data, and paired data, nonparametric tests.
Prerequisite: A grade of 2.0 or better in MATH 113 or equivalent.

MATH 128 **Precalculus (without Trigonometry) (4 - 0) 4 Cr. Hrs.**
NOTE: Math 128 is recommended for business and social science majors.
The function concept, polynomial, rational, exponential, and logarithmic functions, curve sketching, systems of linear equations and inequalities, graphical solutions and business applications.
Prerequisite: A grade of 2.0 or better in MATH 055 and MATH 113 or equivalent. The combination of MATH 119 and MATH 128 is not comparable to MATH 129.

MATH 129 **Precalculus (with Trigonometry) (5 - 0) 5 Cr. Hrs.**
NOTE: MATH 129 is recommended for engineering, science and math majors.
The function concept, polynomial, rational, exponential, logarithmic, rapid review of trigonometric and inverse trigonometric functions, solving equations and systems of equations; curve sketching, complex numbers, coordinate geometry, conic sections. Prevailing theme is applications and graphical solutions.
Prerequisite: A grade of 2.0 or better in MATH 113 and MATH 119 or equivalent.

MATH 135 **Finite Mathematics (4 - 0) 4 Cr. Hrs.**
NOTE: MATH 135 is oriented to business and social science majors.
Matrices and their applications to linear equations and linear programming, the simplex method, elementary probability, mathematics of finance.
Prerequisite: A grade of 2.0 or better in MATH 128 or equivalent.

MATH 145 **Calculus for Business and Social Science (4 - 0) 4 Cr. Hrs.**
Differentiation of algebraic, exponential and logarithmic functions, curve sketching, optimization, constrained optimization, integration, introduction to functions of several variables, and applications.
Prerequisite: A grade of 2.0 or better in MATH 128 or equivalent.

MATH 150 **Calculus with Analytic Geometry 1 (5 - 0) 5 Cr. Hrs.**
NOTE: Oriented to engineering, science, and mathematics majors. (A course oriented to business and social science majors, and others who desire a one-semester survey of calculus, is provided by MATH 145 as an alternative to MATH 150.)
Limits and continuity, derivatives and integrals of algebraic and some trigonometric functions, curve sketching and applications.
Prerequisite: A grade of 2.0 or better in MATH 129 or equivalent.

MATH 151 **Calculus with Analytic Geometry 2 (5 - 0) 5 Cr. Hrs.**
NOTE: MATH 151 may be taken concurrently with MATH 230.
Derivatives and integrals of transcendental functions, techniques of integration, indeterminate forms, improper integrals, infinite series, numerical methods, conics, polar coordinates, and applications.
Prerequisite: A grade of 2.0 or better in MATH 150 or equivalent.

MATH 230   Linear Algebra (4 - 0) 4 Cr. Hrs.
Systems of linear equations, matrices, determinants, Euclidean vector spaces, general vector spaces, inner product spaces, eigenvalues and eigenvectors, diagonalization, linear transformations, and applications.
Prerequisite: A grade of 2.0 or better in MATH 150. MATH 230 may be taken concurrently with MATH 151.

MATH 240   Calculus with Analytic Geometry 3 (5 - 0) 5 Cr. Hrs.
Vectors in the plane, vectors in three-space, solid analytic geometry, partial derivatives, line integration, multiple integrals and applications.
Prerequisite: A grade of 2.0 or better in MATH 151 or equivalent.

MATH 252   Differential Equations (5 - 0) 5 Cr. Hrs.
First order differential equations, second order linear equations, series solutions of second order linear equations, higher order linear equations, the Laplace transform, systems of first order linear equations, numerical methods and qualitative theory of differential equations.
Prerequisite: A grade of 2.0 or better in MATH 240 or equivalent. While not a prerequisite, the Math Department recommends taking MATH 230 before electing MATH 252.

MEDICAL ASSISTING

Associate Dean: Robert F. Pearce, MPA
Coordinator: Professor Patricia Rubio, MSA
Instructor: Adjunct Faculty

MA 110   Phlebotomy (4 - 0) 4 Cr. Hrs.
This course teaches basic technical skills necessary for a phlebotomist to draw blood in various health care settings such as hospital labs, doctors' offices and clinics. Proper procedures are stressed for the safe collection and handling of clinical specimens obtained by venipuncture or capillary puncture from adults, children and infants. This course also defines the role of the phlebotomist in the health care setting.
Prerequisite: NONE

MA 134   Medical Insurance Coding (3 - 0) 3 Cr. Hrs.
Introduces the student to insurance coding guidelines developed for use with the International Classification of Diseases, (ICD-9-CM), Current Procedural Terminology, (CPT-4) and Health Care Financing Administration Common Procedure Coding System, (HCPCS). The course is designed to develop coding skills to record the services and procedures that are provided for the patient. The importance of accurate coding will be discussed as it is an essential part of reimbursement.
Corequisite: HIT 104.

MA 140   Medical Office Procedures (3 - 0) 3 Cr. Hrs.
This course introduces the student to the types of medical office practice, telephone procedures, specifics of appointment making, filing, office organization, insurance (government and private), public relations, mailing, travel arrangements and job applications of relevance to the medical profession.
Prerequisite: None. Typing proficiency is required.

MA 155   Medical Insurance Billing (3 - 0) 3 Cr. Hrs.
Introduces student to various types of medical insurance; Blue Cross/Blue Shield, Medicare, Medicaid, Champus and Worker's Compensation and other third-party payers; teaches students to perform the tasks necessary to process claim forms for each type of medical insurance.
Prerequisite: MA 134 and HIT 104.

MA 174   Medical Laboratory Techniques (4 - 0) 4 Cr. Hrs.
This course will provide the opportunity for the student to practice the techniques for performing laboratory procedures. The student will practice preparing the patient for tests, collecting samples, completing the tests, and reporting the results to the physician. The student will practice laboratory procedures such as urinalysis, hematology, bacteriology, chemistries, blood typing, and patient preps.
Prerequisite: BIOL 105, HIT 104, MA 140, and MA 110.

MA 180   Medical Office Clinical Procedures (3 - 3) 4 Cr. Hrs.
Introduces the student to examination techniques, injections, minor surgery, medications and pharmacology, sterilization procedures and autoclave.
Prerequisite: BIOL 105, HIT 104, MA 134, MA 140 and MATH 045.

MA 195   Office Practicum (1 - 15) 3 Cr. Hrs.
The student will participate in an externship under the direction of a physician and medical assistant. The externship is structured to provide experiences in performing administrative and clinical procedures in a health care setting. The student will interact with other health care professionals in facilities such as the physician's office, ambulatory care center, clinic and hospital.
Prerequisite: Successful completion of all academic and medical assisting courses.

MEDICAL TRANSCRIPTION

Associate Dean: Robert F. Pearce, MPA
Coordinator/Instructor: Professor Patricia Rubio, MSA
Instructors: Associate Professor Jody Scheller, MS
                           Adjunct Faculty

MT 106   **Principles of Medical Transcription (2 - 0) 2 Cr. Hrs.**
An introduction to the role of the medical transcriptionist in the health care setting. The student will acquire knowledge of the types of forms and content used and required in medical transcription. The content of the course will also include the legalities and standards that apply to medical transcription.
Prerequisite: Typing skill of 50 WPM or completion of OIS 100 or OIS 102 (OIS 100 or OIS 102 may be concurrent).

MT 108   **Physician Office Transcription (2 - 0) 2 Cr. Hrs.**
Introduces the student to transcription practices utilized in the physician/medical office practice/ setting. The course is designed to develop transcription skills necessary to transcribe dictation regarding the services and procedures that are provided for the patient. The importance of accurate transcription will be an essential aspect for this course. The student will gain experience by transcribing office, clinic, and hospital dictation from many medical specialties.
Prerequisite: HIT 104, CIS 105, and BIOL 105.

MT 157   **Medical Transcription Seminar (1 - 0) 1 Cr. Hr.**
This course will provide an overview of the law as it is applied to health care professionals and patients and will cover a description of a legally safe working environment. The course will describe management techniques that may be employed by the entry-level and the experienced medical transcriptionist.
Prerequisite: HIT 104 , MT 106, MT 108 and BIOL 105.

MT 158   **Medical Transcription 2 (3 - 4) 5 Cr. Hrs.**
This course will provide medical transcription skill building opportunities to strengthen and expand medical terminology. The course will emphasize the technique of developing skill with medical transcription documents for each anatomic system. The student will use the English language and communication skills during transcription practice.
Prerequisite: HIT 104, MT 106, MT 108 and BIOL 105.

MT 159   **Medical Transcription 3 (3 - 4) 5 Cr. Hrs.**
This course will describe and illustrate the various reports that the medical transcriptionist will be expected to transcribe. The student will use production typewriting skills in transcribing all of the commonly used medical reports. The student will be expected to format, edit and transcribe medical reports that require an advanced level of medical terminology.
Prerequisite: MT 157.

METALLURGY AND MATERIALS SCIENCE

Associate Dean: Bruce Sweet, MA
Instructors: Associate Professor Charles Gibbons, CSIT
                  Adjunct Faculty

MET 102   **Introduction to Materials Science (2 - 2) 3 Cr. Hrs.**
A basic introduction to Materials Science using the Principles of Science to study the nature of metallic and nonmetallic materials used in most industries. Topics include atomic structure, elements, states of matter, bonding, crystallization, mechanical, chemical, and physical properties of metallic, polymeric, ceramic and composite materials.
Prerequisite: None.

MET 114   **Advanced Materials and Applications (3 - 0) 3 Cr. Hrs.**
A course in materials applications covering ferrous and nonferrous alloys, powdered metals, ceramics and glass, rubber and polymers. Each are examined with respect to their advantages and disadvantages, methods of fabrication and joining and specific industrial applications, both current and future.
Prerequisite: MET 102.

MET 120   **Hazardous Materials Management (2 - 0) 2 Cr. Hrs.**
This course provides instruction in the nature of hazardous materials and their interaction with the health and safety of individuals as they relate to industrial metallurgical practices. Topics include proper handling of hazardous substances, chemical, physical and biological influences on health, human response to toxins, target organ effects and regulatory controls used in hazard prevention in the laboratory and materials process workplace.
Prerequisite: None.

MET 125 **Cooperative Metallurgical Experience 1**
(0 - 40) 4 Cr. Hrs.
Industrial or laboratory experience under the supervision of the College Coordinator, the cooperating organization and the Department of Metallurgy and Materials Science. A written report and performance appraisal will be required.
Prerequisite: **MET 102 and MET 114 or consent of department.**

MET 152 **Structures and Properties Laboratory**
(2 - 2) 3 Cr. Hrs.
An experience orientated course with emphasis on lab techniques and equipment required for the macro and microstructural evaluation of metals produced by industrial processes. Topics include optical systems, sectioning and polishing, mounting techniques, etching, specialized measurement technology and photo-microscopy.
Prerequisite: **MET 114 (may be concurrent).**

MET 160 **Composite Materials (2 - 2) 3 Cr. Hrs.**
An introduction to plastic and composite materials used in industry. Emphasis is placed on chemical, physical and mechanical properties of thermoplastic, thermosetting plastics and matrix reinforced composites. Topics include the nature of polymeric materials, reinforcements, coatings and adhesives. Industrial forming techniques and applications are also examined.
Prerequisite: **None.**

MET 211 **Physical Metallurgy Structures (3 - 1) 3 Cr. Hrs.**
An interpretative study incorporating phase equilibria, diffusion, nucleation and growth, solid state transformation, strengthening mechanisms; effects of alloying, deformation, precipitation, and recrystallization and grain growth on microstructure. Microstructural interpretation of ferrous and nonferrous metal is emphasized.
Prerequisite: **MET 114.**

MET 215 **Mechanical Properties of Metals (3 - 1) 3 Cr. Hrs.**
Basic elastic and plastic behavior, deformation, dislocations; brittle, ductile and transitional fractures; fatigue, tensile, hardness, impact and stress testing. A review of industry methods and testing standards. Mechanical forming processes used in the industry including rolling, forging, drawing and other forming techniques will be introduced.
Prerequisite: **MET 114.**

MET 217 **Computer Applications for Materials Science**
(2 - 2) 3 Cr. Hrs.
An experience-oriented course in data acquisition, specifically designed for students interested in materials laboratory computer applications. Topics include an introduction to materials laboratory computer systems, data acquisition, test system integration, hardware-software options, electronic fundamentals, international data bases, image processing, graphics, computerized processing and control, and the fundamentals of basic programming in materials science.
Prerequisite: **MET 114, and CIS 105 which can be taken concurrently or consent of department.**

MET 248 **Electron Microscopy and Image Analysis**
(2 - 2) 4 Cr. Hrs.
This course introduces the fundamentals of Scanning Electron Microscopy (SEM) and quantitative Image Analysis (IA) currently used in support of effective materials, characterization, and evaluations. Topics include microscopy systems and components, applications in fractrography and quantifiable measurements used in process and surface failure analysis, materials characterization, and product development studies. Recommended for students specifically interested in specialized laboratory practices.
Prerequisite: **MET 152, MET 211, and MET 217 or consent of department.**

MET 271 **Corrosion and Corrosion Analysis (2 - 2) 4 Cr. Hrs.**
Corrosive processes, including electrochemical reactions in metals and the chemical degradation of polymeric materials are emphasized. Topics include basic electrochemical reactions, nature of corrosive environments, types of corrosion, laboratory corrosion testing, data analysis, interaction with mechanical behavior and fabricated dissimilar materials.
Prerequisite: **MET 102, MET 114 or consent of department.**

MET 280 **Special Problems in Materials Science**
(3 - 2) 4 Cr. Hrs.
Students having adequate backgrounds in this discipline and/or catalog specified prerequisites are encouraged to select a topic associated with metallic or nonmetallic materials, related processing, new developments or analytical techniques, and conduct investigations to identify problems, analyze data and make decisions. The results of such evaluations will be presented and reported in a systematic, critical scientific format. Scientific methods including literature search, laboratory evaluations and experimentation are encouraged. Likewise, faculty directed study will be provided.
Prerequisite: **MET 215 or MET 211 or consent of instructor.**

MUSIC

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor Donald Morelock, MM
                   Instructor Barton Polot, PhD
                   Adjunct Faculty

The Music curriculum is designed to provide opportunities for professional development as well as an outlet for previously acquired performance skills. Courses in Music Theory and History provide a stylistic framework from which students can gain an understanding and appreciation of the art form. Applied Music courses give students direct contact with artists/teachers who help them achieve technical competence on their instruments or with their voices. A variety of musical ensembles afford regular performance opportunities. Performance ensembles are open to all students with appropriate musical background. An elaborate electronic Musical Instrument Digital Interface (MIDI) lab and a digital keyboard lab assist in the teaching of computer music applications and piano classes. A Recording Technology Associate Degree, Recording Technology Certificate, Piano Certificate Program, an Intermediate Music Certificate and a Music Foundations Certificate are also offered within the curriculum and can be completed in two years or less. Applied Music courses may have added fees.

MUSIC 102   Music on the PC (3 - 0) 3 Cr. Hrs.
This course will offer a unique approach to the understanding and appreciation of music through projects that involve making music with the assistance of a computer. The course may be taken by students who have little or no experience with a musical instrument or by the advanced musician as well.
Prerequisite: None.

MUSIC 104   Basic Materials in Music Theory (3 - 0) 3 Cr. Hrs.
A step-by-step approach to the fundamentals of music which includes notation, scales, intervals and triads. Not recommended for music majors with music theory background.
Prerequisite: None.

MUSIC 105   Music Appreciation (3 - 0) 3 Cr. Hrs.
An introduction to music, designed especially to increase understanding and enjoyment of music through intelligent listening. No technical knowledge required. Outside listening and attendance at live performances are required.
Prerequisite: None.

MUSIC 107   Music for Elementary Teachers (3 - 2) 4 Cr. Hrs.
Provides functional knowledge and skills to handle music requirements in the elementary grades. Recommended for elementary education majors. Required off-campus classroom visitations.
Prerequisite: None.

MUSIC 109   The Architecture of Music (3 - 0) 3 Cr. Hrs.
This course serves as an introduction to the major forms of Western music. The course will cover the major musical styles from the Baroque through the 20th century. Representative masterpieces from each period will be studied. The course serves to facilitate the transition from the introductory music appreciation course to the music history sequence through the development of critical listening and analytical skills.
Prerequisite: None.

Music Theory Classes	Applied and/or Performing Music Classes			
104	113	132	213	232
137	117	133	217	233
138	118	134	218	234
153	119	135	220	235
154	124	136	224	236
228	127	141	227	241
250	131	142	231	242
252				

MUSIC 113   Vocal Jazz Ensemble (2 - 1) 2 Cr. Hrs.
Principles and performance of jazz singing and musicianship. Jazz compositions of all styles and periods. Regular rehearsals and concerts. Vocal Jazz Ensemble is an elective for all students, regardless of major field.
Prerequisite: Audition.

MUSIC 114   Voice Class 1 Elements—Beginners (2 - 0) 2 Cr. Hrs.
A voice class for young or beginning singers, or for singers wishing to refresh their focus on the elements upon which the cultivation of the singing voice is built.
Prerequisite: None.

MUSIC 116   Voice Class 2 Cultivation—Intermediate (2 - 0) 2 Cr. Hrs.
A voice class for singers of intermediate level or for singers wishing to refresh their understanding of the study and cultivation of the singing voice.
Prerequisite: Consent of instructor.

MUSIC 117   Choir (2 - 1) 2 Cr. Hrs. each
MUSIC 118
Principles of choral singing and musicianship. Music of all styles and periods. Choir is an elective for all students, regardless of major field.
Prerequisite: Audition.

MUSIC 119   Vocal Jazz Ensemble (2 - 1) 2 Cr. Hrs.
Principles and performance of jazz singing and musicianship. Jazz compositions of all styles and periods. Regular rehearsals and concerts. Vocal Jazz Ensemble is an elective for all students, regardless of major field.
Prerequisite: Audition.

MUSIC 121   Class Piano 1 (2 - 0) 2 Cr. Hrs.
Group piano instruction designed for students with little or no formal piano training. Instruction is given on both electronic and acoustic instruments.
Corequisite: MUSIC 153.

MUSIC 122   Class Piano 2 (2 - 0) 2 Cr. Hrs.
Group piano instruction designed for students with little or no formal piano training. Instruction is given on both electronic and acoustic instruments. A continuation of MUSIC 121.
Prerequisite: Completion of MUSIC 121 or equivalent.

MUSIC 123   Keyboard Skills for Recording Engineers (1 - 0) 1 Cr. Hr.
Students will apply knowledge gained in MUSIC 121 to use with electronic keyboard instruments used in the modern recording studio. These skills will be applied to individual projects in the laboratory.
Prerequisite: MUSIC 121.

MUSIC 124   Chamber Singers (1 - 1) 1 Cr. Hr. each
MUSIC 127
A select ensemble that performs madrigals and other chamber music for events on and off campus. Open to all students regardless of major.
Prerequisite: Audition.

MUSIC 130   Ear Training for Recording Engineers (2 - 0) 2 Cr. Hrs.
Listening skills particular to the recording engineer are developed through demonstration and ear training exercises. These skills include hearing and discriminating frequencies, levels, processing, phase, distortion, and equalization. Application of these skills to different styles of music is also included.
Prerequisite: None.

MUSIC 131   Applied Music—Piano (1 - 1) 2 Cr. Hrs.
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: None.

MUSIC 132   Applied Music—Piano (1 - 1) 2 Cr. Hrs.
Private instruction in piano: six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: MUSIC 131.

MUSIC 133   Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: None.

MUSIC 134   Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 133.

MUSIC 135   Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: None.

MUSIC 136   Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 135.

MUSIC 137   Sight Singing and Ear Training 1 (2 - 0) 2 Cr. Hrs.
Sight singing—melodies outlining the intervals of I and V chords of first and second inversion and non-harmonic tones. Simple rhythmic, melodic, and harmonic dictations.
Corequisite: None.

MUSIC 138   Sight Singing and Ear Training 2 (2 - 0) 2 Cr. Hrs.
Sight singing—melodies outlining intervals of all triads and dominant seventh chords. Harmonic, melodic, rhythmic dictation; altered non-harmonic tones, secondary dominants, modulation to closely related keys. Borrowed and altered harmonies.
Corequisite: None.

MUSIC 140   Jazz Lab Band—Improvisation 1 (2 - 1) 2 Cr. Hrs.
This group is geared to the less experienced jazz player, performing contemporary jazz music in the big band setting, but with some emphasis on improvisation. The lab band will perform at concerts during the school year. The class is open to all students, high school and college, and members of the community. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: None.

MUSIC 141   Wind Ensemble 1 (2 - 1) 2 Cr. Hrs.
The Schoolcraft Wind Ensemble is one of the most visible and sought-after organizations on campus. This community instrumental ensemble (wind, brass, and percussion only) is open to all student musicians. The Wind Ensemble performs approximately six concerts a year, and also performs at all college commencements. All musically talented students are invited to participate regardless of their field. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: None.

MUSIC 142   Jazz Band 1 (2 - 1) 2 Cr. Hrs.
This group is known throughout the Detroit Area for its performances at the Michigan Jazz Festival and the Ford Detroit International Jazz Festival at Hart Plaza. The band also has four concerts during the school year, including an invitational Community College Jazz Festival and performs at local malls in the community. All aspiring jazz performers ages 16 through 80+ are invited to participate. An audition at the beginning of each semester is required. May be used as elective credit in humanities.
Prerequisite: None.

MUSIC 143   Practice Teaching and Practicum in Piano Teaching 1 (1 - 1) 2 Cr. Hrs.
Piano teachers will learn to create and present effective lesson plans that include repertoire, theory concepts, rhythm, tone, touch, and hand position through the first semester of piano study.
Prerequisite: Consent of Director of Piano Department.

MUSIC 144 **Practice Teaching and Practicum in Piano Teaching 2 (1 - 1) 2 Cr. Hrs.**
Piano teachers will learn to create and present effective lesson plans that include repertoire, theory concepts, rhythm, tone, touch, and hand position through the first semester of piano study.
Prerequisite: **Successful completion of MUSIC 143.**

MUSIC 149 **Popular Music Culture in America (3 - 0) 3 Cr. Hrs.**
This course serves as an introduction to some of the great works of popular music in the United States, from the songs of colonial America to the present. The course will cover the major periods/styles in popular American music history, including but not limited to music of the westward movement, ragtime and blues, the roots and growth of jazz, country music, folk music, music of Broadway, and Tin Pan Alley, the roots and development of rock music and late 20th century developments in popular music, as well as historical, political and sociological background of the United States as pertinent to music history. A background in music is not required.
Prerequisite: **None.**

MUSIC 153 **Music Theory (3 - 0) 3 Cr. Hrs.**
Harmonic progression; chords of 1st and 2nd inversion. Phrase structure and cadences. Technique of harmonization; non-harmonic tones.
Corequisite: **MUSIC 137.**

MUSIC 154 **Music Theory (3 - 0) 3 Cr. Hrs.**
Introduction to 7th chords, altered non-harmonic tones, secondary dominants, modulation to closely related keys, borrowed and altered chords; original composition.
Prerequisite: **MUSIC 153.**
Corequisite: **MUSIC 138.**

MUSIC 155 **Music of Broadway (3 - 0) 3 Cr. Hrs.**
This course will look at the history and development of the Broadway musical, from its roots in early American musical entertainment and classical European opera, its heyday in the post-modern era, and its evolution in the late 20th century as a result of the music publishing and recording industry. In addition, the course will take an in-depth look at the music and structure of several Broadway masterpieces and how they affected and were affected by American popular culture.
Prerequisite: **None.**

MUSIC 164 **Music History 1 (3 - 0) 3 Cr. Hrs.**
Detailed survey of literature, history and musical materials of the Baroque and Classical eras.
Prerequisite: **None.**

MUSIC 165 **Music History 2 (3 - 0) 3 Cr. Hrs.**
Detailed survey of history and literature of music of the Romantic and 20th century eras.
Prerequisite: **None.**

MUSIC 171 **Music Technology 1 (3 - 0) 3 Cr. Hrs.**
Introduction to the fundamentals of MIDI/computer hardware and software. This course will examine the basic functions of the keyboard controller, synthesizer, sound modules, line mixer, effects unit, and computer interface through hands-on experience and experimentation. The course will also introduce the student to current software applications that emphasize music performance and composition with the assistance of MIDI hardware and a microcomputer.
Corequisite: **MUSIC 104, MUSIC 121 or equivalent.**

MUSIC 172 **Electronic Music—Intermediate MIDI/Sampling and Sound Editing (3 - 0) 3 Cr. Hrs.**
This course will deal with advanced functions of MIDI sequencing and notation. It will also introduce the student to sound sampling and editing with the assistance of MIDI hardware and a microcomputer.
Prerequisite: **MUSIC 171.**

MUSIC 173 **Basic Studio Techniques 1 (3 - 0) 3 Cr. Hrs.**
Fundamentals of the recording arts, including basic audio and acoustical theory, recording consoles, tape recorders, microphone design and technique, speakers, and signal processing.
Prerequisite: **None.**

MUSIC 174 **Basic Studio Techniques 2 (3 - 0) 3 Cr. Hrs.**
Multitrack studio production techniques are developed through class discussion, demonstration, and project assignments. Theory of digital audio technology and its integration into music production is emphasized.
Prerequisite: **MUSIC 173.**

MUSIC 201 **Keyboard Skills for Piano Teachers 1 (2 - 0) 2 Cr. Hrs.**
This course is designed to give piano teachers the necessary keyboard skills for teaching beginning through early intermediate level students. It will cover technical exercises, harmonization, transposition, and sight-reading material using the standards of the Michigan Music Teacher's Association, the National Piano Guild, and other recognized testing organizations.
Prerequisite: **Consent of Director of Piano Department.**

MUSIC 202 **Keyboard Skills for Piano Teachers 2 (2 - 0) 2 Cr. Hrs.**
This course is designed to give piano teachers the necessary keyboard skills for teaching intermediate through late intermediate level students. It will cover technical exercises, harmonization, transposition, and sight-reading material using the standards of the Michigan Music Teacher's Association, the National Piano Guild, and other recognized testing organizations.
Prerequisite: **Successful completion of MUSIC 201.**

MUSIC 213 **Vocal Jazz Ensemble (2 - 1) 2 Cr. Hrs.**
Principles and performance of jazz singing and musicianship. Jazz compositions of all styles and periods. Regular rehearsals and concerts. Vocal Jazz Ensemble is an elective for all students, regardless of major field.
Prerequisite: **Audition.**

MUSIC 214 **Voice Class 3 Performance—Advanced (2 - 0) 2 Cr. Hr.**
A voice class for singers preparing for a career in singing, or for advanced singers wishing to learn the art of performance before an audience.
Prerequisite: **Consent of Instructor.**

MUSIC 216 **Voice Class 4 Performance—Advanced (2 - 0) 2 Cr. Hrs.**
A voice class for singers preparing for a career in singing, or for advanced singers wishing to learn the art of performance before an audience.
Prerequisite: **Consent of Instructor.**

MUSIC 217 **Choir (2 - 1) 2 Cr. Hrs. each**
MUSIC 218 Principles of choral singing and musicianship. Music of all styles and periods. Choir is an elective for all students, regardless of major field.
Prerequisite: **Audition.**

MUSIC 219 **Vocal Jazz Ensemble (2 - 1) 2 Cr. Hrs.**
Principles and performance of jazz singing and musicianship. Jazz compositions of all styles and periods. Regular rehearsals and concerts. Vocal Jazz Ensemble is an elective for all students, regardless of major field.
Prerequisite: **Audition**

MUSIC 224 **Chamber Singers (1 - 1) 1 Cr. Hr. each**
MUSIC 227 A select ensemble that performs madrigals and other chamber music for events on and off campus. Open to all students regardless of major field.
Prerequisite: **Audition.**

MUSIC 228 Sight Singing and Ear Training 3 (0 - 1) 1 Cr. Hr.
Sight singing—melodies in all clefs outlining intervals of all triads, ninths, elevenths, thirteenths, melodic chromaticism. Harmonic, melodic, rhythmic dictation-chromatic mediants, modulation to foreign keys.
Prerequisite: **MUSIC 138.**
Corequisite: **MUSIC 250.**

MUSIC 231 Applied Music—Piano (1 - 1) 2 Cr. Hrs.
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examination held at the end of each semester.
Prerequisite: **MUSIC 132.**

MUSIC 232 Applied Music—Piano (1 - 1) 2 Cr. Hrs.
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examination held at the end of each semester. For music and non-music majors.
Prerequisite: **MUSIC 231.**

MUSIC 233 Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice, six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: **MUSIC 134.**

MUSIC 234 Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice, six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: **MUSIC 233.**

MUSIC 235 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: **MUSIC 136.**

MUSIC 236 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra, including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: **MUSIC 235.**

MUSIC 240 Jazz Lab Band—Improvisation 2 (2 - 1) 2 Cr. Hrs.
This group is geared to the less experienced jazz player, performing contemporary jazz music in the big band setting, but with some emphasis on improvisation. The lab band will perform at concerts during the school year. The class is open to all students, high school and college, and members of the community. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: **None.**

MUSIC 241 Wind Ensemble 2 (2 - 1) 2 Cr. Hrs.
The Schoolcraft Wind Ensemble is one of the most visible and sought-after organizations on campus. This community instrumental ensemble (wind, brass, and percussion only) is open to all student musicians. The Wind Ensemble performs approximately six concerts a year, and also performs at all college commencements. All musically talented students are invited to participate regardless of their field. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: **None.**

MUSIC 242 Jazz Band 2 (2 - 1) 2 Cr. Hrs.
This group is know throughout the Detroit area for its performances at the Michigan Jazz Festival and the Ford Detroit International Jazz Festival at Hart Plaza. The band also has four concerts during the school year, including an invitational Community College Jazz Festival and performs at local malls in the community. All aspiring jazz performers ages 16 through 80+ are invited to participate. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: **None.**

MUSIC 243 Practice Teaching and Practicum in Piano Teaching 3 (1 - 1) 2 Cr. Hrs.
Piano teachers will learn to create and present effective lesson plans that include repertoire, theory concepts, rhythm, tone, touch, and hand position through the third semester of piano study.
Prerequisite: **Successful completion of MUSIC 144.**

MUSIC 244 Practice Teaching and Practicum in Piano Teaching 4 (1 - 1) 2 Cr. Hrs.
Piano teachers will learn to create and present effective lesson plans that include repertoire, theory concepts, rhythm, tone, touch, and hand position through the fourth semester of piano study.
Prerequisite: **Successful completion of MUSIC 243.**

MUSIC 245 Wind Ensemble 3 (2 - 1) 2 Cr. Hrs.
The Schoolcraft Wind Ensemble is one of the most visible and sought-after organizations on campus. This community instrumental ensemble (wind, brass, and percussion only) is open to all student musicians. The Wind Ensemble performs approximately six concerts a year, and also performs at all college commencements. All musically talented students are invited to participate regardless of their field. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: **None.**

MUSIC 246 **Wind Ensemble 4 (2 - 1) 2 Cr. Hrs.**
The Schoolcraft Wind Ensemble is one of the most visible and sought-after organizations on campus. This community instrumental ensemble (wind, brass, and percussion only) is open to all student musicians. The Wind Ensemble performs approximately six concerts a year, and also performs at all college commencements. All musically talented students are invited to participate regardless of their field. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: None.

MUSIC 247 **Piano Teaching Techniques and Materials 2 (3 - 0) 3 Cr. Hrs.**
Designed for teachers enrolled in the Piano Teaching Program.
Prerequisite: Consent of Director of Piano Department.

MUSIC 248 **Jazz Band 3 (2 - 1) 2 Cr. Hrs.**
This group is known throughout the Detroit Area for its performances at the Michigan Jazz Festival and the Ford Detroit International Jazz Festival at Hart Plaza. The band also has four concerts during the school year, including an invitational Community College Jazz Festival and performs at local malls in the community. All aspiring jazz performers ages 16 through 80+ are invited to participate. An audition at the beginning of each semester is required. May be used as elective credit in humanities.
Prerequisite: None.

MUSIC 249 **Jazz Band 4 (2 - 1) 2 Cr. Hrs.**
This group is known throughout the Detroit Area for its performances at the Michigan Jazz Festival and the Ford Detroit International Jazz Festival at Hart Plaza. The band also has four concerts during the school year, including an invitational Community College Jazz Festival and performs at local malls in the community. All aspiring jazz performers ages 16 through 80+ are invited to participate. An audition at the beginning of each semester is required. May be used as elective credit in humanities.
Prerequisite: None.

MUSIC 250 **Music Theory (3 - 0) 3 Cr. Hrs.**
Chromatic mediants modulation to foreign keys. Ninth, 11th, and 13th chords. Analysis; original compositions in basic homophonic forms and traditional harmony.
Prerequisite: MUSIC 154.

MUSIC 252 **Music Theory (4 - 0) 4 Cr. Hrs.**
Eighteenth century counterpoint—study, analysis and composition of two-voice invention and three-voice fugue; 20th century forms and harmonic tendencies—study, analysis and composition of quartal harmony piece, and work using the 12-tone system.
Prerequisite: MUSIC 250.

MUSIC 257 **Piano Teaching Techniques and Materials 2 (3 - 0) 3 Cr. Hrs.**
Designed for teachers enrolled in the Piano Teaching Program.
Prerequisite: Consent of Director of Piano Department.

MUSIC 258 **Jazz Lab Band—Improvisation 3 (2 - 1) 2 Cr. Hrs.**
This group is geared to the less experienced jazz player, performing contemporary jazz music in the big band setting, but with some emphasis on improvisation. The Lab Band will perform at concerts during the school year. The class is open to all students, high school and college, and members of the community. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: None.

MUSIC 259 **Jazz Lab Band—Improvisation 4 (2 - 1) 2 Cr. Hrs.**
This group is geared to the less experienced jazz player, performing contemporary jazz music in the big band setting, but with some emphasis on improvisation. The Lab Band will perform at concerts during the school year. The class is open to all students, high school and college, and members of the community. An audition at the beginning of each semester is required. May be used as an elective credit in humanities.
Prerequisite: None.

MUSIC 273 **Advanced Studio Techniques 1 (3 - 0) 3 Cr. Hrs.**
A comprehensive examination of the principles and applications of digital audio in today's recording and interactive media industries. Computer based recording and editing is emphasized along with musical instrument digital interface (MIDI) technology.
Prerequisite: MUSIC 130 and MUSIC 174.

MUSIC 274 **Advanced Studio Techniques 2 (3 - 0) 3 Cr. Hrs.**
A continuation of recording in the digital domain. Areas of focus will include data storage, analog to digital conversion, editing, time code, and synchronization.
Corequisite: MUSIC 273.

MUSIC 282 **Applied Music—Piano (1 - 1) 2 Cr. Hrs.**
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: MUSIC 232.

MUSIC 283 **Applied Music—Piano (1 - 1) 2 Cr. Hrs.**
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: MUSIC 282.

MUSIC 284 **Applied Music—Piano (1 - 1) 2 Cr. Hrs.**
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: MUSIC 283.

MUSIC 285 **Applied Music—Piano (1 - 1) 2 Cr. Hrs.**
Private instruction in piano; six hours minimum weekly practice required; one private lesson and one studio class each week; performance examinations held at the end of each semester. For music and non-music majors.
Prerequisite: MUSIC 283

MUSIC 286 **Applied Music—Voice (1 - 1) 2 Cr. Hrs.**
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 234.

MUSIC 287 **Applied Music—Voice (1 - 1) 2 Cr. Hrs.**
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 286.

MUSIC 288 Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 287.

MUSIC 289 Applied Music—Voice (1 - 1) 2 Cr. Hrs.
Private instruction in voice; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 288.

MUSIC 290 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra, including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 236.

MUSIC 291 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra, including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 290.

MUSIC 292 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra, including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 291.

MUSIC 293 Applied Music—Instrumental (1 - 1) 2 Cr. Hrs.
Private instruction in all instruments of the band and orchestra, including classical guitar; six hours minimum weekly practice required; one private lesson each week plus weekly symposium; performance examinations held at the end of each semester. Performance opportunities at weekly symposium. For music and non-music majors.
Prerequisite: MUSIC 292.

MUSIC 298 Special Music Projects (2 - 0) 2 Cr. Hrs. each
MUSIC 299
An opportunity for the talented student to explore individually, in depth, under the direction of a faculty member, a performance, composition, or research related project. This course provides an opportunity to present traditional musical events such as a recital or a concert or to learn a new technology.
Prerequisite: Dean's list status (G.P.A. 3.5). Successful completion of MUSIC 154 and two semesters of applied voice or instrumental music. Student eligibility will be determined during interviews with the instructor.

NURSING

Assistant Dean: Monica Sullivan, MS
Coordinator/Assistant: Kathleen Fordyce, MSN
Instructors: Associate Professor Tamara Campbell, MSN
                          Associate Professor Sharon Griffin, MSN
                          Associate Professor Nancy Palmer, MSN
                          Associate Professor Elizabeth Quell, MSN
                          Associate Professor Deborah Vendittelli, MSN
                          Assistant Professor Marlynn Marroso, MSN
                          Assistant Professor Cheryl Mascolo, MSN
                          Instructor Cindy Sheppard, MSN
                          Adjunct Faculty

The contact hours listed are based on a full 15 week semester. Nursing courses are commonly offered in a shortened semester format (i.e. 4 weeks or 7 weeks vs. 15 weeks). The number of hours per week increases when courses are offered in a shortened semester format.

NURS 115 LPN to RN Transition Course (4 - 5) 3 Cr. Hrs.
This course is for Licensed Practical Nurses (LPNs) who are articulating to Registered Nurse (RN) status. Theory and supervised clinical/lab experience will be focused on the transition of the LPN to the RN role; the health-illness continuum; biopsychosocial development and human needs; nurse-client interaction; nursing process; clinical skills and patient education.
Prerequisite: High school Biology or BIOL 050, high school Chemistry or CHEM 051, high Sschool Algebra or MATH 051, BIOL 236 or BIOL 237 and 238 with a minimum grade of 2.5, PSYCH 201 and BIOL 243 with a minimum grade of 2.5 and consent of department.

NURS 116 Fundamentals of Nursing 1 (2 - 3) 3 Cr. Hrs.
This course is an introduction to the theory and practice of nursing. Students will utilize critical thinking, nursing process and psychological principles as a foundation for provision of care for clients experiencing alterations in functional health patterns. The student will apply knowledge of health, nutrition, cultural diversity and gerontological concepts in assessing and diagnosing adult client's needs in a community setting. Nursing skills related to asepsis, physical assessment, mobility, hygiene, safety and skin integrity will be performed in laboratory and/or clinical settings.
Prerequisite: High school biology or BIOL 050, high school chemistry or CHEM 051, high school algebra or MATH 053, and consent of department. BIOL 236 or BIOL 237 and BIOL 238 with minimum grade of 2.5. BIOL 115 is also recommended.

NURS 117 Fundamentals of Nursing 2 (1 - 6) 3 Cr. Hrs.
This course continues the study of critical thinking, nursing process and psychosocial principles for provision of care for clients experiencing alterations in functional health patterns. Nursing skills will build upon those previously learned. Skills will be practiced during supervised laboratory practice. The student will apply knowledge of health, nutrition, cultural diversity, gerentological concepts, and ethical-legal considerations to provide nursing care to adult clients in an extended care facility/community setting.
Prerequisite: NURS 116 with a grade of 2.0.

NURS 118 **Pharmacology 1 (1 - 0) 1 Cr. Hr.**
This course introduces pharmacological concepts and major drug classifications. Drug information includes mechanism of action, drug effects, therapeutic uses, side effects, adverse effects, toxicity, drug interactions, and dosages. The nursing process will be utilized as related to drug therapy
Prerequisite: **NURS 116 with a grade of 2.0.**

NURS 119 **Pharmacology 2 (1 - 0) 1 Cr. Hr.**
This course is a continuation of Pharmacology 1. Drug information includes mechanism of action, drug effects, therapeutic uses, side effects, adverse effects, toxicity, drug interactions, and dosages for selected drug classifications. The nursing process will be utilized as related to drug therapy.
Prerequisite: **NURS 117 and NURS 118 with a grade of 2.0.**

NURS 120 **Health Assessment and Adult Medical—Surgical Nursing 1 (2 - 6) 4 Cr. Hrs.**
This course involves the application of critical thinking, nursing process and psychosocial principles for provision of care for adult clients experiencing alterations in functional health patterns. Health and physical assessment techniques/processes will be utilized in community and acute care settings. Skills will be demonstrated during lab/clinical activities. Theoretical content will focus on care of clients with alterations affecting the respiratory, cardiovascular, musculoskeletal and endocrine systems.
Prerequisite: **NURS 117, NURS 118 with a grade of 2.0 and PSYCH 201.**

NURS 121 **Adult Medical—Surgical Nursing 2 (2 - 9) 5 Cr. Hrs.**
This course continues application of the nursing process for adult clients experiencing alterations in functional health patterns. The student will utilize critical thinking skills to apply knowledge of infection control; pathophysiology; pharmacology; diagnostic testing; nutrition; and psychosocial, spiritual, cultural, and ethical-legal principles in provision of nursing care for adult clients in a medical-surgical/community setting. Theoretical content will focus on care of clients with alterations affecting the renal, neurological, gastrointestinal, hepatic, biliary, male reproductive, and hematological systems.
Prerequisite: **NURS 120 with a grade of 2.0.**

NURS 122 **Psychiatric—Mental Health Nursing (2 - 6) 4 Cr. Hrs.**
This course applies critical thinking skills, nursing process, and psychosocial principles and interventions for mental health clients in acute and community settings.
Prerequisite: **NURS 121 with a grade of 2.0 and PSYCH 209.**

NURS 211 **Nursing Care of Women and Childbearing Families (2 - 9) 5 Cr. Hrs.**
This course introduces the student to the theory and practice of nursing care of women and childbearing families. Course content will include care of women and their families during the perinatal experience. Pathophysiology, diagnosis, treatment, preventative measures, and patient teaching strategies for select gynecological disorders will also be covered. Acute and community settings will be utilized for clinical experiences. The student will utilize critical thinking skills and incorporate previously learned content.
Prerequisite: **NURS 119 and NURS 122 with a grade of 2.0 and BIOL 243 with a minimum grade of 2.5.**

NURS 212 **Nursing Care of Children and Families (2 - 9) 5 Cr. Hrs.**
This course is designed to introduce the student to the theory and clinical practice of the acutely ill child and their family. The student will integrate previously learned nursing skills and theory in meeting the needs of acutely ill children and their families. There will also be a focus on the topic of growth and development and how the child's level of growth and development may impact their illness. The issue of growth and development will also be addressed in considering the needs of the well child and well child care. The student will be expected to demonstrate beginning skills in the management of multiple clients and their families. The student will also be expected to identify the role of the pediatric nurse when acting as an advocate for the child and/or family.
Prerequisite: **NURS 119 and NURS 122 with a grade of 2.0 and BIOL 243 with a minimum grade of 2.5.**

NURS 213 **Adult Medical—Surgical Nursing 3 (2 - 9) 5 Cr. Hrs.**
In this course students will utilize critical thinking, nursing process, psychosocial concepts and previously learned principles to provide care for adult clients experiencing complex alterations in functional health patterns. Advanced nursing skills will be utilized during clinical practice in acute care and community settings.
Prerequisite: **NURS 119 and NURS 122 with a grade of 2.0 and BIOL 243 with a minimum grade of 2.0.**

NURS 214 **Leadership and Nursing Management of Complex Clients (2 - 9) 5 Cr. Hrs.**
This course includes advanced medical-surgical nursing content and basic principles of leadership and management. Current legal-ethical issues are included, as well as issues related to nursing practice, standards of conduct, employment, and licensure requirements. Clinical practice provides opportunities for students to be integrated as part of the health care team while providing complex care to groups of clients.
Prerequisite: **NURS 211, NURS 212, and NURS 213 with a grade of 2.0 or higher.**

NURS 224 **Advanced Maternity Nursing for LPNs (1 - 3.75) 2.5 Cr. Hrs.**
This course is for Licensed Practical Nurses (LPN's) who are articulating to Registered Nurse (RN) status. This course will focus on common complications of prenatal, labor, delivery and postpartum patients as well as the care and appropriate nursing interventions for these patients and their infants.
Prerequisite: **NURS 115 with a grade of 2.0 and BIOL 243 with minimal grade of 2.5 required.**

NURS 226 **Advanced Nursing Care of Children for the LPN (1 - 3.75) 2.5 Cr. Hrs.**
This course is for Licensed Practical Nursing (LPNs) who are articulating to Registered Nurse (RN) status. Theory and supervised clinical experience will be aimed at expanding on previous theory and clinical experience in the nursing care of physically ill children of all ages and their families. Focus is also aimed at expanding on previous learning in meeting the needs of children and their families with normal growth and development concepts and adaptation of basic nursing skills in the pediatric setting.
Prerequisite: **NURS 115 with a minimum grade of 2.0 and BIOL 243 with minimal grade of 2.5.**

OCCUPATIONAL THERAPY ASSISTANT

Associate Dean: Robert F. Pearce, MPA
Coordinator/Instructor: Assistant Professor Cheryl Hawkins, MS
Instructors: Professor Nancy Vandewiele-Milligan, MS
                        Adjunct Faculty

OT 225   Clinical Experience Level 2B (2 - 36) 4 Cr. Hrs.
Provide practical experience under the supervision of qualified occupational therapists in the treatment of physical or psychosocial dysfunctioning clients.
Prerequisite: OT 204, OT 214 and consent of Instructor.

OFFICE INFORMATION SYSTEMS

Associate Dean: Bruce Sweet, MA
Instructor: Professor Patricia Partyka, MEd
                 Adjunct Faculty

OIS 100   Keyboarding 1 (2 - 0) 2 Cr. Hrs.
Students will learn how to keyboard using the touch control method. Development of proper keyboarding techniques while building basic accuracy and speed will be emphasized.
Prerequisite: None.

OIS 102   Keyboarding 2 (2 - 0) 2 Cr. Hrs.
This course continues the development of accuracy and speed in keyboarding. Emphasis will be in formatting various kinds of business correspondence, reports and tables.
Prerequisite: OIS 100 or equivalent.

OIS 105   Office Communications and Editing Skills (3 - 0) 3 Cr. Hrs.
This course is designed to review and incorporate the principles of grammar, punctuation, vocabulary, spelling, proofreading and editing of business documents.
Prerequisite: A skill level of ENG 050 or higher on the placement test. OIS 102 strongly recommended.

OIS 165   Microsoft Word for Windows (3 - 0) 3 Cr. Hrs.
This course is designed to provide practical hands-on experience with a current word processing software package for the microcomputer. Current software will be introduced and explained with emphasis in the area of word processing.
Prerequisite: OIS 102 or equivalent and OIS 105.

OIS 185   Business Presentation 1—Fundamental Concepts (3 - 0) 3 Cr. Hrs.
This course will introduce students to the fundamental concepts of office presentations. Students will produce elementary presentation documents such as overheads, audience handouts and speaker notes.
Prerequisite: OIS 165 or equivalent.

OIS 195   Time and Project Management (1 - 0) 1 Cr. Hr.
This course will aid students in gaining control of their office activities by showing them how to set goals around individual values and how to use a day planner.
Prerequisite: None.

OIS 255   Office Procedures (2 - 0) 2 Cr. Hrs.
This course is designed to enhance the students' knowledge about basic secretarial skills, office reprographics, public relations, records management, telephone techniques, mailing and shipping services, meeting and conference planning, travel arrangements and written communication.
Prerequisite: OIS 100 or equivalent.

OIS 260   Office Administration (3 - 0) 3 Cr. Hrs.
The student will learn the basic principles of administrative office management, the importance of managing human resources and administrative services, as well as controlling administrative operations.
Prerequisite: OIS 255 recommended.

OIS 265   Advanced Microsoft Word for Windows (3 - 0) 3 Cr. Hrs.
This course is a continuation of OIS 165 and will focus on the advanced functions of Microsoft Word such as templates, macros, Microsoft Draw, Word Art, merge, create and format tables, charts and columns, styles, outlines, and sort and select.
Prerequisite: OIS 165.

PHILOSOPHY

Assistant Dean: Dominic Aquila, PhD
Instructors: Associate Professor Robert Schaden, PhD
                 Adjunct Faculty

PHIL 243   Introduction to Philosophy (3 - 0) 3 Cr. Hrs.
Designed to familiarize the student with philosophy as a foundation for life, this course provides an introduction to questions in metaphysics, epistemology, ethics, social and political philosophy and the philosophy of religion. Classical and modern philosophers from Western, Asian, African and Native American traditions are presented. Critical thinking and an application of theory to contemporary issues are emphasized.
Prerequisite: None.

PHIL 247   Logic (4 - 0) 4 Cr. Hrs.
This course is designed to assist the student in distinguishing between good and bad reasoning. The course will address both informal logic, which focuses on arguments in every day language and how to evaluate them, and formal logic, which focuses on symbolic language and the formal methods for determining the validity of arguments. Common logical fallacies will be outlined and attention given to validity of arguments on contemporary issues in the public forum.
Prerequisite: None.

PHIL 277   Ethical Problems (3 - 0) 3 Cr. Hrs.
In this course the student will be introduced to a variety of ethical theories as discussed by classical and contemporary moralists. The course experience also provides for an application of these theories to modern moral questions through a process of critical thinking in discussion and in written assignment. Lecture, discussion and readings are employed to explore alternate solutions to present day moral problems.
Prerequisite: PHIL 243 or equivalent.

PHYSICAL EDUCATION, HEALTH & RECREATION

Assistant Dean: Monica Sullivan, MS
Instructors: Professor Jack Washka, MEd
    Professor Cecil Woodruff, PhD
    Adjunct Faculty

1. Students enrolled in certificate programs are encouraged, but not required, to complete one semester hour of a physical education activity credit. Students enrolled in a degree program are encouraged, but not required, to complete two semester hours of physical education activity credit. Physical education activity credits may be taken as elective credit towards an Associate Degree when applicable. See Graduation Requirements.

2. Activity classes are offered in various time blocks and have an added fee.

3. Students must register for ALL CLASSES in a given semester/session at registration time, regardless of a later starting date. See published class schedule.

PE 104   Physical Fitness and Conditioning (1 - 1) 2 Cr. Hrs.
Stresses vigorous body conditioning through progressive exercises, stretching, weight machine and free weight use. Cardiovascular fitness will be emphasized.
Prerequisite: None.

PE 106   Beginning Swimming (1 - 1) 2 Cr. Hrs.
For the student who has little or no skill and knowledge of swimming techniques. Fundamental instruction in the basic swimming strokes, including front crawl, back crawl, elementary back stroke, side stroke, elementary diving and water safety skills.
Prerequisite: None.

PE 115   Aerobic Dance Fitness (1 - 1) 2 Cr. Hrs.
Instruction will stress the development of an individual's aerobic capacity and cardiovascular endurance through aerobic dance and dance exercise.
Prerequisite: None.

PE 116   Intermediate Swimming (1 - 1) 2 Cr. Hrs.
For students who can swim two lengths of the pool, stay afloat for three minutes. Designed to increase skill and knowledge in the basic swimming strokes, including front crawl, back crawl, elementary back stroke, side stroke, breast stroke, diving and water safety skills. Some stroke variations and synchronized swimming techniques may be covered.
Prerequisite: None.

PE 118   Total Aqua Toning and Aerobic Fitness (1 - 1) 2 Cr. Hrs.
This course is designed to give the student the knowledge of proper and safe techniques for performing various exercises for strength, flexibility and cardiovascular fitness in water and on deck with regard to the following: water aerobics, water walking, muscle toning.
Prerequisite: Must be comfortable in deep water.

PE 121   First Aid and Personal Safety (2 - 0) 2 Cr. Hrs.
A lecture-demonstration approach on the prevention of accidents and care of victims with emergencies skill training in all procedures. Heimlich Maneuver and CPR will be discussed. American Red Cross responding to Emergencies Certificate and Adult, Child and Infant CPR cards may be earned. Satisfies requirements of Occupational Safety and Health Act (OSHA) or Michigan Occupational Safety and Health Act (MIOSHA).
Prerequisite: None.

PE 123   Healthful Living (3 - 0) 3 Cr. Hrs.
A course emphasizing and promoting the individual's responsibility for the acquiring of attitudes, habits, skills and ideas favorable to healthful living. Body systems and their functions are explored along with the interrelationships of health problems of the individual, the community and the environment.
Prerequisite: None.

PE 131   Golf (1 - 1) 2 Cr. Hrs.
This course is geared toward the beginner or advanced beginning golfer. Instruction will be given on fundamental skills, strategy, rules, practice techniques and equipment. An opportunity to play on a course with the instructor will be made available.
Prerequisite: None.

PE 132   Beginning Tennis (1 - 1) 2 Cr. Hrs.
Basic history of tennis, techniques, fundamental skills, strategy, rules and the opportunity to participate in a competitive situation.
Prerequisite: None.

PE 133   Intermediate Tennis (1 - 1) 2 Cr. Hrs.
Intermediate tennis class includes a review of tennis history, basic stroke technique and fundamental skills; the learning of intermediate level net play and court strategies; strokes, such as drop shot, lob, etc., will be presented. Singles, doubles and cut-throat tournaments will be carried out.
Prerequisite: None. Student should know how to keep score and be able to rally.

PE 141   Basketball (1 - 1) 2 Cr. Hrs.
This course covers the sports' history, basic techniques, fundamental skills, strategy, rules, and the opportunity to participate in a competitive situation.
Prerequisite: None.

PE 150   Racquet Sports (1 - 1) 2 Cr. Hrs.
A course designed to introduce the skills, terminology, rules and strategies for the racquet sports of racquetball, badminton, and tennis. There will be an opportunity for competition and skill refinement.
Prerequisite: None.

PE 153   **Volleyball (1 - 1) 2 Cr. Hrs.**
This course covers the sport's history, basic techniques, fundamental skills, strategy, rules, and the opportunity to participate in a competitive situation.
Prerequisite: None.

PE 157   **Paddleball/Racquetball (1 - 1) 2 Cr. Hrs.**
Instruction in rules, safety practices, etiquette, strategy and skills of paddleball and racquetball. Tournament play in singles, doubles and cut-throat is included.
Prerequisite: None.

PE 164   **Skin and Scuba Diving (1 - 2) 3 Cr. Hrs.**
Skills, techniques, safety factors, mechanics, first aid, marine life and environment, medicine and physics of diving and dive organization are stressed. Open water certification may be earned. Some advanced techniques are included. Equipment, rented or furnished, should not be obtained until after the first class meeting. Class size limited to 17 persons.
Prerequisite: Beginning Swimming or equivalent required.

PE 166   **Self-Defense (1 - 1) 2 Cr. Hrs.**
Combines various methods of self-defense with an emphasis on Judo. Related techniques of Jujitsu and Karate will be covered.
Prerequisite: None.

PE 194   **Weight Training (1 - 1) 2 Cr. Hrs.**
Various methods of weight training for both men and women are taught. Proper lifting techniques learned. The concept of "total fitness and body awareness" is stressed.
Prerequisite: None.

PE 202   **Lifestyle Fitness and Wellness (1 - 1) 2 Cr. Hrs.**
This course will introduce the student, through lecture and exercise, to the various methods and benefits of physical and emotional fitness and wellness activities. A wide variety of topics pertinent to the physical and mental health and well-being of the individual will be presented and practiced, providing the framework for the student to make sound health choices. Pre- and post-fitness assessments will be taken. Both in-class and outside of class lab projects will be undertaken.
Prerequisite: None.

PE 206   **Advanced Swimming (1 - 1) 2 Cr. Hrs.**
Advanced swimming instruction and practice with emphasis on stroke technique with diving included (side and springboard).
Prerequisite: Intermediate Swimming or PE 116 ability required.

PE 240   **Physical Education for Elementary Teachers (3 - 0) 3 Cr. Hrs.**
Use of basic movement, games, relays, stunts, and organization for the early and later elementary grades. Emphasis is on the organization for P.E. at these levels. Students are required to make arrangements for observation of elementary classes during the latter part of the semester.
Prerequisite: None.

PHYSICS

Assistant Dean: Monica Sullivan, MS
Instructors: Professor Steve Schewe, MS
Instructor Paul Holody, Ph.D

PHYS 051   **Basic Physics (4 - 1) 4 Cr. Hrs.**
Mechanics, sound, heat, electricity, light and modern physics. For those students who have had no previous course in physics or need review of the subject to prepare for college physics.
Prerequisite: One year of high school algebra or MATH 053.

PHYS 104   **Introduction to Astronomy (3 - 2) 4 Cr. Hrs.**
History, methods, the solar system, stars, galaxies and cosmology. For students in any curriculum, but not for science majors.
Prerequisite: One year of high school algebra or MATH 053.

PHYS 123   **Applied Physics (4 - 2) 5 Cr. Hrs.**
A course in applied physics designed for technical, business and applied health programs. Using trigonometry, the traditional topics of mechanics, heat, acoustics, electricity and magnetism, optics, modern physics and nuclear physics are treated in a practical and applied fashion with emphasis on laboratory work and scientific procedures. (Can replace PHYS 051.)
Prerequisite: MATH 113.

PHYS 181   **General Physics (4 - 2) 4 Cr. Hrs.**
Mechanics, fluids, energy relationship, heat, and sound. Not for engineering students or physics majors.
Prerequisite: MATH 119 and one year of high school physics or PHYS 051 or PHYS 123.

PHYS 182   **General Physics (4 - 2) 4 Cr. Hrs.**
Continuation of PHYS 181. Magnetism, electricity, light and modern physics. Not for engineering students or physics majors.
Prerequisite: PHYS 181.

PHYS 211   **General Physics (5 - 2) 5 Cr. Hrs.**
Mechanics, fluids, heat and sound. For engineering students and science majors.
Prerequisite: High school physics or PHYS 051 and MATH 150.

PHYS 212   **General Physics (5 - 2) 5 Cr. Hrs.**
Continuation of PHYS 211. Magnetism, electricity, light and modern physics.
Prerequisite: A grade of 2.0 or better in PHYS 211.

POLITICAL SCIENCE

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor William Burke, MA
    Associate Professor Kent Kirkpatrick, MA
    Assistant Professor Alexander Thomson, MA

POLS 105   Survey of American Government (3 - 0) 3 Cr. Hrs.
Survey of the American political system, including an analysis of decision makers, power and controversial issues, at the national, state and local governmental levels.
Prerequisite: None.

POLS 109   State and Local Government (3 - 0) 3 Cr. Hrs.
Nature of state constitutions and powers; structure and operation of state executive, legislative and judicial branches; organization, functions and problems of local governments; state-federal and state-local relations.
Prerequisite: None.

POLS 205   Political Parties (3 - 0) 3 Cr. Hrs.
Organization and functions of modern American political parties. Includes an analysis of campaigns, conventions, power and participation in politics. A campaign simulation may be used.
Prerequisite: POLS 105 or equivalent political experience or consent of instructor.

POLS 207   Comparative Government (3 - 0) 3 Cr. Hrs.
The essence of politics including the scientific method and the comparative study of politics; democratic and autocratic political systems; typologies and types of variables; environmental considerations; history and political culture; structures for political participation; governmental structures and processes; system institutionalization and durability. Major western European countries will be discussed.
Prerequisite: A college course in political science or history, or consent of instructor.

POLS 209   International Relations (3 - 0) 3 Cr. Hrs.
This course provides an examination of some of the social, economic and political forces which make for cooperation and conflict between nations. Emphasis will be on political economy. Areas of concentration include the Russian Revolution and the rise of the U.S.S.R., the Chinese Revolution and the emergence of China and the unfolding relationships between the third world and the industrialized nations. International economics and the international debt will be examined. Recent studies of Chile and Cuba will be presented.
Prerequisite: Sophomore standing and POLS 105. Completion of other social science courses recommended.

PRACTICAL NURSING

Assistant Dean: Monica Sullivan, MS
Coordinator/Assistant: Kathleen Fordyce, MSN
Instructors: Assistant Professor Tamara Campbell, MSN
    Instructor Cindy Sheppard, MSN
    Adjunct Faculty

The contact hours listed are based on a full 15 week semester. The number of hours per week increases when courses are offered in a shortened semester format.

PN 102   Fundamentals of Practical Nursing (6 - 18) 8 Cr. Hrs.
The course includes beginning theory and supervised practice in the fundamental skills necessary to meet the needs of the chronically ill patient. The student will learn application of the nursing process with emphasis on assessment and planning, along with application of communication skills necessary to give patient care. The study of normal nutrition with application to the geriatric patient and math necessary for administration of medications is included.
Prerequisite: Consent of department.

PN 107   Human Behavior and Relationships (4 - 0) 4 Cr. Hrs.
An introductory course in Practical Nursing that focuses on understanding how human behavior and personality arise from various cultures, groups and philosophies and how to deal with them. This course includes nursing development, communication skills and legal and ethical aspects of practical nursing, as well as a section on how a client's spiritual needs or religious orientation affect health care.
Prerequisite: None.
Corequisite: PN 102.

PN 119   Mental Health Nursing (3 - 0) 3 Cr. Hrs.
Continuation of PN 107 with emphasis on helping the client deal with developmental problems of young, middle and late adulthood. Includes psychiatric disorders, substance abuse and the impact of the community and family on the client's recovery. Also includes coping and defense mechanisms used by clients to deal with illness, anger, grief and depression.
Prerequisite: PN 102 and PN 107.
Corequisite: PN 123

PN 123   Nursing Adult Patients (8 - 21) 10 Cr. Hrs.
The course is an introduction to the care of adult patients having common physical disorders. The student will focus on the application of nursing process in planning patient care. The student will apply knowledge of basic nursing skills, nutrition, pharmacology, diagnostic tests, pathophysiology, communication and behavioral principles in the care of selected adult patients.
Prerequisite: PN 102, PN 107, and BIOL 105 with a minimum grade of 2.0.

PN 128   Trends in Practical Nursing (1 - 0) 1 Cr. Hr.
Study of the current issues and trends in education and practice, role of the practical nurse in modern health services, employment opportunities, and preparation for licensure as a licensed practical nurse.
Prerequisite: PN 123 and PN 119 with minimum grade of 2.0.

PN 130   Maternal and Child Nursing (3 - 12) 5 Cr. Hrs.
Correlated theory and clinical practice in nursing the mother through labor, delivery and postpartum, as well as nursing children from the newborn through the adolescent period.
Prerequisite: PN 119 and PN 123.

PN 135   Transition to Employment (1.5 - 6) 3 Cr. Hrs.
Emphasis will be on functioning with greater independence in providing care for a group of patients. In supervised practice students will have an opportunity for advanced experience in providing patient care as a member of the nursing team while working with staff personnel.
Prerequisite: PN 128 and PN 130.

PSYCHOLOGY

Assistant Dean: Dominic Aquila, PhD
Instructors: Professor Walter Hoffmann, MEd
   Associate Professor Robert Schaden, PhD
   Assistant Professor Colleen Pilgrim, PhD
   Adjunct Faculty

PSYCH 153 Human Relations (3 - 0) 3 Cr. Hrs.
This course is designed particularly for students in the Career Curricula. The course focuses upon a better understanding of human behavior as related to interpersonal relations on the job. Foundations of human behavior, strategies for effective human relations, fundamental skills of working as a team leader and team member, and ways of anticipating, preventing, and coping with challenges of human relations are major areas of study.
Prerequisite: None.

PSYCH 201 General Psychology (4 - 0) 4 Cr. Hrs.
Principles of human thought and action with emphasis on individuals in their environment; individual differences in intelligence and personality; effects of heredity and environment on the organism; the nervous systems, learning, intelligence, perception, motivation, social relationships, feelings and emotions.
Prerequisite: Twenty-six hours of transferable credit or consent of department. Successful completion of a political science course and biology (BIOL 101) recommended.

PSYCH 205 Psychology of Adjustment (3 - 0) 3 Cr. Hrs.
Factors and processes involved in the adjustment of the individual to personal and social environment are the main focuses of this course. Essentials for the development of an effective and mentally healthy individual are emphasized. Foundations for adjustment, personal life-style adjustment, interpersonal relationships, adjustment throughout life and coping with maladjustment are major areas of study.
Prerequisite: Twenty-six hours of transferable credit or consent of department.

PSYCH 209 Child Psychology (3 - 0) 3 Cr. Hrs.
General characteristics of development, development of social behavior, feelings, emotions, language, growth of understanding and interests, with emphasis upon personality and problems of adjustment.
Prerequisite: PSYCH 201.

PSYCH 219 Psychology of Aging (3 - 0) 3 Cr. Hrs.
This course studies late adult development and aging. It focuses on the developmental changes relates to biological, psychological, and social processes. Coping strategies and intervention techniques will be examined.
Prerequisite: Twenty-six hours of transferable credit or consent of department. Successful completion of PSYCH 201 highly recommended.

QUALITY MANAGEMENT

Associate Dean: Bruce Sweet, MA
Instructors: Adjunct Faculty

QM 106 Introduction to Quality Systems (3 - 0) 3 Cr. Hrs.
Introduction to quality improvement practices in business, technology and service industries including the ability to respond to signals resulting from complex system analysis. Through the enhancement of knowledge and using basic problem-solving techniques, including Cause and Effect diagrams, Pareto diagrams, Scatter diagrams, and related analytical methods, students develop a better understanding of effective problem-solving techniques applicable to manufacturing and non-manufacturing industries.
Prerequisite: None.

QM 107 Quality Planning and Team Building (3 - 0) 3 Cr. Hrs.
Planning effective quality systems including error prevention through team building to support both recommended procedures and customer satisfaction is emphasized. Students will be introduced to planning methods, Quality Function Deployment (QFD), Failure Mode and Effects Analysis (FMEA), and new quality related programs used in process/product development validation. Control plans and teamwork will be used to demonstrate the dynamics of synergism in groups.
Prerequisite: None.

QM 108 Quality Statistical Methods (3 - 0) 3 Cr. Hrs.
Analysis related to statistical process control (SPC) and other analytical techniques are directed toward defect prevention, systems improvement and customer satisfaction. Students will be introduced to statistical methods, theory and charting including X-bar and R, P, NP, C & U and their application. Topics also include process identification and capability (CpK) analysis.
Prerequisite: MATH 113.

QM 112 Facilitating Quality Systems (3 - 0) 3 Cr. Hrs.
Managing and facilitating effective quality systems requires a systematic approach to employee commitment. Topics include identifying strengths and weaknesses in current systems, establishing plans, confirming objectives, training for team effectiveness and methods of feedback analysis to support efforts in Total Quality Management.
Prerequisite: QM 108 or consent of department.

SOCIOLOGY

Assistant Dean: Dominic Aquila, PhD
Instructor: Associate Professor Josselyn Moore, MA
    Adjunct Faculty

SOC 201   **Principles of Sociology (3 - 0) 3 Cr. Hrs.**
A survey of the major theoretical perspectives, concepts, and methods of sociology. Topics include social organization, culture, socialization, stratification systems, social institutions and social change.
Prerequisite: None.

SOC 205   **Social Problems (3 - 0) 3 Cr. Hrs.**
Consideration of current social problems, such as family stability, racism, sexism, poverty, crime, urbanization, and ecological problems using sociological theory and recent empirical studies. Analysis of sociocultural factors underlying these problems and possible solutions.
Prerequisite: SOC 201.

SOC 209   **Marriage and Family (3 - 0) 3 Cr. Hrs.**
A study of the impact that changes in society have had on gender roles, sexual relationships, marriage, and family life. Considers diversity in family patterns, norms, and values. Topics include gender roles, sexual behavior, mate selection, problems of marital adjustment, family stability and crisis, divorce and parenting.
Prerequisite: None.

SOC 210   **Cultural Diversity (3 - 0) 3 Cr. Hrs.**
An analysis of racial and ethnic diversity in the U.S. in relation to evolving social, economic and cultural factors. Various American minority cultures are studied with an emphasis on education, politics, religion and the resulting cultural effects. Sociological and psychological concepts and theories will be explored. The impact of the current wave of immigrants to the U.S. will be discussed and the incidents of hate crimes will be explored.
Prerequisite: None.

SOC 220   **Urban Sociology (3 - 0) 3 Cr. Hrs.**
A survey of the origin and development of cities and the processes of urbanization. A discussion of the ecology and social organization of urban life. The special problems and realities of urban society will be covered as well as perspectives for the future.
Prerequisite: SOC 201 or ANTH 112 recommended.

SOC 290   **The Individual and Community—An Honors Capstone Course (3 - 0) 3 Cr. Hrs.**
A required conclusion to the Schoolcraft Scholars honors program, this capstone course examines individual, social, structural, and social institutional relationships through multiple disciplines. Students will identify and analyze social and cultural trends and issues. During the course, students will complete and present results of service-learning projects.
Prerequisite: HUM 190.

SPANISH

Assistant Dean: Dominic Aquila, PhD
Instructor: Professor Roberta Holtzman, MA
    Assistant Professor Andrea Nofz, MA
    Adjunct Faculty

SPAN 101   **Elementary Spanish 1 (4 - 0) 4 Cr. Hrs.**
Fundamentals of pronunciation, basic grammar structure and essential vocabulary; particular emphasis placed on speaking and understanding Spanish; practice in written Spanish given by means of dictation and easy translation.
Prerequisite: None.

SPAN 102   **Elementary Spanish 2 (4 - 0) 4 Cr. Hrs.**
Continuation of SPAN 101. Continued emphasis on the spoken language and reading of graded materials in Spanish for comprehension without translation; extensive use of Spanish in the classroom; and written composition.
Prerequisite: One year of high school Spanish or a grade of 2.0 or better in SPAN 101 or consent of instructor.

SPAN 201   **Intermediate Spanish 1 (4 - 0) 4 Cr. Hrs.**
Continuation of SPAN 102. Review and application of essential principles of Spanish grammar structure and training in idiomatic usage through oral and written exercises; intensive practice of the spoken language; reading of representative Spanish prose for comprehension; development of ability to read rapidly without translation.
Prerequisite: Two years of high school Spanish or a grade of 2.0 or better in SPAN 102 or consent of instructor.

SPAN 202   **Intermediate Spanish 2 (4 - 0) 4 Cr. Hrs.**
Continuation of SPAN 201. Emphasis on oral skill, conversation, and reading without translation.
Prerequisite: Three years of high school Spanish or a grade of 2.0 or better in SPAN 201 or consent of instructor.

THEATRE

Assistant Dean: Dominic Aquila, PhD
Instructor: Professor James R. Hartman, EdM

Schoolcraft College offers opportunities for students who wish to study drama and perform in the theatre program. Enrollment in classes is open to majors and minors and to any student with a sincere interest in theatre. Students enrolled in the theatre transfer program are able to earn 24 credit hours during a two-year period with all credits transferable to a four-year institution; an example of such a program appears in the program area of the catalog.

Schoolcraft College now grants an academic Theatre scholarship to a current Theatre major.

Since September 1977, the Theatre Department has adopted a dinner-theatre format for production and provides an exciting experience in this popular kind of entertainment; usually two-three plays are produced annually.

THEA 101 **Introduction to Theatre (3 - 0) 3 Cr. Hrs.**
A survey course which examines all the elements of theatre: actor, director, playwright, scenery, costumes, makeup, lighting, sound, audience, theatre publicity, theatre management, and critic.
Prerequisite: None.

THEA 120 **Theatre Activities (1 - 0) 1 Cr. Hr.**
Brief introduction to theatre activities, including primarily technical and dramatic production with minimum hours spent working on or in the current production.
Prerequisite: None.

THEA 121 **Theatre Activities (1 - 0) 1 Cr. Hr.**
Continuation of THEA 120.
Prerequisite: THEA 120.

THEA 204 **Stage Makeup (2 - 0) 2 Cr. Hrs.**
An introductory course in stage makeup application. The course covers basic makeup, character makeup, old-age makeup, and special effects. Discussion on types of makeup and practical student application projects.
Prerequisite: None.

THEA 207 **Stagecraft and Lighting (3 - 0) 3 Cr. Hrs.**
Technical aspects of play production, including principles of scene design, set construction, painting, lighting, sound, costuming and makeup.
Prerequisite: None.

THEA 208 **Acting 1 (3 - 0) 3 Cr. Hrs.**
A beginning course preparing the actor for acting. Training in voice and body development that not only is applicable to the stage, but to daily life. Exercise work in concentration, relaxation, awareness, sensitivity and body alignment. This exercise work is applied to scene work from modern drama.
Prerequisite: None.

THEA 209 **Acting 2 (3 - 0) 3 Cr. Hrs.**
An advanced course in the preparation of an actor for acting. Training in voice and body development, with an emphasis on studying and applying the Stanislavski Method and the Alexander Technique of body alignment. Presentation of scenes from classical and modern plays.
Prerequisite: THEA 208.

THEA 220 **Theatre Activities (1 - 0) 1 Cr. Hr.**
Continuation of THEA 121.
Prerequisite: THEA 121.

THEA 221 **Theatre Activities (1 - 0) 1 Cr. Hr.**
Continuation of THEA 220.
Prerequisite: THEA 220.

THEA 231 **History of Theatre 1 (3 - 0) 3 Cr. Hrs.**
The development of dramatic art and practice from ancient times to the end of the 18th century, stressing the evolution of the physical theatre and dramatic forms in relation to contemporaneous production facilities and innovations.
Prerequisite: None.

THEA 232 **History of Theatre 2 (3 - 0) 3 Cr. Hrs.**
The development of dramatic art and practice from the beginning of the 19th century to the present, stressing the evolution of the physical theatre and dramatic forms in relation to contemporaneous production facilities and innovations.
Prerequisite: None.

THEA 241 **Oral Interpretation of Literature (3 - 0) 3 Cr. Hrs.**
This course is designed to give the student an understanding of Oral Interpretation of Literature through a twofold technique: one, by practical experience in interpretive readings in various types of literature, and two, by the study of techniques used in the textbook. The class emphasizes the performance of literature through the use of the voice and body.
Prerequisite: THEA 208 or COMA 103.

WELDING

Associate Dean: Bruce Sweet, MA
Instructor: Instructor Rodney Johnson, CWE/CAWI
Adjunct Faculty

WELD 108 **Shop Mathematics (2 - 0) 2 Cr. Hrs.**
A basic course in arithmetic which reviews or develops basic concepts in numbers and their usage. Whole numbers, fractions, and decimals are used in addition, subtraction, multiplication, and division of practical industrial shop problems. Metric conversions, square roots, squares, usage of math tables and hand calculators are also introduced.
Prerequisite: None.

WELD 109 **Algebra (2 - 0) 2 Cr. Hrs.**
This course addresses the concepts of addition, subtraction, multiplication, and division of algebraic expressions; the treatment of signs, exponents, and roots; factoring, formulas, equations, solving for unknowns and quadratic equations. Solving ratios, proportions, percentages, and algebraic fractions are also included.
Prerequisite: WELD 108 or equivalent.

WELD 113 **Shielded Metallic Arc Welding (S.M.A.W.) (2 - 2) 3 Cr. Hrs.**
Theory and fundamentals of oxy/fuel cutting, welding, soldering, brazing, resistance and shielded metallic arc welding, joining and fabricating, and welding metallurgy. Emphasis on basic welding skills and welding metallurgy and the establishment of sound work habits. Designed to provide the foundation for more advanced courses.
Prerequisite: None.

WELD 115 **Gas Metallic Arc Welding (G.M.A.W./M.I.G.)**
(2 - 2) 3 Cr. Hrs.
Theory and fundamentals of gas metallic arc welding, commonly referred to as M.I.G. This method of fusion of metals is widely used and is the fastest growing segment of the metalworking industry. Emphasis on skill development and the establishment of sound work habits. Designed to provide entry level employability and a solid foundation for more advanced courses.
Prerequisite: **WELD 113 or consent of department.**

WELD 119 **Gas Tungsten Inert Arc Welding (G.T.A.W./T.I.G.)**
(2 - 2) 3 Cr. Hrs.
Theory and fundamentals of gas tungsten arc welding (G.T.A.W.). This method of metal fusion is capable of producing very high quality welds in virtually all metals and one of the few methods of welding some of the more difficult to weld metals. Designed to provide entry level employability and solid foundation for more advanced courses.
Prerequisite: **WELD 113 or consent of department.**

WELD 120 **Advanced Processes—Stick Electrode/M.I.G. Welding**
(2 - 2) 3 Cr. Hrs.
The student will gain additional knowledge and experience in shielded metallic and gas metallic arc welding. Welding will be performed in all positions; flat, horizontal, vertical and overhead. The class will introduce the student to pipe cutting and pipe welding on heavy sections. Material will be formed and fabricated using power and hand operated tools and equipment. Students will design, cost estimate, procure materials and fabricate a student project.
Prerequisite: **WELD 115 or consent of department.**

WELD 130 **Advanced Processes—Gas Tungsten, Ceramic and Polymer Welding (2 - 2) 3 Cr. Hrs.**
The course consists of gas tungsten arc welding of high carbon steel, tool steels, stainless steel, aluminum, magnesium and copper. Plasma cutting of ferrous and non-ferrous metals will be stressed. Metal surfacing including thermal spraying, bonding ceramic and polymers will be performed on a variety of materials.
Prerequisite: **WELD 119 or consent of department.**

WELD 205 **Welder's Print Reading (1 - 1) 2 Cr. Hrs.**
Welder's print reading provides detailed information to help welding students develop skills necessary to interpret working sketches and prints common to the welding/metalworking field. In addition, the welding student will gain knowledge in how to interpret conventional drafting symbology and specialized welding symbols and will have the opportunity to perform welds on test plates that are indicated by the welding symbols.
Prerequisite: **WELD 120.**

WELD 206 **Welding Inspection and Qualification (1 - 1) 2 Cr. Hrs.**
Quality welders are in demand today. It is important that these welders possess a working knowledge of weld test equipment and qualification as well as be able to test and evaluate welds. Proper use of weld test gages and equipment, dye penetrant, fluorescent dye penetrant, magnetic particle and destructive testing equipment and techniques will be covered.
Prerequisite: **WELD 205.**

WELD 223 **Fabrication—Student Project (2 - 4) 4 Cr. Hrs.**
Fabrication of student/instructor selected projects. Emphasis will be upon the development of fabrication techniques, including design, material selection, layout, material preparation and use of fixtures. Welding skills developed in WELD 120 and WELD 130 will be applied. There will be an opportunity for students to further investigate other industrial welding processes.
Prerequisite: **WELD 130 or consent of department.**

WELD 262 **Welding Metallurgy (1 - 2) 3 Credit Hours**
Welding metallurgy includes the influence of alloy composition, filler materials, fluxes and thermal interactions on the structure and properties of metals. Topics include the chemical, mechanical, and physical properties of metals, mechanical behavior, microstructure and post-weld heat treating.
Prerequisite: **MET 152, WELD 120 or consent of department.**

PREPARATION FOR WELDING CERTIFICATION EXAMINATION(S)

There is a greater need today than ever before for "Certified Welders" who demonstrate their competence by passing performance examinations of their work. Although Schoolcraft College is not in the business of qualifying or certifying welders, we can duplicate these tests, provide instruction in the proper welding procedure and provide the appropriate testing equipment to examine and evaluate the results.

WELD 210 **Preparation for Welder Certification in Shielded Metallic Arc Welding (2 - 2) 3 Cr. Hrs.**
Prerequisite: **WELD 113 or extensive welding experience.**

WELD 211 **Preparation for Welder Certification in Gas Metallic Arc Welding (2 - 2) 3 Cr. Hrs.**
Prerequisite: **WELD 115 or extensive welding experience.**

WELD 212 **Preparation for Welder Certification in G.T.A.W. (T.I.G.) (2 - 2) 3 Cr. Hrs.**
Prerequisite: **WELD 119 or consent of department.**

WELD 213 **Preparation for Welder Certification in S.A.W. (2 - 2) 3 Cr. Hrs.**
Prerequisite: **WELD 130 or consent of department.**

WELD 214 **Preparation for Welder Certification in Pipe Welding (2 - 2) 3 Cr. Hrs.**
Prerequisite: **WELD 130 or consent of department.**

Schoolcraft College

Schoolcraft College Personnel

Schoolcraft College Personnel

Administrators

AQUILA, DOMINIC 2002
Assistant Dean Liberal Arts
BM The Juilliard School
ABD University of Rochester
MBA New York University
Ph.D. University of South Africa

BEAUDOIN, MARY 1974
Bursar
AAS Schoolcraft College

BONNER, APRIL 1981
Director of Administrative Computing
AAS Schoolcraft College
BS Madonna University
MS Walsh College

BONNER, JEANNE 1968
Dean of Educational Services
BA and AMLS University of Michigan
MSA Central Michigan

BRAUN, SHARON 1992
Director of Health, fitness,
and Senior Adult Programs
AA Schoolcraft College
BS Eastern Michigan University

CHAMPNELLA, CINDY 2003
Executive Director of Human Resources
BA Albion
MA Central Michigan University

COSSIN, CHARLES W. JR. 1987
Director of Technology &
Telecommunication Services
AAS Schoolcraft College

DAIEK, DEBORAH B. 1998
Associate Dean-Academic &
Assessment Services
BA and MEd Western Michigan University
PhD Wayne State University

DOINIDIS, ELGENE 1988
Director of College Centers
BA Madonna University
MS Central Michigan University

GOODEN, SAMUEL 1987
Director of Media/
Instructional Support Services
AS Schoolcraft College

GRIFFITH, RONALD L. 1971
Assistant Vice President for Instruction
BS and MEd Morehead State University

HAGEN, CHERYL M. 2001
Associate Dean of Enrollment Management
BA Valparaiso University
MA Eastern Michigan University

HEATOR, MARTIN G. 2001
Director of Marketing
BS and MA Eastern Michigan University

JEFFRESS, CONWAY A. 1982
President
BA Washington and Jefferson College
MEd and PhD University of Pittsburgh

KONOWALOW, BRUCE S. 2000
Director of Culinary Arts
AOS Culinary Institute of America
BS University of Bridgeport
MA New York University

LILLEY, JEFFREY, CPA 1987
Director of Finance
BS Lawrence Technological University

LUPO, SUSAN 1993
Director Strategic Initiatives
BS and MA Eastern Michigan University

MONGE, JOHN A. 1997
Director of Public Safety
BS Madonna University
MSA Madonna University

NORDMAN, DONNA 1993
Director of Student Advisement Services
AS Schoolcraft College
BGS University of Michigan
MA Eastern Michigan University

O'NEAL, TIMOTHY K. 1999
Director of Academic Computing Labs
AS Schoolcraft College
BSED University of Michigan
MA Eastern Michigan University

O'SULLIVAN, JILL F., CPA 1982
Vice President of Finance and
Business Services
BS Michigan State University
MBA Wayne State University

PEARCE, ROBERT F. 1994
Associate Dean of College Centers
BS and MPA Wayne State University

PIOTROWSKI, JOHN 1992
Director of Technical Programming
AAS Schoolcraft College

POLKOWSKI, JAMES 1986
Executive Director of Business Services
BS Wayne State University

REIBLING, LOUIS A. 1980
Vice President for Instruction
BA Thomas More College
MEd Catherine Spaulding College
PhD St. Louis University

RUGG, WILLIAM J. 2002
Director of Distance and
Distributed Learning
BA Barrington College
MS Utah State University
Ph.D. University of Mississippi

SAVAGE, THOMAS S. 1985
Director of Food Service
AA Henry Ford Community College
BA Michigan State University

SIGWORTH, DENISE 1985
Executive Director of Grants and Research
BS Eastern Michigan University
MA University of Michigan

STIRTON, EDWARD R. 2001
Director of Institutional Effectiveness
BA University of Michigan – Dearborn
MA New Mexico State University

SULLIVAN, MONICA 2003
Assistant Dean of Sciences
BS Michigan State University
MS University Of Michigan

SWANBORG, NANCY K. 1989
Director of Women's Resource Center
BS State University at New York
MA Marygrove College

SWEET, BRUCE 1985
Associate Dean Corporate Services
and Technology
BS and MA Central Michigan University

TITUS, JOHN 1997
Director of Career Planning and Placement
BS Urbana College
MS Wright State University

TOMEY, JOHN B. 1974
Vice President for Enrollment Management
BS and MBA University of Detroit

VALENTE, JASON 2003
Director of Major Gifts and
Planned Giving
BA Concordia University

WALSH, JOHN J. 2001
Executive Director of Development
and Government Relations
BA Michigan State University
JD Wayne State University

WAVREK, DIANE M. 1967
Director of College Disbursements
AAS Schoolcraft College

WIELECHOWSKI, ROBERT A. 1988
Executive Director of
Facilities Management
AS Schoolcraft College
BET Wayne State University

WILSON, MATTHEW W. 2001
Director of Purchasing
BA and MBA Michigan State University

WILTRAKIS, FRANK P. 1985
Chief Information Officer
AS Henry Ford Community College

WRIGHT, JOHN 1974
Director of Maintenance and Grounds
AS Schoolcraft College
Licensed Builder

ZAPPALA, SHIRLEY 1994
Director of Business and
Industrial Services
AA Bay de Noc Community College
BS and MS Central Michigan University

ZYLKA, SHERYL 1980
Associate Dean
Continuing Education Services
AS Schoolcraft College
BS University of Michigan
MA Eastern Michigan University

Full-Time Faculty

ABBAS, MOHAMMED, 1991
  Associate Professor, Biology
  BS Baghdad University
  MS Purdue University
  PhD Wayne State University

ADDI, OMAR, 1990
  Associate Professor, English
  BA University of Mohamed V
  MA State University of New York

ARSZNOV, JANET M. 1996
  Associate Professor, Mathematics
  BS and MA University of Michigan
  MA Eastern Michigan University

BAKER, STUART C. 1973
  Counselor/Associate Professor
  AA Henry Ford Community College
  BBA Western Michigan University
  MA University of Michigan

BALFOUR, LINDA M. 1990
  Associate Professor, Mathematics
  BA and MA Eastern Michigan University

BEARDEN, LOIS J. 1990
  Associate Professor, Mathematics
  BA and MA University of Michigan

BERG, STEVEN L. 2000
  Assistant Professor, English/History
  BA, MA, Ph.D Michigan State University

BRIGGS, ROBERT A. 1967
  Professor, History
  BA Dartmouth College
  MAT Johns Hopkins University

BUCHANAN, GALE F. 1965
  Librarian, Professor
  BA and MALS University of Michigan

BURKE, WILLIAM J. 1967
  Professor, Political Science
  AB David Lipscomb College
  MA Vanderbilt University

BURRELL, GRAHAM C. 1975
  Librarian, Professor
  BA and MLS University of Michigan

BUTKEVICH, NICKOLAS 1995
  Associate Professor, Biology
  BS and MS Eastern Michigan University

CAMPBELL, TAMARA 1995
  Associate Professor, Nursing
  BSN Mercy College of Detroit
  MSN University of Michigan

CASE, COLLEEN M. 1996
  Associate Professor,
  Computer Graphics Technology
  BS University of Wisconsin, LaCrosse
  MLS Eastern Michigan University

CAVANAUGH, GERALD F. 1969
  Related Trades Professor
  BS Michigan State University
  MA Eastern Michigan

CHAUDHERY, SUMITA 1968
  Professor, English
  BA Howard University
  MA Howard University
  PhD University of Michigan

CLACK, DONNA, L. 1988
  Associate Professor,
  Developmental Education
  BA Wayne State University
  MA Eastern Michigan

DECKER, JOSEPH 1991
  Professor, Culinary Arts
  Certified Master Pastry Chef
  American Culinary Federation

DICKSON, PAUL M. 2001
  Instructor, Chemistry
  BS University of Michigan, Dearborn
  Ph.D. Wayne State University

DOLGIN, STEVEN 1990
  Professor, English
  AA Oakton Community College
  BA and MA University of Illinois–Springfield
  CAS Northern Illinois University
  DA Illinois State University

ELLIS, TIMOTHY 1999
  Assistant Professor,
  Computer Information Systems
  BBA Eastern Michigan University

FERMAN, CATHERINE 1992
  Associate Professor, CAD/Drafting
  BS, GMI and MS University of Michigan

FLYNN-HAHN, DIANE E. 1996
  Assistant Professor,
  Child Care and Development
  BS and MA Eastern Michigan University

GABRIEL, JEFFREY M.1987
  Professor, Culinary Arts
  AOS Culinary Institute of America
  Certified Master Chef
  American Culinary Federation

GALPERIN, FREDERICK D. 1966
  Professor, Economics
  AB University of Michigan
  MA and EdS Eastern Michigan

GARRETT, EVAN D. 1968
  Professor, History
  BA State University of Iowa
  MA University of Michigan

GAWRONSKI, KEVIN P. 1982
  Professor, Culinary Arts
  AAS Schoolcraft College
  Certified Master Chef
  American Culinary Federation

GIBBONS II, CHARLES 1993
  Associate Professor, Metallurgy
  AAS Wayne State University
  Certified Senior Industrial Technologist

GORDON, RICHARD A. 1969
  Professor, English
  BS and MA St. Louis University

GRIFFIN, SHARON Y. 1988
  Associate Professor, Nursing
  BSN Mercy College
  MSN Wayne State University

HARRIS, MARK C. 1997
  Professor, English
  BA Michigan State University
  MA University of South Carolina

HARTMAN, JAMES R. 1987
  Professor, Theatre, Communication Arts
  BS and EdM University of Cincinnati

HAWKINS, CHERYL D. 1996
  Assistant Professor,
  General Education Assessment
  BS Eastern Michigan University
  MS Wayne State University

HOFFMANN, WALTER O. 1964
  Professor, Psychology
  AB Hiram College
  MEd Wayne State University

HOLODY, PAUL 2002
  Instructor Physics
  BS University of Michigan
  Ph.D. Michigan State University

HOLTZMAN, ROBERTA L. 1964
  Professor, French/Spanish
  BA Wayne State University
  MA University of Michigan
  MA Wayne State University

HOWIE, CEDRIC 1991
  Associate Professor, Economics
  BA University of North Carolina,
  MS Murray State University

HUGELIER, DANIEL 1991
  Professor, Culinary Arts
  Certified Master Chef
  American Culinary Federation

JANKOVIAK, KATHERINE 2001
  Instructor, Mathematics
  BS Northern Michigan University
  MS Michigan State University
  BA and MA Wayne State University

JOHNSON, RODNEY 1986
  Instructor, Welding
  Certificate Schoolcraft College
  Certified Welding Educator
  Certified Associate Welding Inspector
  Residential Builder License
  Certificate Welding Fabrication
  Certificate Applied Physical Metallurgy
  Metallurgical Co-Operative Experience Completion
  Certificate Hazardous Materials Management

KAPPEN, ORVILLE H. 1989
  Associate Professor, Criminal Justice
  AAS Henry Ford Community College
  BA University of Michigan
  MA Eastern Michigan University

KAVANAUGH, EDWARD A. 1982
  Professor, Mathematics
  BS University of Michigan
  MA University of Michigan

KERR, SANDRA J. 1994
  Associate Professor, Mathematics
  MA Wayne State University
  BSE University of Michigan

KIRKPATRICK, KENT 1992
  Associate Professor, Political Science
  BS and MA Eastern Michigan University

KRAMER, JAMES R. 1986
  Professor, Computer Assisted Manufacturing,
  Lasers
  BA, BS and MS Eastern Michigan University

MAHESHWARI, ARCHANA 2002
  Instructor, English
  BA and MA Osmania University
  MA Wayne State University

MARROSO, MARLYNN J. 1998
  Assistant Professor, Nursing
  AAS Henry Ford Community College
  BSN University of Michigan
  MSN Wayne State University

MASCOLO, CHERYL S. 1996
  Assistant Professor, Nursing
  RN St. John's Hospital
  BSN and MSN Oakland University

MCBRIDE, RONALD E. 1974
  Professor, Electronics
  AAS Schoolcraft College
  BS Eastern Michigan University
  MA Eastern Michigan University

MCNUTT, CAROLINE H. 2000
  Assistant Professor, Biology
  BS, MS University of Western Ontario

MCPHERSON, DORIS 1992
Associate Professor,
Computer Information Systems
BS, MA and Specialist
Eastern Michigan University
EdD Nova University

MEHALL, MICHAEL J. 1998
Assistant Professor,
Computer Graphics Technology
BFA and MA Wayne State University

MINGELA, AUDRONE M. 2000
Assistant Professor, Mathematics
BS University of Michigan
MA Eastern Michigan University

MONROE, CARL 2002
Instructor, Counselor
BA Sacred Heart Seminary
MA Wayne State University

MOORE, JOSSELYN 1995
Associate Professor, Anthropology,
Archaeology, Sociology
BA Washington University
MA Hunter College City
University of New York

MORELOCK, DONALD L. 1967
Professor, Music
BM University of Oklahoma
MM University of Michigan

NAG, PRANTOSH, 1969
Professor, Economics
BA Scottish Church College
Calcutta University, India
MS and PhD University of Minnesota

NATHAN, JOHN G. 1975
Professor, English
BA, MA, PhD Wayne State University

NESBIT, DIANE P. 1985
Librarian, Professor
AA Michigan Christian College
BA Marygrove College
MLS Wayne State University

NISSEN, JAMES C. 1996
Associate Professor, Humanities
BM, MM, and DMA University of Michigan

NOFZ, ANDREA L. 1999
Assistant Professor, Spanish
BA and MA Michigan State University

NUFFER, ROY A. 1987
Librarian, Professor
BA and MSLS Wayne State University

O'CONNELL, DIANE 1990
Associate Professor, Geography
BA College of William and Mary
MS Eastern Michigan University

O'CONNOR, THOMAS A. 1990
Associate Professor, Biology
BA and MS Purdue University
PhD University of Washington

OLSON, SARAH M. 2000
Assistant Professor, Art
BAED, BFA, MA University of Michigan

ORICK, MICHAEL 1993
Associate Professor, Biology
BA University of Michigan, Dearborn
MS Eastern Michigan University

PALM, MARY ALICE 1993
Associate Professor, English
AA Orange County Community College
BA University of Michigan
MA Eastern Michigan University
MA University of Michigan

PALMER, NANCY 1995
Associate Professor, Nursing
BSN Mercy College of Detroit
MSN Wayne State University

PARTYKA, PATRICIA A. 1978
Professor, Office Information Systems
AAS Schoolcraft College
BS University of Detroit
MEd Wayne State University

PILGRIM, COLLEEN C. 2000
Assistant Professor, Psychology
BS Michigan State University
MA, Ph.D. Wayne State University

POLCYN, BRIAN D. 1997
Assistant Professor, Culinary Arts
Certified Executive Chef
American Culinary Federation

POLOT, BARTON L. 2001
Instructor, Music
BM, MM and Ph.D. University of Michigan

POWELL, MARY S. 1966
Professor, English
BA Arkansas Tech University
MA University of Arkansas

PRICER, WAYNE F. 1994
Librarian, Associate Professor
ALA Oakland Community College
BA Madonna University
MSLS Wayne State University

QUELL, ELIZABETH 1991
Associate Professor, Nursing
BSN University of Michigan
MSN Wayne State University

RAMEY, LAVONDA G., CPA 1985
Professor, Accounting
BBA and MBA University of Michigan

RANDALL, MICHELLE F., CPA 2001
Assistant Professor, Accounting
BBA University of Michigan
MBA Wayne State University

REXIUS, JAMES E. 1978
Professor, Geology
BA University of Michigan
MS Eastern Michigan University

RICHARDS, CHRISTOPHER 2001
Counselor, Instructor
BS and MA Eastern Michigan University

RUBIO, PATRICIA A. 1969
Professor, Health Information Technology
BS Mercy College of Detroit
MSA Central Michigan University

RUOKOLAINEN, DAVID W. 1984
Professor, Computer Information Systems
BS and MS Eastern Michigan University

RYKTARSYK, DONALD A. 1964
Professor, Business
BS University of Detroit
MA University of Detroit

SANTIAGO, RODOLFO 2002
Instructor, Computer Information Systems
BS University of the Philippines
MBA University of Detroit

SCHADEN, J. ROBERT 1993
Associate Professor, Philosophy, Psychology
BA Sacred Heart Seminary,
Master of Divinity,
St. John's Provincial Seminary
MA University of Michigan
PhD Wayne State University

SCHELLER, JODY 1993
Associate Professor,
Health Information Technology
AS, BS and MS Mercy College of Detroit

SCHEWE, STEPHEN J. 1972
Professor, Physics, Astronomy
AS Henry Ford Community College
BSE and MA University of Michigan
MS Eastern Michigan University

SCHLICK, WILLIAM 1995
Associate Professor,
Computer Information Systems/
Electronics Technology
AAS Schoolcraft College
BEE Wayne State University

SCHNEIDER, ELIZABETH A. 2000
Assistant Professor,
Child Care and Development
AAS Schoolcraft College
BGS University of Michigan
ME Wayne State University

SCHNEIDER, JANET M. 1989
Librarian, Associate Professor
BA University of Minnesota
MS Columbia University
MA University of Michigan

SCHUETT, FAYE 1992
Associate Professor, English
BS Illinois State University
MA and PhD University of Tulsa

SCHWARTZ, RANDY K. 1984
Professor, Mathematics
BA Dartmouth College
MA University of Michigan

SHEPPARD, CYNTHIA 1984
Instructor, Nursing
BSN Mercy College of Detroit
MSN Madonna University

SIMMONS-SHORT, IDA 1990
Associate Professor, English
BA and MA University of Michigan

SNYDER, CHERYL A. 1998
Assistant Professor, Chemistry
BA Suny at Plattsburgh New York
MS Purdue University

STEFFEN, CAROLYN A. 1975
Professor, Biology
BS Appalachian State University
MS Michigan Technological University
PhD Wayne State University

STEVENS, HOLLY 2002
Instructor, Art History/Humanities
AA Elgin Community College
BA and MA Northern Illinois University

TAYLOR, BONNITA 2002
Instructor, Biology
BS Michigan State University
MS Eastern Michigan University

TAYLOR, JUJUAN C. 1989
Professor, Communication Arts
BA Mercy College,
MA University of Detroit,
PhD Michigan State University

THOMSON, ALEXANDER 1999
Assistant Professor, Political Science/History
BA & MA Wayne State University

TURNAGE, PAUL A. 2000
Assistant Professor,
Computer Information Systems
AS Schoolcraft College
BSA University of Michigan
MS Eastern Michigan University

UDRYS, JANINA 1973
   Professor, Mathematics
   BS Loyola University
   MA Wayne State University
VENDITTELLI, DEBORAH S. 1989
   Associate Professor, Nursing
   AA Lake Superior College
   BSN Lake Superior State College
   MSN University of Texas
VENTE, MARY B. 2001
   Counselor, Instructor
   BS Western Michigan University
   MA Eastern Michigan University
WALDYKE, MICHAEL J. 2001
   Assistant Professor, Chemistry
   BS Calvin College
   MS University of California, Berkley
WALE, JERRY C. 1973
   Professor, Computer Information
   Systems/Electronics Technology
   BSEE Lawrence Institute of Technology
   MSEE University of Detroit
WASHKA, JACK A. 1967
   Professor, Health and Physical Education
   BSEd Ohio University
   MEd Ohio University
WILLIAMS, LARRY G. 1969
   Professor, Mathematics
   BS and MA Bowling Green State University
WILSON, GORDON L. 1968
   Professor, English
   BS Oregon State University
   MA University of Oregon
WOODRUFF, CECIL C. 1970
   Professor, Health and Physical Education
   BA Central Michigan University
   MA Central Michigan University
   PhD University of Utah
WROBLE, STEPHEN A. 1991
   Associate Professor, Art
   Computer Graphics Technology
   BFA Michigan State University
   MA Wayne State University
ZACCONE, LISA A. 2000
   Assistant Professor,
   Computer Aided Design/Drafting
   AAS Delta College
   BS Michigan Technological University

Support Staff

ADAMS, SUSAN 1991
   Help Support Specialist
ALLEN, ANNE 1991
   Primary Caregiver
ANCHOR, ELIZABETH 1997
   Secretary III
ANDERSEN, GERALDINE 1997
   Counseling Office Assistant
ANDERSON, BRUCE 1999
   Electronic Technician
APPLE, ROSE 1999
   Secretary III
ARAMBASICH, DENISE 2003
   Financial Aid Specialist
BARNES, FRANCES 1992
   Utility II
BARNEY, CYNTHIA 2000
   Financial Services Office Assistant
BEAUDOIN, ROSEMARY 1997
   Continuing Education Office Assistant

BELLAIRE, BARBARA 1996
   Office Assistant
BERENDT, AMY 1989
   Human Resources Technician
BERKAW, MOLLY 1988
   Secretary III
BETTIS, PATRICIA 1981
   Accounts Payable Associate
BLAZIC, CAROL 1992
   Secretary III
BOISSEAU, PATRICIA 1992
   Coordinator-Assessment Center
BONA, ROBERTA 1995
   Office Assistant
BORTON, JEFFREY 1990
   Lead Computer Technician
BOWE, STELLA 1986
   Office Assistant
BOYLE, CHARLENE 1992
   Accounts Payable Associate
BRIGGS, CARLOS 2000
   Student Services Technician
BROWN, BERNICE 1993
   Secretary IV
BROWN, CATHERINE 2001
   Distance Learning Office Assistant
BROWN, DAVID 1997
   Media Technician
BROWN, KATHY 1997
   Coordinator-Instructional Services
BROWN, PAUL 1983
   General Maintenance
BUREK, NORMA 1979
   Coordinator-Computer Operations
BURNS, DIANE 1994
   Lead Coordinator-CES
CANARY, STACEY 2002
   Student Recruitment Specialist
CHAMBERS, DIANE 1997
   Supervisor, Financial Aid
CHATHAM, ROBERT 2001
   Public Safety Officer
CHEEMA, LAKHBIR 1996
   Culinary Sanitarian
CICHONSKI, CAROL 1995
   Secretary III
CICCHELLI, CYNTHIA 2001
   Information Specialist
COLLING, GREGORY 1985
   Public Safety Officer
COMMON, SHARON 1998
   Secretary III
CONRAD, MARY 2001
   Grant Technician
COOK, JENNIFER 1997
   Utility II
COOLEY, MARGOT 1997
   Financial Aid Assistant
COPPOLA, LYNDSAY 2003
   Bookstore Assistant
COUTTS, ROGER 1995
   Network Support Specialist
CROSS, VICKI 1994
   Utility II
DANI, BRENDA 1994
   Contracted Training Team Leader
DANI, DEBORAH 1992
   Human Resources Technician
DIXON, SHIRLEY 1989
   Research Coordinator

DORSEY, JUANITA 1979
   Secretary III
DOUGLAS, JANET 2000
   Secretary III
DROUILLARD, CLARENCE 1966
   Utility II
DUBOIS, ROBERTA 1996
   Public Safety Officer
DUKA, KENNETH 1986
   Utility II
DUNCAN, JR., TIMOTHY 1997
   Networking and Software Specialist
DURIEUX, ERNEST 1977
   General Maintenance
DURLING, BRENDA 1998
   Coordinator of Special Events &
   Fundraising
ELESON, BELINDA 1979
   College Receptionist
ERISMAN, BRADLEY 1995
   Purchasing Assistant
FISHER, SANDRA 2003
   Coordinator—CES
FLEMING, MICHAEL 1983
   Operations Technician
FORD, JR., THOMAS, 2000
   Lead Coordinator—
   Academic Computing Labs
FORDYCE, KATHLEEN 2002
   Coordinator, Nursing Programs
FOURNIER, KIMBERLEY 1998
   Learning Resources Assistant
FOURNIER, RONALD 1998
   Skilled Maintenance-HVAC
FOX, WILLIAM 1986
   Technical Support Specialist
FRENTZOS, KARLA 1994
   Administrative Coordinator
GALINDO, JOYCE 1996
   Administrative Assistant to the
   Vice President for Instruction
GALLAGHER, DIANA L. 1989
   Utility II
GEINZER, CHRISTINE 2000
   Secretary III
GELMAN, SANDRA 1991
   Corporate Services Coordinator
GERARGE, ELAINE 1984
   Job Placement Technician
GERNERT, KERRY 2001
   Interior Design Coordinator
GILLOW, JANINE 1998
   Accounting Associate
GRANT, PHILIP 1977
   Utility II
GRAYER, SHAWNDA 2000
   Purchasing Assistant
GREENWELL, DIANE 1979
   Accounts Receivable Associate
GREIFENBERG, JASON 1997
   Networking and Software Specialist
GRIFFITH, PATTY B. 1989
   Primary Caregiver
GRIFFIN, JEFFREY 2001
   Utility II
GUMINA, SARA 1996
   Corporate Services Technician
HALL, JEREMY 2001
   Instructional Designer

*March 20, 2003

HARRISON, BECKY 1988
Utility II
HAYES, SYLVIA 1989
Marketing/Merchandising Specialist
HENRY, LORETTA 1995
Programmer/Analyst
HEUSNER, SCOTT 1997
Programmer/Analyst
HILL, WILLIAM 2001
Utility II
HINDS, CHERYL 1997
Grant Technician
HINZMAN, SYLVIA 1988
Public Safety Education Associate
HOCHBERG, ELLEN 1998
Senior Graphic Designer
HOLMAN, CHERI 1997
Supervisor, Instructional Services
HOLTSCHNEIDER, DONNA 1996
Primary Caregiver
HOWELL, BRADLEY 1999
Skilled Maintenance
HUBENSCHMIDT, JOHN 1990
Utility I
HUDSON, JR., ROBERT 1980
Utility I Leader
HULIK, KATHLEEN 1996
Public Relations/Media Coordinator
HUMBARGER, CHRISTINA 2002
Supervisor, Doc-U-Center
ISABELL, AGNES 1995
Office Assistant
JOHNSON, EMILY 1997
Admissions Office Assistant
JONES, DAVID 1995
Public Safety Officer
JONES, TERASA 1991
Continuing Education Office Assistant
JOSWIAK, FRANCES 1992
Executive Assistant
KELLY, SANDRA 1976
Secretary III
KERSHAW, MARLENE 1985
Displaced Homemaker Coordinator
KING, DAVID 1980
Utility II
KIURSKI, CATHERINE 1976
Administrative Assistant to the Vice
President for Enrollment Management
KLINCK, KERRI 2000
Contract Technician
KLOTZ, HOLLY 2002
Continuing Education Events Associate
KOROL, GEORGE 1992
Public Safety Officer
KOTRBA, CONNIE 2002
Contracted Training Coordinator
KOVACS, CHRIS 1991
Public Safety Officer
KOVACS, CONNIE 1998
Primary Caregiver
KRAWCZYK, THERESA 1990
Secretary III
KRYSTYNIAK, KAREN 2000
Information Specialist
KUDLAWIEC, JOHN 1994
Utility II
LABO, HOLLY 1982
Physical Education Attendant

*March 20, 2003

LAVEQUE, RANDOLPH 1999
Utility II
LEAVENS, BRENDA 1999
Accounts Receivable Associate
LESHOK, LAURA 1997
Information Specialist
LIGHTFOOT, RUSSELL 1977
Utility I
LOSEY, KEVIN 1994
General Maintenance
LOUNSBERY, RICHARD 1989
Public Safety Officer
LOWE, CLAUDETTE 1998
Secretary IV
LOZINSKI, STANLEY 1993
Utility II
LUBECK, SUSAN 1998
Secretary I
MABRY, MELISSA 2000
Electronic Technician
MACHNIAK, ELIZABETH 1994
Secretary II
MAISANO, JOSEPH 1999
Networking and Software Specialist
MALINOWSKI, KAREN 1995
Continuing Education Associate
MANNING, GREGORY 1978
Skilled Maintenance
MANSFIELD, JAMES 2002
Utility II
MASON, DENISE 1992
Utility II
MATHUR, VIKRAMADITYA 1999
Corporate Services Coordinator
MATTSON, LORNA 1987
Accounts Receivable Associate
MATUSIK, SHERRINE 1983
Assistant to the Registrar
MCCARDELL, CATHERINE 2002
Secretary III
MCCARDELL, TIMOTHY 2001
Utility II
MCCOLLISTER, DONALD 1987
Storekeeper Leader
MCDONALD, CHERYL 1990
Instructional Services Specialist
MCVITTIE, DONALD 1979
Facilities Management Specialist
MENDEL, KATHERINE 2002
Student Recruitment Specialist
MILEWSKI, DANNY 1977
Bookstore Assistant-A
MILEWSKI, ROBERT 1986
Bookstore Assistant-B
MILLER, JAMES 1986
Utility I
MISIAK, CHRISTOPHER 1986
Culinary Administrative Specialist
MOG, PATRICK 1983
Skilled Maintenance-HVAC
MOLONEY, STEVEN 1996
Multimedia Coordinator
MONTROY, TERRI 2001
Secretary III
MORAND, MARY 1993
Coordinator of Academic Services
MOSCHET, JUDY 1999
Document and Layout Associate
MOSS, CARL 1996
Utility II

MUNDAY, JANICE 1991
Information Specialist
MUNRO, KENNETH 1986
Physical Education Attendant
NETTLES, NINA 2002
Contracted Training Coordinator
NOGUEZ, VERONICA 1990
Utility II
NOWACKI, DARRYL 1987
Networking and Software Specialist
O'CONNOR, DEBRA 1996
Lead Help Support Specialist
O'KEEFE, SHARYL 1998
Primary Caregiver
OLDHAM, JOANN 1996
Assistant to the Director of Food Service
PACK, SALLY 1983
Information Processing Lab Technician
PARDO, PATRICK 1996
Shift Supervisor
PARKS, APRIL 1995
Assistant to the Director of College Bookstore
PARKS, PEGGY 1988
Cashier II
PAWLAK, PAMELA 1988
Secretary III
PELOQUIN, DIANA 1993
Primary Caregiver
PEPPER, MARIANNE 1985
Benefits Specialist
PEREZ, PATRICIA 1973
Secretary III
PERUGIA, COLETTE 1995
Assistant Coordinator-Distance Learning
PETRICCA, JULIE 1997
Senior Buyer
PIASENTIN, GERARD 1997
Project Engineer
PLEMMONS, LARRY 1997
Public Safety Officer
POPKES, JENNIFER 2000
Bookstore Assistant C
PRENGER, ANN 1998
Coordinator-CES
PUHLMAN, JEFFREY 1974
Media Systems Technician
PURCELL, THOMAS 1981
Utility II Leader
PUSKARZ, TAMMY 2000
Corporate Services Coordinator
RAGAN, MICHAEL 1976
Skilled Maintenance
REID, AMY 1994
Corporate Services Team Leader
RICE, RUTH 2000
Assistant to the Director of Food Service
RIEF, MARY JO 1987
Administrative Assistant to the Vice
President for Finance and Business Services
RILEY, BONNIE 1980
Cashier III
ROURK JR., THOMAS 2003
Utility II
RUTECKI, JOSEPH 2001
General Maintenance
RYDZEWSKI, DAVID 2000
Shipping and Receiving Operations Supervisor
SATHER, SUSAN 1986
Payroll Associate

SAVAGE, ANGELA 2000
Secretary III
SCHAFFRATH, ROCHELLE 1980
Human Resources Specialist
SCHARMEN, BARBARA 1995
Coordinator, Financial Services
SCHERTZER, ANDREW 1980
Utility II
SEVERSON, MELISSA 1992
Payroll Associate
SHAUGHNESSY-SMITH, JEAN 1989
Co-Supervisor, Children's Center
SHELTON, CAROLINE 2002
Secretary I
SHERFIELD, BARBARA 1998
Coordinator-Academic Computing Labs
SMITH, JONATHAN 1998
Document and Layout Associate
SMITH, KENNETH 1987
Storekeeper
SMITH, PIERA 1984
Coordinator, Support Services
SPRINGER, SHERRY 1983
Coordinator of Student Activities
STAKNIS, BARBARA 1996
Secretary A
STAPULA, JEANNE 1999
Secretary II
STEVANOVIC, DANNE 1996
Grant Technician
STOWELL, TODD 1996
Student Activities Technician
SULLIVAN, PATRICK 1988
Utility I
SWIGER, CURTIS JR. 1983
Sergeant, Public Safety
SZUKIELOWICZ, GAIL 1989
Transfer Credit Specialist
TAPIO, GLENN 1996
Utility II
TAYLOR, LUCIAN 1980
Storekeeper
THOMAS, TAHLIA 2002
Coordinator-Academic Computing Labs
TIKKANEN, LISA 1995
Research Assistant
TIMTE, JACQUELINE 1997
Secretary IV
TOMEY, CAROLYN 1991
Office Assistant
TONG, MICHAEL 1988
Utility II
TREMBLAY, LOU-ANN 2002
Utility II
UTLEY, JAMES 1987
Research Technician
VANLUE, JR., ROBERT 1997
Programmer/Operator
WAGERS, MARK 1998
Utility II
WALLACE, LINDA 1995
Secretary III
WALLEN, LYNN 1992
Secretary to the Executive Director
of Human Resources
WATKINS, JOEL 1989
Laboratory Coordinator
WEBER, MATTHEW 1995
Media Technician

WEBER, REBEKAH 1998
Secretary III
WESTWOOD, HERBERT 1980
Utility I
WHELAN, JUDITH 1994
Administrative Secretary
WIKTOR-PROFFITT, MICHELLE 1988
Document and Layout Associate
WILSON, JANET 1993
Accounting Supervisor
WILSON, NICOLE 2002
Admissions Technology Coordinator
WILTRAKIS, DANIEL 1988
Network Support Specialist
YAREMCHUK, PATRICIA 1982
Human Resources Specialist
YOUNG, SUSAN 1987
Senior Buyer
ZACHOS, PATRICIA 1999
Strategic Initiatives Office Assistant

Adjunct, Part-Time Faculty

The following part-time adjunct instructors have earned a minimum of 100 points in one or more Schoolcraft disciplines. Some have expertise in more than one discipline. Highest earned degree is indicated.

ADJUNCT PROFESSOR

(Min. 14 yrs. service & 200 points)

Andersen, Katherine, MA .... MATH
Bell, Carolyn, PhD .... ENG
Belloli, Patricia, A., MEd .... COUNS
Blay, Harold, MA .... ENG
Bogarin, Russell, MA .... COUN
Bondie, Susan, MA .... CIS
Bowers, Jr., Anne, PhD .... COMA
Brennan, Judith, M.,MS .... PSYCH
Buchta, Patricia, BSN .... NURS
Burnham, Robert, MS .... MFG/QM
Burnside, Robert, MEd .... COUNS
Bushart, Gerald, MA .... MATH
Cavan, Paul, MS .... COR/CS
Conway, Daniel, J., MA .... POLS
Coppola, Carlo, PhD .... CAP/CM
Cox, Madeline, MA .... MA
Cramb, Richard, Jr., MA .... CJ
Cundiff, Margaret, MSN .... NURS
Cuneo, Linda, MA .... MUSIC
Dagher, Joseph, P., MA .... ENG
Delonis, Richard, JD .... CJ
Dembicki, Helen, MA .... ENG
Derr, Carol, L., MA .... SOC
Donkers, Sylvia, MEd .... OIS/BUS
Dostal, Frederick, MB .... ACCT
Downs, Robert, F., MA .... ART
Driscoll, Faye, MA .... COUNS/HDS
Edwards, Allan, EdD .... MATH
Ellis, Mark, JD .... COMA
Flamme, Albert, BS .... MATH
Friedrich, Paul, MA .... MATH
Galbraith, Stuart, MA .... WELD/RI
Gibbons, Thomas, MA .... ECON/POLS
Glass-Boyd, Crystal, MA...................... GEOG
Gordon, Richard, F., SPA .... BUS
Grewe, Barbara, BSN .... NURS
Griffith, Robert, MBA .... ACCT

Hanert, Frederick, MA .... COUNS
Harden, Shirley, EBM .... MUSIC
Harm, Nancy, EdS .... PSYCH
Harper, Ellen, MSA .... AHE
Hershoren, Gary, EdD .... COUNS
Holman, Cheri, MA .... MATH/OIS
Hopfner, John, MBA .... BUS
Horvath, John, SpA .... PSYCH
Hurick, Patricia MA .... COUNS
Jacobs, Jan, PhD .... PSYCH
Jenvey, Alan, MBA .... CIS
Johns, Michael, MA .... HIST
Jooharigian, Robert, PhD .... PHIL
Kavalhuna, Carol, MAT .... MATH
Keller, Mary, J., BS .... CCD
Kitakis, Frank, G., PhD .... BIOL
Kiyak, James, MS .... MATH
Ko, Chung, Y., MS .... CHEM
Koelzer, Leonard, MBE .... CIS/ACCT
Korenchuk, Nancy, I., MA .... COMA
Lawton, Corazon, MEd .... MA
Lesko, John, MS .... PHYSICS
Lindenberg, Arthur, MFA .... ENG
Lonigro, Antonio, MA .... SPAN
Madsen, James, MA ....CJ
Marilley, David, BS .... MATH
McCartney, James, MA .... BUS
McPeak, Russell, MA .... BUS/MATH
Meehan, Cheryl, MEd .... MATH
Meehan, George, MEd .... MATH
Melia, Nancy, BS .... BIOL
Mendenhall, Heather, BSN .... NURS
Misiak, Christopher, BA .... CAP/CM
Monge, John, MSA .... PA
Moy, William, AAS .... RI
Neilands, Joyce, Med .... MATH
O'Kelly, James, MA .... POLS/SOC/COR
Oakes, Michael, MA .... GEOG
Olech, Timothy, MS .... BIOL
Parsons, Wayne, A., MA .... CIS
Patchin, Ellen, MS .... BIOL/CON
Phillips, Clyde, T., MS .... CIS
Pickett, Kenneth, M., MS .... RI/MET
Poledink, Alice, MA .... ENG
Probelski, James, MS .... MATH
Rabotnick, Seymour, MBA .... BUS/ACCT
Reynolds, John, R., MA .... HIST
Robinson, Ronald, MA .... POLS
Rogowski, Ronald, MA .... COUNS/HDS
Safran, Kenneth, JD .... BUS
Sarris, Cynthia, MFA .... ART
Sarris, Stephanie, MFA .... ART
Schluter, P. Carl, JD............................... BUS
Schuby, Thomas, MA .... SOC
Segowski, Edward, MEd .... MATH
Sikorski, Gary .... PA
Skinner, Robert .... PE
St John, Beverly, J., MS .... BIOL
St. Chur, Joseph, BE .... RI/ELECT/BMET
St. Louis, Mary, MA .... MATH
Standish, Marc, MA .... ENG
Stanley, Dorothy, MA .... MATH
Sylvester, James, MEd .... COUNS
Szabo, Sharon, MBEd .... CIS
Temporelli, Barbara, MS .... CHEM
Trembath, Darryl, MBA .... BUS

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Vukirovich, Sylvia, EdD .... COUNS
Wasson, Samuel, MSEE .... ELECT
Weiskopf, Barbara, MS .... PSYCH
Westover, Glenda, MA .... MATH/RI
Woods, Robert, MA .... ENG/PHIL
Worosz, Gregory, MBA .... BUS
Wroblewski, Veronica, MA .... COLLS
Yee, Donald, MA .... BUS
Zimmerman, Nancy, MA .... COUNS
Zurel, Richard, MA .... ANTH/ARCOL

ADJUNCT ASSOCIATE PROFESSOR

(Min. 8 yrs. service & 150 points)

Allen, Robert, PhD .... PHIL
Badura, Arlene, MBA .... COMA
Bagdadchi, Mahin, MS .... CHEM
Bartha, Paul, Z., MS .... CIS
Binkowski, Christine, MS .... MA/HIT/MR
Bodrie, Carol, BSN .... AHE/NURS
Brown, Craig A.. .... CAP
Brown, Kathy, MA .... ACCT/MATH
Cieslak, Daniel, H., BS .... BUS
Denoyer, Georgia, BS .... AHE/MA
DiDonato, Jeanine, A., MS................. MATH
Hackman, Bruce, MA .... COMA
Huber, William, BBA .... CIS
Josiah, George, MS .... MATH
Jubenville, Lawrence, ME .... SOC
Julian, Bruce, BA .... CIS
Kasenow, Gary, JD .... COR
Kaufman, Judith, MEd,MA .... CPPC/HDS
Kilbert, Louis PhD .... CHEM
Kohlert, Peter, A., MSA .... MATH
Kulnis, Edward, MA .... ECOUN
Lee, Matthew, BA............................. MFG/RI
Levy, Barbara, S., MSN .... NURS
Liss, Marianna, MA .... COMA
Little, Patricia, MA .... ECOUN
Martoia, Suzanne, BSN .... NURS
McAllister, Emily, MS .... MATH
Moucoulis, Ellen, MA .... ART
Moylan, Mark, MA .... COMA
Patail, Bryanne, MLS .... ELECT/BMET
Perry, Patricia, MS .... GEOL/GEOG
Perry, Robert, ... FIRE
Pritt, Jeanette, MA .... COMA
Pylvainen, Sandra, MA .... ENG
Ramia, Rafael, BS .... CIS
Rejniak, Christine, MA .... COLLS
Reppenhagen, Gilbert, ME .... ENG
Schaeli, Leopold, CMC .... CAP
Shuput, Evelyn, MA .... ECOUN
Sim, Julie, MA .... POLS
Simo, C.T., MSA .... BUS
Sitzler, Mardell, MA .... MATH
Smilnak, John, AAS .... FIRE
Smith, Craig, MA .... ART
Spiro, Steven, H., PhD .... PSYCH
Stanton, Fred, BS .... PA
Swarup, Chitra, MS .... MATH/RI
Talbert, Linda, S., MA .... COLLS
Taylor, Kathy, BS .... MT/HIT/MR
Turnau, III, William, BS .... DRFG/CAD
Valenti, Judith, MA .... ENG
Viksne, Edgar, MBA .... BUS
Wasserman, Melvin, EdD .... HUM
Whitmarsh, Lawrence, MS .... QM

ADJUNCT ASSISTANT PROFESSOR

(Min. 3 yrs. service & 100 points)

Abani, Kaveh, MA .... CIS
Alexander, Keith, BA .... CIS
Al-Shemeri, Furat, Ph.D .... BIOL
Alway, Peter, MS .... PHYS
Bartlett, David, MA .... CCD
Behler, Conrad, MA .... HIST
Bell, Patricia Ph.D .... HIST
Bielat, Robert, MA .... ART
Boron, James, MA .... CIS
Breger, William, MBA .... ECON/ACCT
Brooks, Gale, BSN .... NURS
Cardellio, Carla, MA .... BUS
Chuhran, Linda, MSA .... CGT
Cypher, Jeffrey, MS .... BIOL
Dakessian, Hagop, S., MA .... ECON
Derderian, Harry, MBA .... BUS
Doinidis, Elgene, MS .... OIS/BUS
Eliasson, Jonene, MA .... FR
Ellies, Karen, MBA .... BUS
Enteshary-Najafabady, Abbas, MS .... CIS
Fletcher, Debra, MA .... BIOL
Fox, Harvey, BS .... CIS/OIS
Frank, Robert, ... EMT
Garcia, Glenda, MA .... PSYCH
Gates-Palombo, Debora, MA .... ECOUN
Grant, Dorothy, MA .... COLLS
Grodsky, Elliott, MA .... ENG
Han, Sheng, C., MSW .... COR
Harper, Michael , AAS .... FIRE
Hays, Samuel, MA .... ENG
Hummer, Herbert, MS .... COR
Jackson, Harold, MA .... MATH
Kiurski, Thomas, MPA .... FIRE
Kurland, Sheila, MS .... BIOL
Laberge, Brend, BSN .... NURS
Lane, Robert, MA .... BIOL
Lovelace II, Robert, AS .... EMT
Miles, Lois, MPA .... COR
Modlin, Russell, BSN .... NURS
Mogelnicki, Margaret, MA .... CIS
Morton, Harrison, BS .... MATH
Murphy, Susan, MBA .... CIS
Nadon, Robert, MA .... FIRE
Pederson, Vera, MA .... CCD
Peters, Chris, AAS ...BMET/ELECT/COMPS
Porter, Donald, BS .... CIS
Qiu, Yun, MS .... MATH
Redmond, Charles, MS .... CIS
Rivard, Clarence, BA .... FIRE
Roney-Hays, Sandra, MA .... SOC/ANTH/PSYCH
Roth, Diane, MA .... MATH
Rothstein, Barbara, MA .... GER
Saratovtsev, Dena, BA .... ENG
Snyder, Jill .... CAP
Stovall, Clarice, MA .... COR
Switalski, Jurgin, Ph.D .... CHEM
Teska, Jane, MA .... ELECT/RI
Towner Jr., Melvin, MBA .... CIS
Trpovski, Jovan, BAA .... POLS
Wlosinkski, Raymond, BS .... FIRE
Yemets, Aleksandr, MS .... MATH

Emeritus–Honoraire Employees

❖ADAMS, JON P. 1965-1973
    Dean of Applied Sciences Emeritus
AHLAND, VIRGINIA 1969-1991
    Secretary Learning Resources Honoraire
ALLEN, KENNETH M. 1965-1993
    Biology Professor Emeritus
ALLISON, LEA M. 1975-1998
    OIS Associate Professor Emeritus
❖ANDREWS, ELIZABETH 1973-1989
    Assistant Dean, CES Emeritus
ARLEN, RICHARD 1969-1994
    Accounting Professor Emeritus
ATTALAI, PETER 1964-1984
    German, Spanish Professor Emeritus
BAUMGARTNER, WILLIAM H. 1967-1986
    Electronics Professor Emeritus
❖BEDFORD, JOHN P. 1964-1981
    Geology Professor Emeritus
BENSON, RICHARD 1967-1993
    Culinary Arts Professor Emeritus
BLACK, AGNES J. 1973-1992
    Personnel Specialist Honoraire
BLACK, ROBERT J. 1966-1992
    Art Professor Emeritus
BLOOM, BRADLEY 1968-2001
    Music Professor Emeritus
BLOOM, STUART C. 1965-1996
    History Professor Emeritus
BOGARIN, RUSSELL 1965-1991
    Registrar Emeritus
BOLCER, EILEEN 1971-1995
    Nursing Professor Emeritus
BOYE, DALE 1970-1995
    Mathematics Professor Emeritus
BOYCE, MARILYN JOYCE 1973-1994
    Doc-U-Center Supervisor Honoraire
❖BRADNER, ERIC 1961-1971
    President Emeritus
BREITHAUPT, ROBERT L. 1966-1987
    Assistant Dean of Culinary Arts Emeritus
BURNELL, JOHN R. 1968-1998
    Manufacturing Professor Emeritus
BURNSIDE, ROBERT 1967-1996
    Counselor Professor Emeritus
BUTLER, PATRICK 1962-1984
    Director of Library Emeritus
CARLETON, MIDGE 1970-2002
    Associate Dean-Sciences Emeritus
CASTILLO, CHARLES W. 1964-1985
    Communication Arts Professor Emeritus
❖COLLINS, LOIS 1970-1993
    Secretary to the Dean of Educational
    Services Honoraire
COOK, LOWELL T. 1967-1997
    Business Professor Emeritus
COTTON, SHARON A. 1980-2000
    Accounting Professor Emeritus
COVERT, CHRISTINE 1965-1982
    OIS Professor Emeritus
DAGHER, JOSEPH 1967-1988
    English Professor Emeritus
❖DANSBY, EDWYNNA 1979-1994
    Dean of College Centers Emeritus
DIEBEL, THADDEUS E. 1973-1985
    Dean of College Centers Emeritus
DOLL, RODMAN E. 1968-1997
    Mathematics Professor Emeritus

DuFort, Robert C. 1969-1999
Art Professor Emeritus

Edmunds, Margaret 1991-2002
Continuing Education Office Assistant Honoraire

Ellis, Midge B. 1974-1991
Coordinator of Special Events Honoraire

Feenstra, Fernon 1964-2002
Associate Dean-Business and Technology Emeritus

Ferrari, Dorothy E. 1982-1992
Personnel Specialist Honoraire

Florek, Saundra P. 1969-1999
Dean of Marketing and Development Emeritus

Foley, Maureen F. 1983-2000
Chemistry Professor Emeritus

❖Gaitskill, Lawrence R. 1964-1985
Political Science Professor Emeritus

❖Garritano, Rocco 1966-1991
Mathematics Professor Emeritus

Geil, Barbara A. 1964-1995
Vice President for Student Services Emeritus

Gilbert, Betty J. 1986-2001
Executive Director of Human Resources Emeritus

Green, Anne 1978-2002
Administrative Coordinator to the President Honoraire

❖Gudan, Sirkka 1980-1998
Assistant Dean for Academic and Assessment Services Emeritus

Hammond, Patsy R. 1970-1995
Nursing Professor Emeritus

Heinzman, David L. 1970-1986
Assistant Dean for Instruction Emeritus

Hershoren, Gary 1967-1996
Counselor Professor Emeritus

Hurick, Patricia 1990-2002
Counselor Professor Emeritus

❖Huston, D. Louise 1964-1982
Director of Accounting, Payroll Honoraire

Jawor, Mary 1964-1989
English Professor Emeritus

❖Jones, Claren 1964-1979
Chemistry Professor Emeritus

Keene, Robert 1968-1979
Instructional Vice President Emeritus

❖Kelley, Ralph B. 1964-1984
English Professor Emeritus

Kelly, Cecilia 1964-1983
Art Professor Emeritus

❖Kianfar, Mehdi 1967-1987
Political Science Professor Emeritus

Kirkland, Jo Ann 1989-2000
Human Resources Operations Assistant Honoraire

❖Kolenda, Janet 1971-2001
Nursing Professor Emeritus

Kyriacopoulos, John 1965-1992
English Professor Emeritus

Lao, Lincoln 1968-1999
Art Professor Emeritus

Larkin, Virginia E. 1985-1998
Secretary to Associate Dean of College Centers Honoraire

Lesko Jr., John S. 1969-2002
Physics Professor Emeritus

Lichty-Mayes, Elizabeth F. 1967-1992
English Professor Emeritus

Lindenberg, Arthur 1967-2002
English Professor Emeritus

❖Lindner, W. Kenneth 1962-1987
Vice President for Business Services Emeritus

Loehne, Joyce 1969-1986
Assistant to the Vice President for Business Services Honoraire

❖Lockwood, Bryce 1964-1988
Physics Professor Emeritus

Ludwig, Joyce 1964-1992
Secretary to the President Honoraire

Lurain, Jane 1966-1985
Secretary to Assistant Dean Community Services Honoraire

Martin, Candis 1965-1997
Assistant Dean Math, Information Systems, and Business Emeritus

Matson, Richard E. 1968-1990
Computer Information Systems Professor Emeritus

Mayes, La Salle S. 1964-1992
English Professor Emeritus

McDowell, Richard W. 1981-2001
President Emeritus

❖McNally, Edward V. 1963-1981
Vice President for Student Affairs Emeritus

Miller, Ralph 1966-1985
Geography Professor Emeritus

Minock, Donna 1967-1996
English Professor Emeritus

Moorhead, Rex K. 1968-1981
Mathematics Professor Emeritus

Morgan, Harriet C. 1964-1990
Biology Professor Emeritus

Munn, Wilson E. 1964-1995
Mathematics Professor Emeritus

Munro, Gerald 1970-1996
Executive Director of Human Resources Emeritus

Naslund, Raymond L. 1966-1985
Accounting Professor Emeritus

Nickels, William G. 1968-2001
Chemistry Professor Emeritus

Niergarth, Grover G. 1965-1990
Biology Professor Emeritus

Ochs, Marion J. 1964-1980
Business Professor Emeritus

Olson, John A. 1973-1985
Librarian Emeritus

Ordowski, Lawrence E. 1965-1995
Associate Dean of Liberal Arts Emeritus

O'Toole, Michael A. Jr. 1964-1992
English Professor Emeritus

Perkins, W. David 1964-1985
English Professor Emeritus

Pike, Jean 1964-1997
Associate Dean of Students Emeritus

Pletcher, E. Rachel 1968-1983
Payroll Employee Honoraire

❖Poupart, Oscar 1967-1992
CIS Professor Emeritus

Proffitt, Carol M. 1992-1999
Document and Layout Associate Honoraire

Raby III, Adelard H. 1981-2001
Vice President for Business Services Emeritus

Randall, Ronald 1969-2002
Registrar Emeritus

Richmond, Merle J. 1970-1999
Accounting Professor Emeritus

Rogowski, Ronald W. 1970-2001
Counselor Professor Emeritus

Roncoli, Thomas C. 1967-1992
Physical Education Professor Emeritus

Rousseau, Clara M. 1962-1981
Administrative Assistant Honoraire

❖Rudick, Lawrence W. 1964-1983
Communication Arts Professor Emeritus

❖Rupp, Louis E. 1969-1988
Counselor Professor Emeritus

❖Ryan, William A. 1964-1979
Geology Professor Emeritus

Sampson, Dorothy 1967-1998
Nursing Professor Emeritus

Sattig, Harriett H. 1963-1980
Director of Health Careers Emeritus

Scharmen, Larry L. 1985-2000
Biomedical Engineering Technology Professor Emeritus

Shon, Maybelle B. 1966-1983
Secretary to Dean of College Centers Honoraire

Sipes, Delavan W. 1965-1987
Electronics Professor Emeritus

Smith, Mary 1965-1988
Nursing Professor Emeritus

❖Snyder, Edmund S. 1962-1974
Librarian Professor Emeritus

Snyder, Gordon G. 1965-2000
Biology Professor Emeritus

Stec, Leonard 1966-1990
Culinary Arts Professor Emeritus

Stefanski, Frederick 1966-1980
Instructional Dean Emeritus

Sutherland, Roger A. 1964-1990
Biology Professor Emeritus

Sylvester, James 1967-1997
Counselor Professor Emeritus

Szabo, Sharon F. 1981-2001
Computer Information Systems Professor Emeritus

Tang, Kin Ling 1990-1999
Psychology Associate Professor Emeritus

Tews, Carolyn H. 1977-1999
Mathematics Professor Emeritus

Tomalty, R. Elaine 1987-2001
Secretary for Women's Resource Center Honoraire

Tomalty, Richard L. 1970-2000
Counselor Professor Emeritus

Verlinich, Mary 1973-1989
Secretary for Financial Aid Honoraire

Vukmirovich, Sylvia 1967-2001
Counselor Professor Emeritus

❖Watson, Andrew C. 1964-1999
Chemistry Professor Emeritus

Webber, John R. 1965-1993
Director of Counseling Emeritus

Wilson, John M. 1965-1993
History Professor Emeritus

Witten, Dorothy B. 1975-2001
Child Care Development Professor Emeritus

Witten, John D. 1967-2001
Counselor Professor Emeritus

Woltz, Phebe M. 1965-1982
Accounting Professor Emeritus

Worosz, Gregory J. 1969-2000
Business Professor Emeritus

Zande, Geraldine 1976-1997
Senior Buyer, Purchasing Honoraire

❖deceased

Advisory Committees

Accounting

Richard Berschback, CPA	Associate Professor of Accounting, Walsh College, Troy
William Breger	Accountant, W. A. Breger, Bloomfield Hills
Janet Evans	Chief Financial Officer, Rm Motorsports, Inc., Wixom
Michele Hill, CPA	Buyer of Consulting Services, Ford Motor Company, Dearborn
Gerard Mellnick, CPA	Chief Financial Officer, Building Industry Association of Southeastern Michigan, Farmington Hills
David Williamson, CPA	Post, Smythe, Lutz & Ziel, Plymouth

Biomedical Engineering Technology

Joe Acosta	System Director-DMC, Clinical Engineering, Grace Hospital, Detroit
Ronald Edmonds	Manager, Clinical Engineering BMET, Providence Hospital, Southfield
Jane Focht, CBET	Certified Biomedical Engineering Technologist, Beaumont & Service Co. LLC, Royal Oak
Marty Gibson	Manager, Clinical Engineering, St. Joseph Mercy Hospital, Ann Arbor
Steven J. Henning	Manager of Biomedical Engineering, Botsford Hospital, Farmington
David C. Lawton, Jr.	Sales Manager, A.S.A.P. Services, Novi
Bryanne Patail	Biomedical Engineer, Department of Veterans Affairs, Ann Arbor
Chris Peters,CBET	University of Michigan Hospitals, Ann Arbor
Condon A. Quicci	Supervisor, Clinical Engineering, Sinai-Grace Hospital, Detroit
Paul Roberts	Director of Biomedical Engineering, University of Michigan Hospital, Saline
Richard Sutton	Manager of Clinical Contracts, St. John Hospital and Medical Center, Detroit

Child Care and Family Services

Shirley Baker-Reed	Licensing Consultant, Child Day Care Licensing, Department of Consumer & Industry Services, State of Michigan, Detroit
David Bartlett	Special Education Teacher, Northville Public Schools, Northville
Dorene Brown	Head Start Social Worker and Training Coordinator, Detroit Public Schools and Wayne State University.
Ingrid Crepeau	Director of T.L.C. Preschool and Kindergarten, Livonia
Bethany Duncan	Home Day Care Provider, A Dream Come True Day Care, Inkster
Patricia Kirksey	Director of Prep Program, Jackson Center, Livonia
Ray Roberts	Executive Director, R. Roberts Residential Services, Inc., Redford
Patricia Sargent	Director of Early Childhood, Downriver Guidance Clinic, Lincoln Park
Carol Smiley	Director of Early Childhood, Livonia Public Schools, Livonia
Jason Vance	Birght-Horizons Family Solutions, Program Coordinator, UAW-Ford FSLC Child Development Center

Computer Assisted and Manufacturing for Quality Production

Robert Burnham, MSE, PE	Vice President, Engineering, SportRack, An Advanced Accessory Systems Company, Sterling Heights
Kevin Crute	Chief Operating Officer, Cimatron Technologies, Inc., Livonia
Gene Keyes	President, Keyes & Company, Inc., Highland
David J. Lawrence	Process/Dimensional Control Engineer, Ford Motor Company, Wayne
Matthew J. Lee	Training Developer, Ford Motor Company, Plymouth
Tom Llewellyn	Retired Toolmaker, Milford

Computer Graphics Technology

Richard Cochrum	Mac-Operator, Valassis Communications, Inc., Livonia
Susan M. Daly	Assignment Manager, Portfolio, Southfield
Ed Hubert	Department Chair, Visual Communication, Livonia Career/Tech Center, Livonia
John T. Kosinski II	Owner, John T. Kosinski Design Studio, River Rouge
George Sepetys	Vice President, Director Graphic Design Consulting, Ford and Earl, Troy

Computer Information Systems and Computer Service

Ken Demski	Retired Senior Manager, Manufacturing Systems, Information Technology Management, Daimler Chrysler Corporation, Auburn Hills
Bill Tancill	Retired Systems Implementation Manager, Ford Investment Enterprises Corporation, Detroit
Tom Troschinetz	Consultant, Ajilon Consulting, Southfield
Karl Zager	Consultant, Plante & Moran LLP, Southfield
Vincent Zebraitis	Systems Engineer, Cisco Systems, Inc., Southfield

Correctional Science

Robert Brown, Jr.	Former Director, Michigan Department of Corrections, Lansing
Theodore Johnson	Attorney, 35th District Court Magistrate, Plymouth
Jimmy Stegall	Warden, Macomb Regional Correctional Facility, New Haven
Clarice Stovall	Warden, Western Wayne Correctional Facility, Plymouth
Michael Swope	Retired, Michigan State Police Officer, Sterling Heights

*March 20, 2003

Culinary Arts and Culinary Management

Milos Cihelka	Master Chef, Retired, Bloomfield Hills
Randy Emmert	Executive Chef, The Golden Mushroom, Southfield
Ted Gillary	General Manager, Detroit Athletic Club, Detroit
Paul Grosz	Executive Chef, The Whitney, Detroit
Rick Halberg	Chef/Owner, Emily's Restaurant, Northville
Lorraine Platman	Chef/Owner, Sweet Lorraine's, Southfield
Matt Prentice	Owner/Entrepreneur, Morels, Bingham Farms
Leopold Schaeli	Master Chef, Retired, West Bloomfield
Takashi Yagihashi	Executive Chef, Tribute, Farmington Hills

Design

David Brown	Product Design Engineer, Ford Automotive Operations, Body Engineering Closures, Allen Park
Hank Knott	Product Design Manager, GKN, Romulus
John Kurtz	Technology Manager, Tesco Technologies, Warren
Thomas Miller	GDT Technical Representative, Dearborn
Steven Roddy	Accounts Manager, STR Services, Livonia

Electronics

Thomas Chrapkiewicz	Design Engineering, Philips Semiconductors, Dearborn
Darlene Delonis	Biomedical Engineering Technologist, William Beaumont Hospital, Royal Oak
Kenneth Demski	Retired Senior Manager, Manufacturing Systems, Information Technology Management, Daimler Chrysler Corporation, Auburn Hills
John Patchett	Principle Area Leader, Primary Services, Detroit Edison Company, Detroit
Ethan Rosenbaum	Biomedical Engineer, Providence Hospital, Southfield
Frank Schmid	Consultant, Farmington Hills
Richard Snyder	Engineering Technician, Detroit Edison Company, Detroit
Jef Spencer	Director, Infinity Performance Systems, Novi

Emergency Medical Technology

Tom Ayers	Education Manager, Huron Valley Ambulance Service, Ann Arbor
Robert Domeier	Physician, Medical Director, Huron Valley Ambulance Service, Ann Arbor
Robert Frank	Paramedic Instructor, Huron Valley Ambulance Service, Ann Arbor
Gerald Zapolnik	Vice President/Support Services, Huron Valley Ambulance Service, Ann Arbor

Equine Arts and Science

Frank Erickson	Former Student, Retired, Novi
Julie Fershtman	Attorney, Farmington Hills
Kathy Monge	Horse Owner, Livonia
Jim Rendall	Wayne County Sheriff Mounted Police, South Lyon
Carolyn Tews	Horse Owner, Retired, Dexter

Fire Regional Training Center

James Allen	Chief, Northville Fire Department, Northville
Deward Beeler	Regional 3 Supervisor, Michigan State Fire Fighters Training Council, Lansing
Tim Bosman	Deputy Chief, Riverview Fire Department, Riverview
Robert Dahlman	Chief, Wayne Fire Department, Wayne
David Hiller	Director, Grosse Pointe Park Department of Public Safety, Grosse Pointe Park
Randall Layton	Retired Chief, Southgate Fire Department, Southgate
James Moran	Officer, Grosse Pointe Park Department
Daniel McNamara	4th District Vice President, Michigan State Fire Fighters Union, Lansing
James Moran	Officer, Grosse Pointe Shores Public Safety, Grosse Pointe Shores
Leonard Sobieski	Chief, Redford Twp. Fire Department, Redford
Michael Todd	Chief, Garden City Fire Department, Garden City
Keith Weisgerber	Training Coordinator, Michigan Fire Fighters Training Council, Lansing

Health Information Technology, Medical Transcription and Coding Specialist

Gail Alder	Registered Health Information Administrator, Alder Associates, Inc., Farmington Hills
Cheryl Kasparek	Registered Health Information Technician, Blue Care Network, Southfield
Nancy Klinkhammer	Registered Health Information Administrator, Beaumont Hospital, Royal Oak
Shirley Laszlo	Registered Health Information Technician, Quality Management Coordinator, Taylor
Patricia McLane	Registered Health Information Administrator, Henry Ford Community College, Dearborn
Diane Repshinka	Registered Health Information Technician, University of Michigan, Ann Arbor
Shirley Wise	Registered Health Information Administrator, Kern Hospital, Warren

Kids on Campus

Bill Camp	Executive Director of Secondary Education, Wayne/Westland Schools, Westland
Gene Charette	Child Development Facilitator, Taylor Public Schools, Taylor
Elizabeth Hammer	Delta Gifted Department Chairperson, Farmington Public Schools, Farmington
Terri Michaelis	Elementary TAG Lead Teacher, Plymouth/Canton Community Schools, Canton
Susan Ryan	Gifted Specialist, Livonia Board of Education, Livonia
Nancy Schieb	Academically Talented Facilitator, Northville Schools, Northville
Ron Sutherby	Principal/Gifted & Talented Coordinator, Westwood Elementary School, Dearborn Heights
Donna Tinberg	Director of Student Services, Novi Community Schools, Novi
Cheryl Willett	Director of Curriculum and Instruction, Garden City Schools, Garden City
Mary Angela Winter	Program Director/TAG Coordinator, Van Buren School District, Belleville

Laser Electro-Optics Technology

Frank D. Brennan	Lasers Sales Manager, TRUMPF, Inc., Plymouth
Randy Cook	Manufacturing and Test Supervisor, Rofin Sinar, Plymouth
Richard Corey	Application Engineer, Rofin Sinar, Plymouth
Richard R. Davis	Sales Manager, PRECITEC, Fenton
Mark Gartner	STA Process Specialist Welding/Joining, Ford Motor Company, Dearborn
Gerry Herman	Senior Laser Applications Engineer, GSI Lumonics Corporation, Livonia
Alan Miller	Senior Welding Engineer, Ford Motor Company, Livonia
Robert Ruokolainen	Senior Project Scientist, General Motors Research & Development, Warren
John M. Ruselowski	Director of Marketing and Sales, Ann Arbor Machine Company, Chelsea

Law Enforcement—Continuing Education

Kevin Dawley	Lieutenant, Livonia Police Department, Livonia
Daniel Grant	Chief, Brownstown Township Police Department, Brownstown
David Harvey	Chief, Garden City Police Department, Garden City
Victor Hess	Chief, Metro Parks Public Safety, Wayne County
James Lazar	Deputy Chief, Dearborn Heights Police Department, Dearborn Heights
Robert Metzger	Chief, Huron Township Police Department, New Boston
Richard Niemisto	Assistant Chief, Farmington Hills Police Department, Farmington Hills

Learning Assistance Center and Developmental Education

Mary Couillard	Career Intern Coordinator, Livonia Public Schools, Livonia
Jan Kavulich	Counselor, Plymouth High School, Canton
Rick Menoch	Counselor, Canton High School, Canton
Delores Norman	Special Populations, Detroit Public Schools, Detroit
Lois Rice	Adult ESL Instructor/Supervisor, Livonia Dickinson Center, Livonia
Jan Skinner	Rehabilitation Counselor, Michigan Department of Career Development, Wayne

Marketing and Applied Management

Robert Bethel	Owner, Bethel Consulting, Novi
John Hopfner	Retired Manager, Ford Motor Company, Dearborn
Norma La Vallee	Account Manager, Industrial Technology Institute, Ann Arbor
Tom Simo	Realtor, Century 21, Northville

Medical Assisting

Barbara Grzebik	Certified Medical Assistant, Physician's Office, Garden City
Diane Hoffman	Certified Medical Assistant, Physician's Office, Livonia
Toy Lin Lee	Certified Medical Assistant, Wayne State University, Detroit
Gregory Monroe	Doctor of Osteopathy, Garden City Hospital, Garden City
Nancy Pichla	Certified Medical Assistant, Oakwood Health Care, Dearborn
Char Sobieski Greco	Network Control Analyst, CareTech Solutions, Inc., Dearborn
Karan Thompson	Certified Medical Assistant and Registered Medical Assistant, Tempro, Westland

Metallurgy and Materials Science

Charles Bessey, CHMM	Supervisor of Special Projects-Safety Director, KOLENE Corporation, Detroit
Nicholas Gianaris, PhD	Light Weight Materials Specialist, Visteon Chassis Systems, Dearborn
M. Tod Gonzales	President, Procoil, Canton
Glen Hineman	Metallurgist, Eaton Steel Corporation, Oak Park
William F. Jandeska, PhD	Manager, Powder Metallurgy Technology, Powertrain Division, General Motors Corporation Headquarters, Pontiac
David Meuleman, PhD	Senior Staff Specialist, Applications Technology Department, National Steel Corporation, Trenton
Kenneth M. Pickett	Metallurgy Technical Fellow, Six Sigma Black Belt, Visteon Chassis Systems, Dearborn
Daryl R. Wilusz	Corporate Materials Analysis, Masco Corporation, Research Development, Taylor

Nursing—Associate Degree and Practical

Judith Caroselli, RN	Director of Operations, Westland Convalescent Center, Westland
Marilyn Harton, BSN	Degree Completion Coordinator Madonna University, Livonia
Linda Mondoux, MS, RN, CS	Consultant for Strategy Long Term Care, Farmington Hills
Sandy Szekely	Nurse Development Specialist, Oakwood Hospital, Dearborn
Karen Fralick	Manager of Nurse Recruitment, Detroit Medical Center, Detroit
Carol Ann Fausone	Director of Nursing, St. Mary Hospital, Livonia
Lisa Chudzinski	Director of Nursing, Whitehall Healthcare, Novi
Mary Ellen Risch	Director of Nursing Resources, Sinai Grace Hospital, Detroit

Office Information System

Shelley Boatright	Communications Manager, Little Caesar Enterprises, Inc., Detroit
Ree Taylor	Community Development Director, Forgotten, Harvest, Southfield
Beverly Valente	Assistant Treasurer, City of Novi, Novi

Piano Teacher Certificate Program

Jean Candlish	Certification Board Committee, Michigan Music Teachers Association, Livonia
Alex Hanway	Vice President, Hammell Music, Livonia
Jean Schwartz	Piano Teacher Training Committee, Michigan Music Teachers Association, Livonia
Marilyn Sluka	Vice President, Michigan Music Teachers Association, Livonia

Senior Adult

Anita Herman, Ed.D	Chair, Department of Gerontology, Madonna University, Livonia
Sue Koivula	Coordinator, Senior Adult Services, Northville
Esie Mahaffy	Director, Wayne County RSVP, Detroit
Kathy Moore	Area Manager, Wayne County RSVP, Dearborn Heights
Karl Peters	Recreation Supervisor, Livonia Civic Park Senior Center, Livonia
Cheryl Stephanian	Senior Program Coordinator, Maplewood Community Center, Garden City
Roger Sutherland	Retired Instructor, Schoolcraft College, Livonia

Wayne County Regional Police Academy

William Barron	Chief, Grosse Ile Police Department, Grosse Ile
Robert Dickerson	Deputy Chief, Wayne County Sheriff's Department, Detroit
Michael Duggan	Prosecutor, Wayne County, Detroit
Al Fincham	Chief, Grosse Pointe Department of Public Safety, Grosse Pointe
Daniel Grant	Chief, Brownstown Township Police Department, Brownstown Township
Victor Hess	Chief, Metro Parks Public Safety, Wayne County
Anthony Shannon	Director of Homeland Security, Wayne County, Detroit
Michael Sumeracki	Chief, Wayne Police Department, Wayne

Women's Resource Center

Charlotte Adams	Member, Business and Professional Women, Retired Program Specialist, Office of Health Occupations, Westland; Board of Directors member, YWCA, Western Wayne County
Elizabeth Allen	Business Proprietor, Certified Financial Planner, Farmington Hills
Renee Boving, MD	Retired Professor of Anatomy, WSU School of Medicine Volunteer and Peer Counselor, Women's Resource Center, Schoolcraft College, Livonia
Laura Callow	Women's Rights Advocate, Human Relations Commission member, City of Livonia, Livonia
Mary Dumas	Past member of Board of Directors, YWCA Western Wayne County, Livonia; former Wayne County Commissioner.
Dolly Ettenhofer	Stylist, Charisma Salon, Livonia
Elizabeth M. Johnson	Attorney-at-Law, Plymouth
Sue Mason	Editor, Garden City *Observer and Eccentric*, Livonia & Westland
Vera McGregor	Retired Placement Specialist, Michigan Employment Security Commission, Inkster
Nancy Petrucelli	Realtor, Coldwell Banker, Plymouth.
Val Vandersloot	Financial Advisor, Livonia City Council Member, Livonia
Margo Worley	Retired Assistant to a Financial Planner & Securities Coordinator, Michigan Financial Companies, Farmington Hills

Welding

Stuart Galbraith	Retired CEO Weldcraft, Plymouth
Charles Makins, Jr.	Production Supervisor, Super Duty & Excursion Evaporator and Plenum Assemblies, Visteon, Plymouth
Larry Tatro	Vice President Sales, Welding Robotics & Automation, Plymouth Wayne Welding Supplies, Inc., Wixom
Daniel Wellman	General Manager, Hercules Welding Products, Warren
Robert Wilcox	Program Buyer, Visteon Automotive Systems, Allen Park

Campus Phone Directory

Admissions—Schedules/Catalogs	McDowell Center	734-462-4426
American Harvest Restaurant	VisTaTech Center	734-462-4488
Athletics	Physical Education Building	734-462-4400, Ext. 5564
Bookstore	Service Building	734-462-4409
	Radcliff Center	734-462-4778
Business Development Center	VisTaTech Center	734-462-4441
Cafeteria	VisTaTech Center Waterman Wing	734-462-4471
Career Planning & Placement Center	McDowell Center	734-462-4421
Cashier	McDowell Center	734-462-4449
Children's Center	off South Parking Lot	734-462-4442
Continuing Education Services—CES	Continuing Education Center	734-462-4448
Counseling	McDowell Center	734-462-4429
Development & Governmental Relations	Administration Building	734-462-4463
Disabled Student Services	McDowell Center	734-462-4436
Distance Learning	Library	734-462-4532
Doc-U-Center	Liberal Arts Building	734-462-4400, Ext. 5304
Facility Rentals	Continuing Education Center	734-462-4475
Finance & Business Services	McDowell Center	734-462-4416
Financial Aid	McDowell Center	734-462-4433
Grade Reports—Registrar	McDowell Center	734-462-4430
Hearing Impaired Phone Lines	Livonia	734-462-4437
	Radcliff Center….	734-462-4773
Human Resources	Administration Building	734-462-4408
Information	McDowell Center	734-462-4400
Learning Assistance Center	McDowell Center	734-462-4436
Library	Library	734-462-4440
Marketing Department	Administration Building	734-462-4417
Media Center	Library	734-462-4400, Ext. 5330
Office of Instruction	Administration Building	734-462-4451
Payroll	McDowell Center	734-462-4400, Ext. 5368
President's Office	Administration Building	734-462-4420
Public Safety (Security)	Service Building	734-462-4424
Purchasing	McDowell Center	734-462-4444
Radcliff Center	Garden City	734-462-4770
Student Accounts	McDowell Center	734-462-4586
Student Activities	VisTaTech Center Waterman Wing	734-462-4422
Student Newspaper	VisTaTech Center Waterman Wing	734-462-4422
Student Refunds	McDowell Center	734-462-4430
Tennis Courts	Tennis House	734-462-4434
Transcripts—Registrar	McDowell Center	734-462-4480
Veterans Affairs	McDowell Center	734-462-4400, Ext. 5213
Women's Resource Center	McDowell Center	734-462-4443

Index

Do you have limited English Proficiencies?

Schoolcraft College assures that the lack of English skills will not be a barrier to admission into instructional programs. Information in the catalog and schedule of classes is available to limited English proficient students. Please contact Dr. D. Daiek, Learning Assistance Center, 734-462-4436, if you have further questions.

For Spanish Speaking Persons:

Si usted quiere recibir esta información en español, favor de llamar a la Dra. D. Daiek, 734-462-4436. El collegio universitario de Schoolcraft asegura que la falta de habilidad en inglés no será impedimento para personas que quieran ingresar.

About this Catalog

Schoolcraft College has published this Catalog for information purposes only and its contents do not constitute a contract between this institution and prospective or enrolled students.

The information contained in this general College Catalog reflects the current curricula, policies and regulations of the College. However, these are subject to change at any time by action of the Board of Trustees or the administration.

It is the policy of Schoolcraft College that no person shall, on the basis of race, color, national origin, gender, age, marital status, or handicap, be excluded from participating in, be denied benefits of, or be subjected to discrimination during any program or activity or in employment.

Produced by Marketing

In cooperation with Office of Instruction and Enrollment Management.

Program List

LETTERS AND NUMBERS EQUAL SCHOOLCRAFT PROGRAM CODE
Please select a program code that closely matches your potential field of study.
You may change your program code at any time in the Registrar's Office.

Legend
AA = Associate in Arts
AAS = Associate in Applied Science
AE = Associate in Engineering
AGS = Associate in General Studies
AS = Associate in Science
PAC = Post-Associate Certificate
1YC = One Year Certificate

Business Certificate
Accounting 1YC.00001
Basic Business 1YC.00002
Computer Information Systems 1YC.00004
Networking Specialist—NetPrep 1YC.00270
Office Specialist 1YC.00166

Business Associate Degree
Accounting AAS.00005
Computer Information Systems AAS.00012
Cosmetology Management AAS.00010
General Business AAS.00008
Marketing and Applied Management AAS.00009
Office Administration AAS.00133
Small Business Management AAS.00011

**Communications Arts
Associate Degree**
Broadcast Communications AA.00041

Health Certificate
Coding Specialist 1YC.00240
Medical Assisting [1] 1YC.00026
Medical Transcription [1] 1YC.00029
Nursing—Licensed Practical [1] 1YC.00017

**Allied Health
Associate Degree**
Health Information Technology [1] AAS.00153
Nursing—Licensed Practical [1] AGS.00126
Nursing—Registered [1] AAS.00000

Public Service Certificate
Child Care and Development 1YC.00031
Child Care—Family Support 1YC.00143
Child Care—
    Special Needs Paraprofessional 1YC.00032
Child Development Associate 1YC.00034
Emergency Medical Technology 1YC.00024
Firefighter Technology 1YC.00149

Public Service Associate Degree
Child Care and Development AAS.00020
Child Care—Family Support AAS.00243
Child Care—
    Special Needs Paraprofessional AAS.00021
Correctional Science AAS.00132
Criminal Justice AAS.00086
Criminal Justice with Academy AAS.00086
Emergency Medical Technology AGS.00024
Fire Technology AAS.00177
Fire Technology with Academy AAS.00177

Technology Certificate
Computer Aided Drafting—
    ElectroMechanical 1YC.00118
Computer Aided Drafting—Technical 1YC.00119
Computer Graphics Technology Foundation 1YC.00164
Computer Graphics Technology 1YC.00136
Computer Service Technician 1YC.00159
Culinary Arts [1] 1YC.00079
Electronics Service 1YC.00125
Energy Specialist 1YC.00156
Laser Technology 1YC.00059
Metallurgy—Applied Physical 1YC.00124
Music—Foundations 1YC.00162
Music—Intermediate 1YC.00163
Music—Recording Technology 1YC.00144
Piano Teacher 1YC.00115
Welding—Fabrication 1YC.00127

Technology Associate Degree
Biomedical Engineering Technologist AAS.00128
Computer Assisted Manufacturing AAS.00150
Computer Aided Design—Mech. Design AAS.00170
Computer Aided Drafting—Tool Design AAS.00140
Computer Graphics Technology AAS.00028
Culinary Arts [1] AAS.00087
Electronics Technology AAS.00120
Environmental Technology AAS.00176
Manufacturing for Quality Production AAS.00135
Metallurgy and Materials Science AAS.00184
Music—Recording Technology AAS.00244

Post-Associate Certificate [2]
Biomedical Applications PAC.00178
Computer Graphics Technology PAC.00181
Computer Information Systems PAC.00155
Culinary Management PAC.00157
Materials Science PAC.00179

Non-Degree Seeking 00900

> [1] Students must be officially admitted to
> the program prior to selecting core/major
> courses. Call the Office of Admissions,
> 734-462-4426 for more information.
> [2] Prior Associate Degree in the program
> required. See current catalog for additional
> information.

Transfer Programs
Business Related AA.00500
  • Accounting
  • Advertising
  • Business Administration
  • Communications
  • Computer Science
  • Hotel Management
Education AA.00700
  • Elementary
  • Secondary
  • Special
Engineering AE.00039
  • Chemical
  • Civil
  • Computer Systems
  • Electrical
  • Environmental
  • Industrial
  • Materials Science
  • Mechanical
Health Related AA.00600
  • Pre-Dental Hygiene
  • Pre-Dentistry
  • Pre-Medicine
  • Pre-Mortuary Science
  • Pre-Nursing
  • Pre-Occupational Therapy
  • Pre-Optometry
  • Pre-Pharmacy
  • Pre-Physical Therapy
  • Pre-Veterinary
Liberal Arts AA.00042
  • Anthropology
  • Art
  • Biology
  • Chemistry
  • Conservation
  • Criminal Justice
  • Economics
  • English
  • Foreign Language
  • Geography
  • Geology
  • History
  • Mathematics
  • Music
  • Philosophy
  • Physics
  • Political Science
  • Psychology
  • Public Administration
  • Social Work
  • Sociology
  • Statistics
  • Theatre

SCHOOLCRAFT COLLEGE

Application for Admission and ReAdmission

✓Applications are accepted throughout the year

Return your completed application to the Office of Admissions, Schoolcraft College, 18600 Haggerty Road, Livonia, Michigan 48152-2696 **OR APPLY ONLINE!**

applicationforadmissionapplicationforadmissionapplicationforadmission

When do you plan to start school? | 2 | 0 | 0 | | (year)

○ Summer Session (July–August)   ○ Winter Semester (January–April)

○ Fall Semester (August–December)   ○ Spring Session (May–June)

1. NAME (Please use your name as it appears on your Social Security Card. If you do not have a Social Security Card, use your legal name.)

Last (Family Name)   First   Middle

Former Name   Former Name

2. ADDRESS

Number and Street   PO Box or Apartment Number

City   State   Zip Code

3. TELEPHONE

Home   Business   Ext.

4. E-MAIL

Your social security number and date of birth are used for identification purposes. The information in items 6, 7 and 8 is used to fulfill federal and state reporting requirements and is not used to determine admission to Schoolcraft College.

5. SOCIAL SECURITY NUMBER   **6. DATE OF BIRTH**   **7. GENDER** ○ Female

                                                          ○ Male

                          M   M   D   D   Y   Y

8. ETHNICITY ○ White   ○ Asian American   ○ American Indian or Alaskan Native
                 ○ Black or African American ○ Hispanic or Latino   ○ Native Hawaiian or Other Pacific Islander
                 ○ Other

9. CITIZENSHIP ○ USA
                  ○ Non-US   Indicate your status below and provide requested information. You will need to submit documentation for admission. Contact the Office of Admissions at 734-462-4426 for details.

                  ○ Permanent Resident—Resident Alien Number

                  ○ Refugee

                  ○ International Student—Visa Type

                       Home Country

10. PROGRAM OF STUDY (A program code is required and can be changed at any time. See Page 30 for program information.)

Program Code   Program Name

11. What is your primary educational goal at Schoolcraft College? (select one)

- ○ 1 To take classes to earn a Certificate or Associate Degree
- ○ 2 For personal enrichment
- ○ 3 For vocational improvement
- ○ 4 To take classes leading to a Bachelor's Degree
- ○ 5 Other

12. Please tell us your SINGLE most important reason for selecting Schoolcraft College? (select one)

- ○ 1 Cost
- ○ 2 Location
- ○ 3 Class Size
- ○ 4 Reputation
- ○ 5 Programs

13. EDUCATIONAL BACKGROUND

High School   State   if US, city   if non-US, country

High school Diploma?   ○ Yes—Graduation Date: __ / __
(month and year)

○ No   Did you receive a GED?   ○ Yes—GED Date: __ / __
○ No   (month and year)

List all colleges previously attended; list most recent first. Check the appropriate degree earned.
If you did not earn a degree, indicate the number of credit hours earned.

College/University   Degree Earned: ○ Associate   ○ Master's   ○ No Degree   ○ Bachelor's   ○ PhD
Number of credit hours

City   State   if non-US, Country   Number of classes successfully completed

College/University   Degree Earned: ○ Associate   ○ Master's   ○ No Degree   ○ Bachelor's   ○ PhD
Number of credit hours

City   State   if non-US, Country   Number of classes successfully completed

College/University   Degree Earned: ○ Associate   ○ Master's   ○ No Degree   ○ Bachelor's   ○ PhD
Number of credit hours

City   State   if non-US, Country   Number of classes successfully completed

I certify that all the answers in this application are complete and accurate to the best of my knowledge. I understand that falsifying any part of this application may result in cancellation of admission and/or registration. I agree to become knowledgeable about Schoolcraft College's rules and regulations and abide by them.
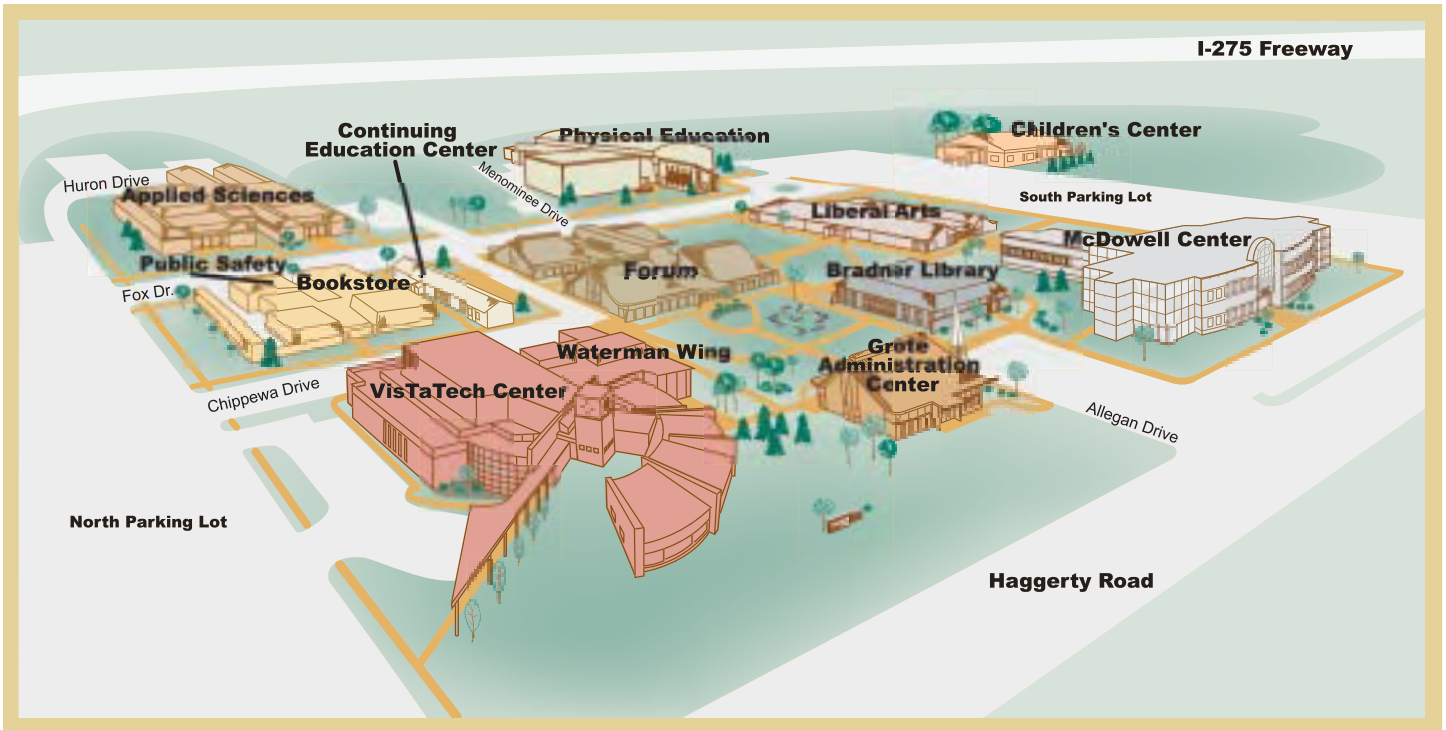
Any student requiring accommodations information for a disability, please contact the Learning Assistance Center at 734-462-4436.

Signature of Applicant _____ Date of Application _____

Office of Admissions
Schoolcraft College
18600 Haggerty Road
Livonia, MI 48152-2696
Phone: 734-462-4426
Fax: 734-462-4553

Campus & Area Maps

Campus map showing building locations including I-275 Freeway, Children's Center, Continuing Education Center, Physical Education, Applied Sciences, South Parking Lot, Liberal Arts, McDowell Center, Public Safety, Bookstore, Forum, Bradner Library, Waterman Wing, Grote Administration Center, VisTaTech Center, Allegan Drive, North Parking Lot, Haggerty Road, Chippewa Drive, Fox Dr., Huron Drive, Menominee Drive

Applied Sciences Building
Associate Dean–Corporate Services
  and Technology
Business Programs
Computer Programs
Classrooms
Computer Graphics Technology
Nursing
Open Entry/Open Exit Lab
Technology Programs

Bookstore

Continuing Education Center

Children's Center

Forum Building
Art Programs
Associate Dean–Sciences
Classrooms
Forum Recital Hall
Music Programs
Science Programs

Grote Administration Center
Assistant Vice President for Instruction
Dean of Educational Services
Development & Governmental Relations
Grants & Research
Human Resources
Instruction Office
Instruction Vice President
Marketing Department
President
Schoolcraft Foundation

Liberal Arts Building
Associate Dean–Liberal Arts/
  Independent Learning
Classrooms
Liberal Arts Programs
Theatre

Library
Distance Learning
Open Entry/Open Exit Testing
Archives

McDowell Center
Admissions
Assessment Center
Career Planning & Placement
Cashier
Classrooms
Computer Labs
Counseling
Enrollment Management Vice President
Finance & Business Services Vice President
Financial Aid
Learning Assistance Center

Purchasing
Registrar
Registration Center
Student Accounts
Testing Services
Women's Resource Center

Physical Education Building

Public Safety Building
Lost & Found
Facilities Management
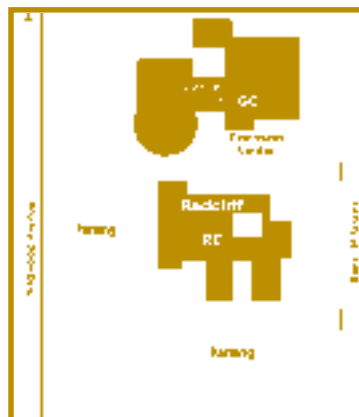Public Safety (Security)

VisTaTech Center
American Harvest Restaurant
Business Development Center
Classrooms
Culinary Arts Program
Main Street Café

Waterman Wing
Cafeteria
Food Service
Founder's Room
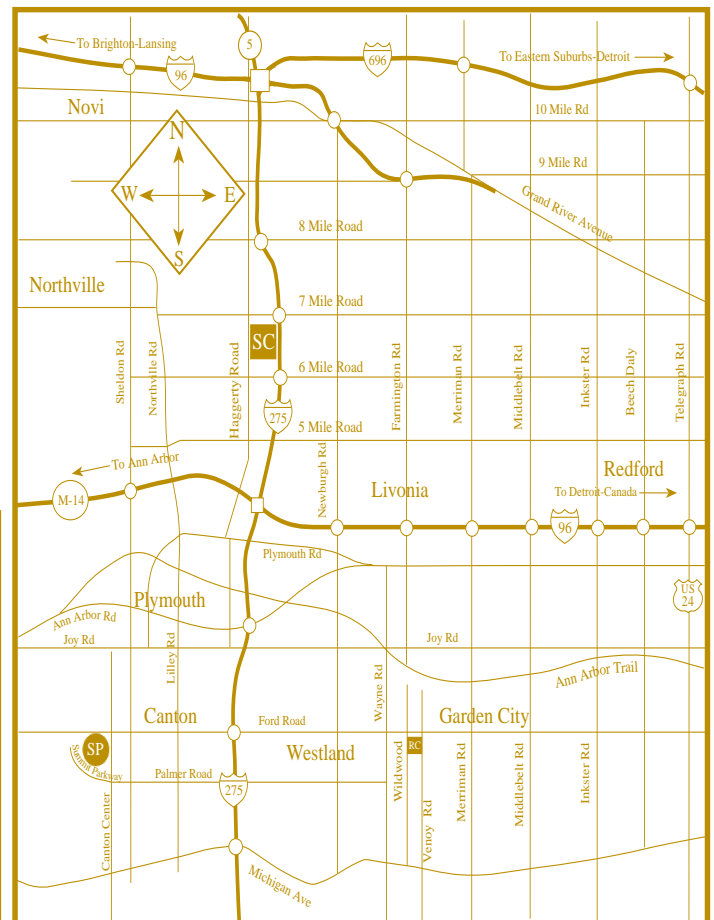Recreational Areas
Student Activities
Study Area

Area Map

Schoolcraft Campus
18600 Haggerty Road
Livonia, MI 48152-2696
734-462-4400

Radcliff Center

1751 Radcliff Street
Garden City, MI 48135
734-462-4770

Schoolcraft College

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