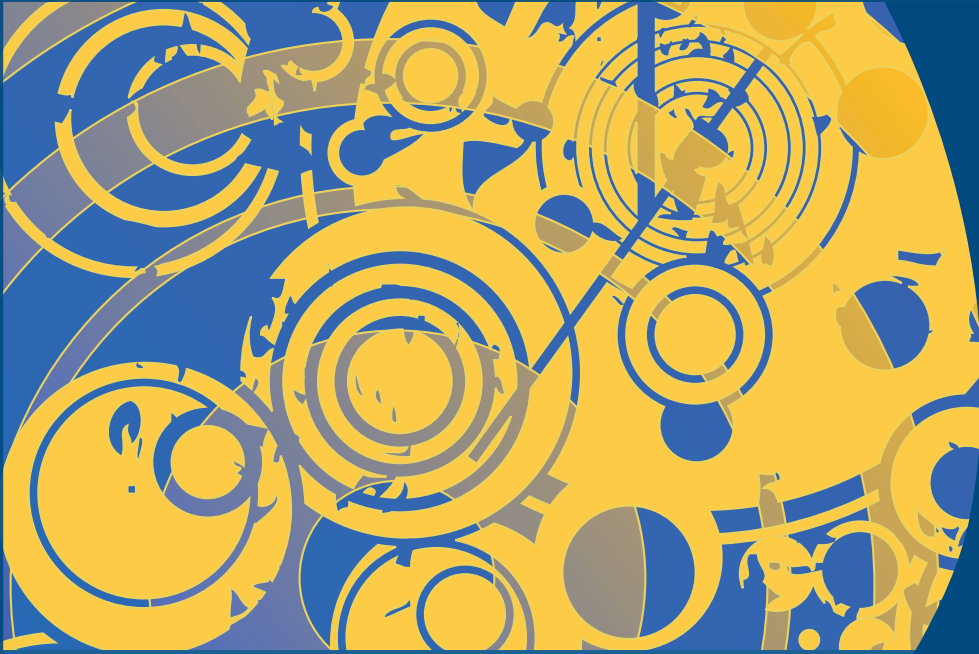




# Schoolcraft College



Catalog 08-09



## 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.



## Core Purpose

Everything Schoolcraft College does, from educational offerings and campus life to its role as a community center, is geared toward fulfilling the institution's core purpose: To increase the intellectual and economic capacity of the individuals, corporations and communities it serves.

*It is the policy of Schoolcraft College that no person shall, on the basis of race, color, national origin, gender, age, marital status, creed or disability, be subjected to discrimination during or be excluded from participating in or be denied the benefits of any program or activity or in employment.*

*Any questions concerning the application of, or grievances for, Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex, and Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, creed, color or national origin should be directed to:*

*Educational Programs & Activities:  
Cheryl M. Hagen  
Dean of Student Services  
Schoolcraft College  
18600 Haggerty Road  
Livonia, MI 48152  
734-462-4400, ext. 5088*

*Employment:  
Cindy Champnella  
Executive Director of  
Human Resources  
Schoolcraft College  
18600 Haggerty Road  
Livonia, MI 48152  
734-462-4405*

*Any questions concerning the application of, or grievances related to, Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap, or the Americans with Disabilities Act of 1990, which requires reasonable accommodation to be provided to disabled persons, should be directed to:*

*Jill F. O'Sullivan  
Vice President and  
Chief Financial Officer  
Schoolcraft College  
18600 Haggerty Road  
Livonia, MI 48152  
734-462-4416*

*Hearing Impaired Phone:  
734-462-4437*

*Individuals who feel their rights have been misused in relationship to the provisions of equal opportunity at Schoolcraft College can contact the appropriate persons listed above.*



## 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 Commission's Web site at [www.ncahigherlearningcommission.org](http://www.ncahigherlearningcommission.org).

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

- The Criminal Justice Associate Degree with Academy program is certified by the Michigan Commission on Law Enforcement Standards (MCOLES). For more information regarding accreditation, call 517-322-3966.
- The Health Information Technology Associate Degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM), in association with the American Health Information Management Association (AHIMA). For more information regarding accreditation, call 312-233-1129.
- 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 regarding accreditation, call 727-210-2350.
- The Nursing Associate Degree and Practical programs are approved by the Michigan Board of Nursing. For more information regarding accreditation, call 517-373-6873.

## New Student Checklist

**All the steps that lead to registration take place in the McDowell Center and are listed below:**

- Apply for admission.** Complete an application for admission and submit it to the Admissions and Enrollment Center. You also can apply online at [www.schoolcraft.edu](http://www.schoolcraft.edu). Your Student Number is: \_\_\_\_\_.
- Visit our campus.** Call 734-462-4426 to schedule a guided campus tour. You also can view a virtual tour of campus at [www.schoolcraft.edu](http://www.schoolcraft.edu).
- Submit transcripts.** Send your high school transcripts and/or GED scores to the Admissions and Enrollment Center, or fax to 734-462-4553. Official college transcripts must be *mailed* from the transfer institution's Registrar's Office directly to Schoolcraft. Guest students are not required to submit transcripts.
- Explore financial aid and scholarship opportunities.** Apply online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) and list the Schoolcraft College code—002315. Call 734-462-4433 for help.
- Send in your ACT or SAT scores or take a placement test.** If you have taken an ACT or SAT test within the last three years, send your scores to the Admissions and Enrollment Center. If you have not taken the ACT test but plan to, the Schoolcraft College ACT code is 2070.

Placement testing is available in the Testing Center. You must have photo identification and your student number or social security number to take the placement test. Call 734-462-4806. Sample placement questions are available at [www.schoolcraft.edu/assessment](http://www.schoolcraft.edu/assessment).

- Participate in orientation.** Orientation is available on campus or online at [www.schoolcraft.edu](http://www.schoolcraft.edu). Visit or call the Counseling Center at 734-462-4429 to make arrangements.
- Meet with an advisor or counselor.** Visit or call the Counseling Center at 734-462-4429.
- Register for classes.** Go online at [www.schoolcraft.edu](http://www.schoolcraft.edu), call 734-462-4800, or visit the Admissions and Enrollment Center. To obtain a student identification card, bring photo identification to the Admissions and Enrollment Center.
- Choose a payment method.** Pay for classes online, by phone at 734-462-4800, in person at the Cashier's Office, or by using our tuition management plan. Payment must be made in full the same day you register.
- Attend your classes!**

**[www.schoolcraft.edu](http://www.schoolcraft.edu)**

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# 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 use the tools of knowledge.  
This is a place to learn and enjoy the experience.

Conway A. Jeffress, Ph.D.  
President

## Board of Trustees



Gregory J. Stempien  
*Chair*



Brian D. Broderick  
*Vice Chair*



Carol M. Strom  
*Secretary*



Patricia Watson  
*Treasurer*



Mary Breen  
*Trustee*



Philip N. Cascade  
*Trustee*



Joan A. Gebhardt  
*Trustee*

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.

## Foundation Board of Governors

The Schoolcraft College Foundation is a non-profit corporation dedicated to transforming lives through scholarships for academically meritorious and financially challenged students, and through grants to the College supporting curriculum development. The Foundation's efforts are grounded in the belief that higher education should be affordable to all and offer a rich learning environment based on excellence and innovation. The Schoolcraft College Foundation is led by the Board of Governors, comprised of 21 civic, business and community leaders drawn from and near the Schoolcraft Community College district.



*Front row from left to right: Jason Valente, Rodger Vojcek, Guy Gehlert, Mark Wilkie*

*Middle row from left to right: John Elkins, Michelle Plawecki, Martha Snow, Mary Ellen King*

*Back row from left to right: John Weyer, Edwin Schulz, Michael Polsinelli, James Fausone, Dr. Conway A. Jeffress, John N. Santeiu, Jr., Craig Bowles, John Walsh*

*Not pictured: John Allie, John Bowen, Robert Farris, Ray Friedrich, David Grossman, Abe Munfakh, Terri O'Brien, Mary Breen, Board of Trustees*

## 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.

Jill F. O'Sullivan	President
Robert R. Nix II	Vice President
James Polkowski	Secretary/Treasurer
Barbara Scharmen	Recording Secretary
Philip N. Cascade	SC Board of Trustees
Patricia Watson	SC Board of Trustees
William Brunton	
James B. McKeon	
Hon. Lita M. Popke	
John J. Walsh	
Conway A. Jeffress	Ex-Officio

# Where to go for Assistance

**College Web Site:** [www.schoolcraft.edu](http://www.schoolcraft.edu)

**Livonia Campus:** 734-462-4400

**Radcliff Center, Garden City:** 734-462-4770

**Hearing impaired phone line:** 734-462-4437

## Academic Advising

[www.schoolcraft.edu/counseling](http://www.schoolcraft.edu/counseling)

Counseling Center,

McDowell Center Room 275 ..... 734-462-4429

Email ..... [counseling@schoolcraft.edu](mailto:counseling@schoolcraft.edu)

## Academic Records

Student Recruitment and Records,

McDowell Center Room 255 ..... 734-462-4677

Email ..... [registration@schoolcraft.edu](mailto:registration@schoolcraft.edu)

## Academic Standing, Probation, Dismissal

[www.schoolcraft.edu/counseling](http://www.schoolcraft.edu/counseling)

Counseling Center,

McDowell Center Room 275 ..... 734-462-4429

Email ..... [counseling@schoolcraft.edu](mailto:counseling@schoolcraft.edu)

## Adding, Dropping, Changing or Withdrawing from a Course

[www.schoolcraft.edu](http://www.schoolcraft.edu)

Online add and drop ..... <https://webadvisor.schoolcraft.edu>

Admissions and Enrollment Center,

McDowell Center Room 240 ..... 734-462-4426

Email ..... [registration@schoolcraft.edu](mailto:registration@schoolcraft.edu)

## Admission to the College

[www.schoolcraft.edu](http://www.schoolcraft.edu)

Online ..... <https://webadvisor.schoolcraft.edu>

Admissions and Enrollment Center,

McDowell Center Room 240 ..... 734-462-4426

Email ..... [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu)

## Athletics

[www.schoolcraft.edu/athletics](http://www.schoolcraft.edu/athletics)

Athletics Office ..... 734-462-4804

## Books & Classroom Supplies

[www.schoolcraftbooks.com](http://www.schoolcraftbooks.com)

Livonia Campus Bookstore, Service Bldg. .... 734-462-4409

Garden City Radcliff Center Bookstore,

Room130 ..... 734-462-4778

Email ..... [books@schoolcraft.edu](mailto:books@schoolcraft.edu)

## Campus Security Police

[www.schoolcraft.edu/safety](http://www.schoolcraft.edu/safety)

Livonia, Service Building ..... 734-462-4424

Garden City Radcliff Center ..... 734-462-4400 ext. 6424

## Career Information

[www.schoolcraft.edu/ctc](http://www.schoolcraft.edu/ctc)

Career and Transfer Center,

McDowell Center Room 205 ..... 734-462-4421

Email ..... [ctc@schoolcraft.edu](mailto:ctc@schoolcraft.edu)

## Catalogs

[www.schoolcraft.edu/publications](http://www.schoolcraft.edu/publications)

Admissions and Enrollment Center,

McDowell Center Room 240 ..... 734-462-4426

Email ..... [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu)

## Change of Name or Address

[www.schoolcraft.edu/registration](http://www.schoolcraft.edu/registration)

Admissions and Enrollment Center,

McDowell Center Room 240 ..... 734-462-4426

Email ..... [registration@schoolcraft.edu](mailto:registration@schoolcraft.edu)

## Clubs; Organizing or Joining

[www.schoolcraft.edu/sao](http://www.schoolcraft.edu/sao)

Student Activities Office,

VisTaTech Center, Waterman Wing ..... 734-462-4422

Email ..... [sao@schoolcraft.edu](mailto:sao@schoolcraft.edu)

## Child Care Services

[www.schoolcraft.edu/services/childcare](http://www.schoolcraft.edu/services/childcare)

Children's Center,

South Parking Lot, Livonia Campus ..... 734-462-4442

## Computer Use—Academic

Livonia Campus,

McDowell Center Room 100 ..... 734-462-4400, ext. 5147

Garden City Radcliff Center,

Room 415 ..... 734-462-4400, ext. 6112

## Continuing Education and Professional Development

[www.schoolcraft.edu/ces](http://www.schoolcraft.edu/ces)

Continuing Education Center ..... 734-462-4448

Email ..... [continued@schoolcraft.edu](mailto:continued@schoolcraft.edu)

## Disability Services—Equal Access

[www.schoolcraft.edu/lac](http://www.schoolcraft.edu/lac)

Learning Assistance Center

Livonia, Bradner Library ..... 734-462-4436

Email ..... [lac@schoolcraft.edu](mailto:lac@schoolcraft.edu)

## Distance Learning Online Courses

[www.schoolcraft.edu/dl](http://www.schoolcraft.edu/dl)

Distance Learning Office,

McDowell Center Room 305 ..... 734-462-4532

Email ..... [dl@schoolcraft.edu](mailto:dl@schoolcraft.edu)

## Dual Enrollment

[www.schoolcraft.edu/admissions](http://www.schoolcraft.edu/admissions)

Admissions and Enrollment Center,

McDowell Center Room 240 ..... 734-462-4426

Email ..... [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu)

## Financial Aid

[www.schoolcraft.edu/aid](http://www.schoolcraft.edu/aid)

Office of Financial Aid,

McDowell Center Room 260 ..... 734-462-4433

Email ..... [finaid@schoolcraft.edu](mailto:finaid@schoolcraft.edu)

**Graduation****Applying to graduate; Intent to Graduate form (ITG)**

www.schoolcraft.edu/counseling  
 Counseling Center,  
 McDowell Center Room 275 ..... 734-462-4429  
 Email..... counseling@schoolcraft.edu

**Commencement ceremony**

www.schoolcraft.edu/graduation  
 Student Recruitment and Records,  
 McDowell Center Room 255 ..... 734-462-4677  
 Email..... registration@schoolcraft.edu

**Hybrid Courses**

www.schoolcraft.edu/hybrid  
 Phone..... 734-462-4525  
 Email..... hybrid@schoolcraft.edu

**I.D. Cards**

www.schoolcraft.edu/admissions  
 Admissions and Enrollment Center,  
 McDowell Center Room 240 ..... 734-462-4426  
 Email..... admissions@schoolcraft.edu

**International Student Services**

www.schoolcraft.edu/admissions  
 Admissions and Enrollment Center,  
 McDowell Center Room 240 ..... 734-462-4426  
 Email..... admissions@schoolcraft.edu

**Job Opportunities****Student on- and off-campus employment**

www.schoolcraft.edu/ctc  
 Career and Transfer Center,  
 McDowell Center Room 205 ..... 734-462-4421  
 Email..... ctc@schoolcraft.edu

**Human Resources**

www.schoolcraft.edu/hr  
 Human Resources, Grote Administration Center  
 Room 160 ..... 734-462-4408  
 Email..... hr@schoolcraft.edu

**Kids on Campus**

www.schoolcraft.edu/ces  
 Continuing Education Center..... 734-462-4448  
 Email..... continueed@schoolcraft.edu

**Library Services**

www.schoolcraft.edu/library  
 Bradner Library, Livonia ..... 734-462-4440  
 Garden City Radcliff Center,  
 Room 355 ..... 734-462-4400, ext. 6020  
 Email..... library@schoolcraft.edu

**Lost & Found**

www.schoolcraft.edu  
 Livonia, Public Safety, Service Building ..... 734-462-4424  
 Garden City Radcliff Center,  
 Public Safety ..... 734-462-4400 ext. 6424

**Open Entry/Open Exit Courses**

www.schoolcraft.edu/oeoe  
 Open Entry/Open Exit Office,  
 McDowell Center Room 305 ..... 734-462-4588  
 Email..... oeoe@schoolcraft.edu

**Orientation for New Students**

www.schoolcraft.edu/counseling  
 Online orientation ..... www.schoolcraft.edu/olo  
 Counseling Center,  
 McDowell Center Room 275 ..... 734-462-4429  
 Email..... counseling@schoolcraft.edu

**Payment for Classes**

www.schoolcraft.edu/admissions  
 Online payment..... https://webadvisor.schoolcraft.edu  
 Cashier's Office, McDowell Center Room 250... 734-462-4449  
 Email..... cashiers@schoolcraft.edu  
 Student Accounts (Accounts Receivable),  
 McDowell Center Room 320 ..... 734-462-4586  
 Email..... acctrecv@schoolcraft.edu

**Register for Classes**

www.schoolcraft.edu/registration  
 Online registration ..... https://webadvisor.schoolcraft.edu  
 Admissions and Enrollment Center,  
 McDowell Center Room 240 ..... 734-462-4426  
 Email..... registration@schoolcraft.edu

**Reserving College Facilities**

vistatech.schoolcraft.edu  
 VisTaTech Center Rental ..... 734-462-4610  
 Email ..... vistatech@schoolcraft.edu  
 Other Room Rentals..... 734-462-4475  
 Email ..... facilitiesuse@schoolcraft.edu

**Scholarships**

www.schoolcraft.edu/aid  
 Financial Aid Office,  
 McDowell Center Room 260 ..... 734-462-4433  
 Email..... finaid@schoolcraft.edu

**Student Grievances**

www.schoolcraft.edu/academics/policies  
 Dean of Student Services,  
 McDowell Center Room 262 ..... 734-462-4577

**Testing /Assessment Services**

www.schoolcraft.edu/assessment  
 Livonia Campus Testing Center,  
 McDowell Center Room 220 ..... 734-462-4806  
 Email..... assesscen@schoolcraft.edu  
 Garden City Radcliff Center,  
 Room 120 ..... 734-462-4400, ext. 6021  
 Email..... lacrc@schoolcraft.edu

**Transcripts**

www.schoolcraft.edu/admissions  
 Online (unofficial copy)..... https://webadvisor.schoolcraft.edu  
 Admissions and Enrollment Center,  
 McDowell Center Room 240 ..... 734-462-4426  
 Email..... admissions@schoolcraft.edu

**Tutoring**

www.schoolcraft.edu/lac  
 Learning Assistance Center:  
 Livonia, Bradner Library ..... 734-462-4436  
 Garden City Radcliff Center,  
 Room 120 ..... 734-462-4400, ext. 6021  
 Email..... lac@schoolcraft.edu

**Veteran's Affairs**

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

**Women's Resource Center**

www.schoolcraft.edu/wrc  
 Women's Resource Center,  
 McDowell Center Room 225 ..... 734-462-4443  
 Email..... wrc@schoolcraft.edu

**Where to go for Assistance**





# Schoolcraft College



Programs of Study



PROGRAMS

# Graduation

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 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.

Any changes in these requirements must be approved in writing by the appropriate Associate Dean or the Dean of Instruction.

## 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, mathematics, 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 associate degree general education requirements. General education and the development of core skills ensure that Schoolcraft College graduates have a broad education and basic competence in communication, critical and creative thinking, and social, global and organizational dynamics.



## 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; some career programs 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 Dean of Instruction.
- During their last semester, students must complete the Intent to Graduate form with the Counseling Center before the published deadline date. Please review the current Credit Class Schedule for dates. The College Registrar will verify all requests to determine compliance with course requirements and the validity of course waivers, if applicable.

## Multiple Degree Requirements

Students earning additional associate 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 three types of certificates. Certificate programs are career rather than transfer oriented. See page 14 for more detailed information on the certificates listed below:

- Skills Certificates
- Pre-Associate Certificates
- Post-Associate Certificates

## 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 current Credit Class Schedule for the semester or session during which they will complete degree requirements. The student must return the Intent to Graduate form to the Counseling Center. After the deadline for submission of the Intent to Graduate form, the Registrar verifies the student for degree completion and, if appropriate, certifies the student for graduation. Degrees and certificates will be officially awarded and sent to the student approximately eight weeks after the end of the semester or session in which the student has completed the requirements and filed for the award.

## Commencement Ceremony

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 complete an Application to Attend Commencement form in the Counseling Office. The student must return the form to the Counseling Office. A commencement information packet will be mailed to all students who are eligible to participate in commencement.

# Degree and Certificate Requirements

## Core Abilities and General Education

Schoolcraft College understands that student learning goals cover a wide spectrum. Some learners choose Schoolcraft for a specific career program and are primarily focused on a direct connection to an employment opportunity. Other learners choose Schoolcraft as the first step on a path to a four-year transfer institution. Still others choose programs for personal development. Regardless of the type of program a student chooses, essential elements are required to assure the provision of a transformational learning experience that increases the learner's capacity to achieve intellectual, social, and economic goals.

Schoolcraft College is committed to the belief that a sound education has its foundation in general education and the development of core abilities. By integrating core abilities into all courses and requiring completion of general education courses, Schoolcraft gives students the opportunity to acquire the knowledge, skills, and attitudes fundamental to achieving personal fulfillment and economic success.

## Core Ability Requirements

Core abilities are broad outcomes or skills that every graduate of a Schoolcraft College associate degree is expected to achieve. These skills are important in every area of learning and are the skills employers and other stakeholders indicate are essential.

Schoolcraft College requires candidates for all associate degrees to demonstrate competency in the following core abilities:

- Communicate effectively
- Think creatively and critically
- Use technology effectively
- Use mathematics
- Manage information
- Work cooperatively
- Act responsibly
- Demonstrate social and cultural awareness

At least one core ability is addressed and assessed in every course. The associate degree programs outlined in the catalog will have all eight core ability expectations integrated into the overall program design.

## General Education Course Requirements for the Associate Degree

General education is “general” in several clearly identifiable ways: It is part of every associate degree course of study, regardless of program area of emphasis; it is not directly related to a student's technical, vocational, or professional preparation; and it is intended to impart common knowledge, intellectual concepts, and attitudes that every educated person should possess. A well educated person is not a narrow specialist; instead, he or she is a person who is well rounded in his or her learning and experiences. The breadth of knowledge acquired in general education cannot be found in any single discipline or major.

The following course selections in English Composition, Humanities, Mathematics, Sciences, and Social Sciences constitute Schoolcraft's general education course distribution requirements for students seeking an associate degree. These course areas are recognized and reinforced by transfer institutions.

Please note that the minimum requirements listed here are necessary to meet the Schoolcraft College general education course distribution requirements. Many programs, particularly transfer programs, require more than the minimums listed here to address specific program outcome goals. Students should refer to their program of study for additional detail.

### I. English Composition (Select one combination of courses based on program requirements)

English 101 & 102  
 English 100 & 106  
 English 100 & 116  
 English 101 & 107  
 English 101 & 106  
 English 101 & 116

### II. Humanities (Select a minimum of one course)

Arabic (ARB)...101, 102, 201, 202  
 Art (ART)...105, 106, 113, 115, 116, 118, 119, 125, 126, 201, 205, 211, 212, 216, 218, 219, 236, 239, 243, 244, 248  
 Chinese (CHIN)...101, 102  
 Communications (COMA)...103, 200, 201, 203, 205, 210, 230  
 Italian (ITAL)...101, 102  
 Literature (ENG)...170, 200, 203, 243, 244, 245, 246, 248, 251, 252, 275, 280  
 French (FR)...101, 102, 201, 202  
 German (GER)...101, 102, 201, 202  
 History (HIST)...134, 137, 138, 141, 151, 152, 153, 230  
 Humanities (HUM)...106, 150, 190, 201, 202, 203, 204, 210, 212, 215, 231, 232  
 Music (MUSIC)...104, 105, 107, 109, 149, 153, 154, 155, 164, 165, 250, 252  
 Philosophy (PHIL)...243, 247, 277  
 Spanish (SPAN)...101, 102, 201, 202  
 Theater (THEA)...101, 120, 121, 204, 207, 208, 209, 220, 221, 231, 232, 241

### III. Mathematics (Select a minimum of one course)

Mathematics (MATH)...101, 105, 106, 111, 113, 119, 122, 128, 129, 135, 145, 150, 151, 230, 240, 252

### IV. Sciences (Select a minimum of one course)

Biology (BIOL)...101, 103, 104, 105, 115, 120, 130, 211, 212, 236, 237, 238, 240, 243  
 Chemistry (CHEM)...100, 111, 117, 120, 213, 214  
 Geography (GEOG)...105, 130, 212, 217  
 Geology (GEOL)...120, 133, 134, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 237  
 Physics (PHYS)...104, 123, 181, 182, 211, 212

### V. Social Sciences (Select a minimum of one course)

Anthropology (ANTH)...112, 117, 201, 211, 214  
 Economics (ECON)...103, 201, 202  
 Geography (GEOG)...133, 225, 241  
 History (HIST)...134, 137, 138, 141, 151, 152, 153, 230  
 Political Science (POLS)...105, 109, 205, 207, 209  
 Psychology (PSYCH)...153, 201, 205, 207, 209, 219, 229  
 Sociology (SOC)...101, 201, 205, 209, 210, 220, 290

## Assessment of Core Abilities

Each student will be held accountable to demonstrate competence in the core abilities through course level learning activities and related assessment. At the institutional level, a sampling of students' work will be reviewed, using established standards, to provide assurance that students, in aggregate, are able to demonstrate competency in the defined core abilities. This assessment may occur through standardized exams, capstone courses, portfolios, internships or other data collection methods. This review will provide the College with an opportunity to assess its effectiveness in preparing students in these core areas and to inform necessary improvement strategies.

## Assessment of General Education and Program Outcomes

Each program outlined in the catalog has a set of established program outcomes that are linked to course competencies and learning objectives. Program outcomes for the transfer programs are the institutional general education outcomes. At the program level, a sampling of students' work will be reviewed to provide assurance that students, in program aggregate, are able to demonstrate competency in the defined program outcomes. This assessment may occur through standardized exams, capstone courses, portfolios, internships or other end of program data collection methods. This review will provide the College with an opportunity to assess its effectiveness in preparing students in the career programs, and in general education through the transfer programs, and to inform necessary improvement strategies.

## Career Programs

Schoolcraft College offers excellent career programs for students seeking an education and skills to enter the job market or to advance their current careers. Students selecting career programs can earn a certificate or an applied science degree. Schoolcraft College's career programs are based on both the 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.

The career programs are designed primarily to prepare students for the workplace rather than to transfer to another educational institution. However, many career courses and programs will transfer to other colleges and universities through articulations and special agreements. To explore transferability options, see the Schoolcraft College Counseling Center and refer to pages 21–22 to see a list of Featured Articulations and Special Agreements.

A list of career programs is available on pages 27–28.



## Requirements for a Career Program Degree

### ASSOCIATE IN APPLIED SCIENCE (AAS)

The associate in applied science degree is for students who plan to seek employment upon completion of a career program. To explore transferability options, it is recommended that students meet with a counselor.

1. English—6 credit hours required by individual curriculum.
2. Completion of one of the career programs listed in the Schoolcraft College catalog.
3. All courses that apply to this degree must be at the 100- or 200-level.
4. Complete all Schoolcraft College core ability and general education requirements.

### Certificates of Program Completion

Schoolcraft College awards three types of certificates. Skills certificates generally are awarded before earning a pre-associate certificate. The pre-associate certificate is generally awarded before earning an associate degree. The post-associate certificate is awarded after receiving an associate degree. All certificate programs are career rather than transfer oriented. Certificates do not require the completion of the Schoolcraft College general education requirements or the demonstration of competency in all eight core ability areas. However, at least one core ability is addressed and assessed in every course and students pursuing a certificate will be held accountable to meet the core abilities that are integrated into the program courses.

#### Skills Certificates

A skills certificate of approximately 16–20 credit hours is awarded upon satisfactory completion of a program of study with a minimum 2.0 grade-point average. The courses for many skills certificates are in the companion pre-associate certificate. A minimum of 8–10 credits must be completed at Schoolcraft College.

#### Pre-Associate Certificates

A pre-associate certificate of approximately 30 credit hours is awarded upon satisfactory completion of a program of study with a minimum 2.0 grade-point average. The courses for many pre-associate certificates are in the companion associate degree program. A minimum of 15 credits must be completed at Schoolcraft College.

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 Schoolcraft or another college. The courses within the post-associate certificate are designed to provide higher level specialized training in job-related skills.

## Pathways to a Bachelor’s Degree

### Transfer planning begins with a counselor or academic advisor

Regardless of which pathway to a bachelor’s degree is selected, students should work with their counselor or academic advisor to create a detailed academic plan. Transfer requirements are constantly changing; by working with a counselor or academic advisor, the student ensures that the plan reflects these changes.

Updated information on transfer requirements is available in the Counseling Center and in the Career and Transfer Center. To make an appointment with a counselor, students should contact the Counseling Center.

	Year 1 30 credits	Year 2 30 credits	Year 3 30 credits	Year 4 30 credits
<b>Articulations and Special Agreements</b>	60 to 90* credits at Schoolcraft <i>Graduate with associate degree</i>		30 to 60* credits at four-year college or university <i>Graduate with bachelor’s degree</i>	
<b>Transfer Associate Degrees</b>	60 credits at Schoolcraft <i>Graduate with associate degree</i>		60 credits at four-year college or university <i>Graduate with bachelor’s degree</i>	
<b>MACRAO Transfer Agreement</b>	30 or more credits at Schoolcraft <i>These credits can stand alone or be part of a Schoolcraft associate degree</i>		60 to 90 credits at four-year college or university <i>Graduate with bachelor’s degree</i>	
<b>Individual Courses</b>	Schoolcraft offers hundreds of courses that can be transferred to four-year colleges and universities			
<b>Guest Students</b>	Students at other colleges and universities can enroll at Schoolcraft as guest students.			
	Total credits earned: 30	Total credits earned: 60*	Total credits earned: 90	Total credits earned: 120*

\* Credit counts are approximate. The exact number of hours required for an associate or bachelor’s degree varies by program and by institution. See a counselor, academic advisor or contact the Career and Transfer Center to learn about credit requirements for specific programs.

## Typical Program Outlines for Popular Transfer Degrees

Business, education, engineering and health care are among the most popular degree paths chosen by Schoolcraft College students. Also popular is a liberal arts curriculum that provides the basic general education courses at the freshman and sophomore level for transfer to a four-year college or university.

The following pages offer typical program outlines for these transfer associate degrees.

- Business Administration
- Pre-Health Related
- Pre-Education, Elementary
- Liberal Arts
- Pre-Engineering

Specific course requirements will vary depending on the four-year college or university to which the student plans to transfer. Students should see a counselor/academic advisor in order to develop an academic plan that is specific to their destination college or university.











## Featured Articulations and Special Agreements

Schoolcraft College has worked with many four-year colleges and universities to develop agreements that pair a specific Schoolcraft associate degree with a specific bachelor's degree.

College/University	Advanced Degree	Schoolcraft College Degree
Central Michigan University	Bachelor of Science in Vehicle Design	Associate in Applied Science: Computer Aided Design—Mechanical Design Option
Cleary University	Bachelor of Business Administration	Associate in Arts, Associate in Science, Associate in Applied Science
Concordia University	Bachelor of Arts in Criminal Justice Administration	Associate in Applied Science: Criminal Justice or Criminal Justice with Academy
	Bachelor of Arts in Public Safety	Associate of Applied Science: Emergency Medical Technology or Fire Technology (with or without academy)
Davenport University	Bachelor of Business Administration	Associate in Arts, Associate in Science, Associate in General Studies, Associate in Engineering, Associate in Applied Science
Eastern Michigan University	Bachelor of Science in Applied Technology	Associate in Applied Science: Biomedical Engineering Technology, Computer Aided Design, Computer Assisted Manufacturing, Computer Graphics Technology, Computer Information Systems, Electronic Technology, Environmental Technology, Advanced Manufacturing, Metallurgy and Materials Science
	Bachelor of Business Administration	Associate in Applied Science: Business—General, Marketing and Applied Management
	Bachelor of Science in Aviation Management	Associate of Applied Science in Aviation Management
	Bachelor of Science in Communication Technology	Associate in Applied Science: Computer Graphics Technology
	Bachelor of Science in Hotel/Restaurant Management	Associate in Applied Science: Culinary Arts
	Bachelor of Science in Health Administration	Associate in Applied Science: Health Information Technology
	Bachelor of Science in Nursing	Associate in Applied Science: Nursing
	Bachelor of Science in Technology Management	Associate in Applied Science, Associate in General Studies
Ferris State University	Bachelor of Science in Criminal Justice, Generalist Option	Associate in Applied Science: Criminal Justice or Criminal Justice with Academy
	Bachelor of Science in Medical Records Administration	Associate in Applied Science: Health Information Technology
Franklin University Alliance	Bachelor of Science in Accounting, Applied Management, Business Administration, Computer Science, Digital Communication, Health Care Management, Information Technology, Management Information Sciences, Public Safety Management	Associate in Arts, Associate in Science, Associate in Engineering, Associate in General Studies, Associate in Applied Science
Lawrence Technological University	Bachelor of Science in Mechanical Engineering	Associate in Engineering
Madonna University	Bachelor of Science in Business Administration	Associate in Applied Science: Business—General, Marketing and Applied Management, Small Business Management
	Bachelor of Science in Child Development	Associate in Applied Science in Child Care Development
	Bachelor of Science in Criminal Justice	Associate in Applied Science: Criminal Justice or Criminal Justice with Academy
	Bachelor of Science in Fire Technology	Associate in Applied Science: Fire Technology or Fire Technology with Academy
	Bachelor of Science in Hospitality Management	Associate in Applied Science: Culinary Arts
Michigan Institute of Aviation and Technology	Bachelor of Science in Nursing	Associate in Applied Science: Nursing
	Federal Aviation Administration License	Associate in General Studies
Northwood University	Bachelor of Business Administration—Management	Associate in Arts, Associate in Science, Associate in Engineering, Associate in General Studies, Associate in Applied Science
Specs Howard School of Broadcast Arts	Diploma	Associate of Applied Science: Broadcast Communications
University of Detroit Mercy	Bachelor of Science in Nursing	Associate in Applied Science: Nursing
	Bachelor of Engineering	Associate in Engineering

**featured articulations and special agreements continued →**

**featured articulations and special agreements continued**

College/University	Advanced Degree	Schoolcraft College Degree
University of Michigan–Dearborn	Bachelor of General Studies	Associate in Arts, Associate in Science, Associate in Engineering, Associate in General Studies, Associate in Applied Science
	Bachelor of General Studies in Children and Families	Associate in Applied Science: Child Care Development
Walsh College	Bachelor of Accountancy and Bachelor of Business Administration in Management, General Business, Marketing, Finance, Computer Information Systems	Associate in Arts
	Bachelor of Business Administration in Management, Masters in Business Administration Honors Fast Track Program	Associate in Applied Science: Business—General, Marketing and Applied Management

**Transfer Associate Degrees**

Although useful for many individuals, the featured articulations and special agreements do not meet the needs of every Schoolcraft student. To further broaden a student's options, Schoolcraft offers four associate degrees that are designed for transfer to four-year colleges and universities: The Associate in Arts (AA), Associate in Engineering (AE), Associate in Science (AS), and Associate in General Studies (AGS). With the help of a Schoolcraft counselor/academic advisor, these associate degrees can be customized to meet the student's interests and to fulfill the transfer requirements of a four-year college or university.

Candidates for one of these Schoolcraft associate degrees must satisfy the specific degree requirements listed below, including completion of the Schoolcraft College core ability and general education requirements.

**ASSOCIATE IN ARTS (AA)**

The associate in arts degree is for students who plan to transfer to a four-year college or university. The associate in arts degree is appropriate for most transfer programs leading to a baccalaureate degree.

1. English 101 and 102 required—6 credit hours.
2. Humanities—8 credit hours in more than one discipline.  
Art, Foreign Language, History, Literature, Music, Philosophy, Communication Arts, Theatre or Humanities.  
One course must be either a Communication Arts or a Foreign Language course.
3. Mathematics/Sciences—8 credit hours.  
One course must be a laboratory science course.  
Biology, Chemistry, Physical Geography, Geology, Mathematics or Physics.
4. Social Sciences—8 credit hours in more than one discipline.  
Anthropology, Economics, World Regional Geography, History, Political Science, Psychology or Sociology.
5. General Electives—30 credit hours.  
Electives must be chosen from transferable 100- or 200-level courses.
6. All courses that apply to this degree must be at the 100- or 200-level.
7. Complete all Schoolcraft College core ability and 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, Philosophy, Communication Arts, Theatre or Humanities.
3. Mathematics/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 all Schoolcraft College core ability and general education requirements and transfer institutions—7–15 credit hours.
6. All 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, Philosophy, Communication Arts, Theatre or Humanities.
3. Mathematics/Sciences—20 credit hours.  
One course must be a laboratory course.  
One course must be a math course.  
Biology, Chemistry, Physical Geography, Geology, Mathematics or Physics.
4. Social Sciences—8 credit hours.  
Anthropology, Economics, World Regional Geography, History, Political Science, Psychology or Sociology.
5. General Electives—18 credit hours.  
Electives must be chosen from transferable 100- or 200-level courses.
6. All courses that apply to this degree must be at the 100- or 200-level.
7. Complete all Schoolcraft College core ability and general education requirements.

**ASSOCIATE IN GENERAL STUDIES (AGS)**

The associate in general studies degree is for students who wish to earn an associate degree that may transfer to a college or university through an individualized program of study.

1. English 101 and 102 required—6 credit hours.
2. Humanities—8 credit hours.  
Art, Foreign Language, History, Literature, Music, Philosophy, Communication Arts, Theatre or Humanities.
3. Mathematics/Sciences—8 credit hours.  
One course must be a laboratory course.  
One course must be a math course.  
Biology, Chemistry, Physical Geography, Geology, Mathematics or 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 must be chosen from 100- or 200-level courses.
6. All courses that apply to this degree must be at the 100- or 200-level.
7. Complete all Schoolcraft College core ability and 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.  
Mathematics/Sciences—12 credit hours required.  
One course must be a laboratory course.  
One course must be a math course  
Social Sciences—12 credit hours required.
3. General Electives—30 credit hours.  
Electives must be chosen from 100- or 200-level courses.
4. All courses that apply to this degree must be at the 100- or 200-level.
5. Complete all Schoolcraft College core ability and general education requirements.

**Program Substitution or Changes****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 or curriculum must be recorded on a data form available in the Student Records Office in the McDowell Center.



## MACRAO Transfer Articulation Agreement

The Michigan Association of Collegiate Registrars and Admissions Officers Articulation Agreement was established to improve the process of transferring coursework between two-year and four-year colleges and universities in Michigan. The agreement provides for transferability of 30 semester credits to fulfill the general education requirements at participating institutions. Students may complete the MACRAO Transfer Agreement as part of an associate degree or as a stand-alone option.

Schoolcraft College participates in the MACRAO Transfer Agreement with the following Michigan colleges and universities:

Adrian College*	Madonna University*
Albion College	Marygrove College
Baker College	Michigan State University*
Calvin College*	Michigan Technological University*
Central Michigan University	Northern Michigan University*
Cleary University	Northwood University
Concordia University*	Oakland University*
Davenport University	Olivet College
Eastern Michigan University*	Rochester College
Ferris State University*	Saginaw Valley State University*
Finlandia University*	Siena Heights University*
Grand Valley State University*	Spring Arbor University
Lake Superior State University	Western Michigan University
Lawrence Technological University*	<i>*Provisions, Limitations and Exceptions</i>

**NOTE:** Institutions marked with \* have limitations, exceptions or provisos to the MACRAO Transfer Agreement. Check with Schoolcraft Counseling Center staff and admissions representatives from the four-year college or university to learn about exceptions before you transfer. Additional information can be found at [www.macrao.org](http://www.macrao.org).

### Required MACRAO Coursework

Thirty semester credit hours of coursework are needed to meet the MACRAO Transfer Agreement.

Students must complete the distribution of coursework listed below:

- English Composition (ENG 101 and 102) ..... 6 credit hours
- Humanities..... 8 credit hours
- Social Science..... 8 credit hours
- Mathematics/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 Transfer Agreement.
- Transcripts of associate in arts or associate in science degrees, for graduates who qualify, will be stamped “MACRAO Agreement Satisfied.”
- Students meeting the MACRAO Transfer Agreement, but not receiving an associate in arts degree or associate in science degree, must request that transcripts be stamped, “MACRAO Agreement Satisfied,” by contacting the Student Records Office.

## MACRAO Transfer Requirements

### I. English Composition (6 credits)

English Composition (ENG)...101, 102

### II. Humanities (8 credits or more in more than one discipline)

Arabic (ARB)...101, 102, 201, 202

Art (ART)...105, 106, 113, 115, 116, 118, 119, 125, 126, 201, 205, 211, 212, 216, 218, 219, 236, 239, 243, 244, 248

Chinese (CHIN)...101, 102

Communications (COMA)...103, 200, 201, 203, 205, 210, 230

Literature (ENG)...170, 200, 203, 243, 244, 245, 246, 248, 251, 252, 275, 280

French (FR)...101, 102, 201, 202

German (GER)...101, 102, 201, 202

History (HIST)...134, 137, 138, 141, 151, 152, 153, 230

Humanities (HUM)...106, 150, 190, 201, 202, 203, 204, 210, 212, 215, 231, 232

Italian (ITAL)...101, 102

Music (MUSIC)...104, 105, 107, 109, 149, 153, 154, 155, 164, 165, 250, 252

Philosophy (PHIL)...243, 247, 277

Spanish (SPAN)...101, 102, 201, 202

Theater (THEA)...101, 120, 121, 204, 207, 208, 209, 220, 221, 231, 232, 241

### III. Sciences (8 credits or more in more than one discipline)

Biology (BIOL)...101, 103, 104, 105, 115, 120, 130, 211, 212, 236, 237, 238, 240, 243

Chemistry (CHEM)...100, 111, 117, 120, 213, 214

Geography (GEOG)...105, 130, 212, 217

Geology (GEOL)...120, 133, 134, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 237

Mathematics (MATH)...101, 105, 106, 111, 113, 119, 122, 128, 129, 135, 145, 150, 151, 230, 240, 252

Physics (PHYS)...104, 123, 181, 182, 211, 212

### IV. Social Sciences (8 credits or more in more than one discipline)

Anthropology (ANTH)...112, 117, 201, 211, 214

Economics (ECON)...103, 201, 202

Geography (GEOG)...133, 225, 241

History (HIST)...134, 137, 138, 141, 151, 152, 153, 230

Political Science (POLS)...105, 109, 205, 207, 209

Psychology (PSYCH)...153, 201, 205, 207, 209, 219, 229

Sociology (SOC)...101, 201, 205, 209, 210, 220, 290

## Transferring Individual Courses

Hundreds of the courses described in this catalog are potential transfer courses, depending on the four-year college or university in question. When considering transferability, it is helpful to think of a course in two ways:

### Course-to-course equivalency

Some courses at Schoolcraft are accepted as equivalent to courses at a four-year college or university. An equivalent course might help the student fulfill the four-year institution's freshman and sophomore general studies requirements. Or, it might apply toward the requirements of a specific academic major or degree. Equivalency guides can be found in the Counseling Center or at [www.macrao.org](http://www.macrao.org).

### Course-to-program transfer

Some Schoolcraft courses can be transferred into specific bachelor's degree programs at a four-year college or university. Transfer guides containing this information can be found in the Counseling Center or at [www.macrao.org](http://www.macrao.org).

## Featured Transfer Partners

By working with a counselor to develop an academic plan, Schoolcraft students can successfully transfer credits to colleges and universities across the nation. With the following colleges and universities, however, Schoolcraft College has taken additional steps to develop partnerships that ease the transition from one college to the next.

Public institutions	MACRAO agreement	Course-to-course equivalency, course-to-program transfer, or other agreements	Articulations and special agreements
Central Michigan University	√	√	√
Eastern Michigan University	√*	√	√
Ferris State University	√*	√	√
Grand Valley State University	√*	√	
Lake Superior State University	√	√	
Michigan State University	√*	√	
Michigan Technological University	√*	√	
Northern Michigan University	√	√	
Oakland University	√*	√	
Saginaw Valley State University	√*		
University of Michigan-Ann Arbor		√	
University of Michigan-Dearborn		√	√
University of Michigan-Flint		√	
Wayne State University <i>Honors MACRAO agreement, but not signatory member</i>		√	
Western Michigan University	√	√	
Private Institutions			
Adrian College	√*		
Albion College	√		
Baker College	√		
Calvin College	√*		
Cleary University	√	√	
College for Creative Studies		√	
Concordia University	√*	√	√
Davenport University	√	√	√
Finlandia University	√*		
Franklin University		√	√
Kettering University		√	
Lawrence Technological University	√*	√	√
Madonna University	√*	√	√

**transfer partners continued →**

**transfer partners continued**

Private Institutions	MACRAO agreement	Course-to-course equivalency, course-to-program transfer, or other agreements	Articulations and special agreements
Marygrove College	√	√	
Michigan Institution of Aviation and Technology			√
Northwood University	√	√	
Olivet College	√		
Rochester College	√	√	
Siena Heights University	√*	√	
Specs Howard School of Broadcast Arts			√
Spring Arbor University	√	√	
University of Detroit Mercy		√	
Walsh College		√	√

\* These institutions have limitations, exceptions and provisos to the MACRAO Transfer Agreement. Students should check with the Counseling Center to learn about these exceptions before attempting to transfer to one of these institutions. Additional information can be found at [www.macrao.org](http://www.macrao.org).

**Guest Students**

Students at other colleges can enroll as guest students at Schoolcraft. Many guest students take Schoolcraft classes over the summer and then transfer the credits to their home institution. An increasing number of guest students are earning transferable credit through Schoolcraft's extensive online offerings. To learn more, refer to the Guest Students section in the Admissions portion of this catalog.

**Reverse Transfer**

Credits earned at other accredited community colleges and at accredited four-year colleges and universities can be applied to a Schoolcraft certificate or associate degree. Students should consult a counselor or academic advisor to determine if any of the credits they've earned elsewhere qualify for transfer to Schoolcraft.

**Transfer Check List**

- Meet with Schoolcraft College Career and Transfer Center staff to keep current with transfer issues, obtain transfer and career information and to ensure transferability of courses.
- Identify the four-year university of your choice as early as possible.
- Meet with Schoolcraft College Counseling staff to satisfy your associate degree requirements, and to ensure transferability of courses.
- Attend transfer events. Meet with representatives from Michigan's four-year universities. Visitation dates and scholarship information are listed on the College cable television network, posted in the Counseling Center and in the Career and Transfer Center and on the transfer bulletin boards throughout campus.
- Follow the transfer guide prepared by the four-year university, which lists course requirements for your specific transfer program. Inquire about the MACRAO Agreement. *See MACRAO Articulation Agreement.*
- Apply to the four-year university of your choice in a timely manner. Transfer applications are available in the Career and Transfer Center.

# Programs of Study

## Letters and numbers equal Schoolcraft College program code

Please select a program code that closely matches your potential field of study and include that code on your Application for Admission. You may change your program code at any time in the Admissions and Enrollment Center.

*Don't see your program? Schoolcraft has transfer courses that apply to most majors at most universities. See your counselor for details.*

<b>Legend</b>	AA = Associate in Arts
	AAS = Associate in Applied Science
	AE = Associate in Engineering
	AGS = Associate in General Studies
	AS = Associate in Science
	CRT = Skills Certificate
	1YC = One Year Certificate
	PAC = Post-Associate Certificate

### Skills Certificates

Skills certificates average 5–6 courses, requiring 16–20 credit hours for completion.

### Certificates

Pre-associate certificates average 10–12 courses (2–3 semesters of full-time study), requiring an average of 30 credit hours for completion. Most credits may be applied toward an associate degree.

### Associate Degrees

Associate degrees average 20–22 courses (4–5 semesters of full-time study), requiring an average of 64 credit hours.

### Transfer Programs

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

### Post-Associate Certificates

Post-associate certificates average 5–6 courses (1–2 semesters of full-time study), requiring an average of 15 credit hours. A student may enter the post-associate program after earning an associate degree from Schoolcraft or another college. The focus is on giving associate degree holders advanced job skills.

### Areas of Study

These courses can be taken for personal or professional interest and/or for transfer to a four-year college or university. Many of the courses count toward a Schoolcraft certificate or degree (i.e. a mathematics course that is part of an associate in engineering degree).

Program Name	Skills Certificate	Certificate	Associate Degree	Post-Associate Certificate <sup>2</sup>
Accounting—		1YC.00001	AAS.00005	
Accounting for Small Business	CRT.00365			
Aviation Management	CRT.00302		AAS.00261	
Biomedical Engineering Technology—				
Biomedical Applications				PAC.00178
Biomedical Engineering Technologist			AAS.00128	
Broadcast Communications			AAS.00041	
Business—				
Basic		1YC.00002		
Business Transfer <sup>5</sup>			AA.00500	
General			AAS.00008	
Marketing and Applied Management			AAS.00009	
Small Business for Entrepreneurs		1YC.00213	AAS.00011	
Business Information Technology		1YC.00242	AAS.00277	
Child and Family Services—				
Child Care and Development		1YC.00031	AAS.00020	
Child Development Associate (CDA)	CRT.00315			
Special Needs Paraprofessional		1YC.00032	AAS.00021	
Computer Aided Design—Mechanical			AAS.00170	
Computer Aided Drafting—Technical		1YC.00119		
Computer Assisted Manufacturing			AAS.00150	
Computer Graphics Technology—				PAC.00181
Foundation	CRT.00364			
3D Animation		1YC.00136		
3D and Video Graphics			AAS.00028	
Digital Art		1YC.00136	AAS.00028	
Graphic Design			AAS.00028	
Interactive Media and Game Design		1YC.00136	AAS.00028	
Publishing		1YC.00136		
Video Graphics		1YC.00136		
Web Design		1YC.00136		
Computer Information Systems—				PAC.00155
Introductory		1YC.00004		
Microcomputer Support Technician			AAS.00014	
Networking Technology Integration		1YC.00270		
Programming	CRT.00366		AAS.00012	
Web Specialist		1YC.00241	AAS.00275	
Computer Service Technician		1YC.00159		
Cosmetology Management			AAS.00010	
Criminal Justice			AAS.00086	
Criminal Justice with Academy			AAS.00086	
Culinary Arts <sup>1</sup>		1YC.00079	AAS.00087	
Culinary Baking and Pastry Arts <sup>1</sup>		1YC.00247		
Education Transfer <sup>5</sup>			AA.00700	

**programs of study continued →**

**programs of study continued**

Program Name	Skills Certificate	Certificate	Associate Degree	Post-Associate Certificate <sup>2</sup>
Electronic Technology	CRT.00320	1YC.00125	AAS.00120	
Emergency Medical Technology		1YC.00024	AAS.00250	
Engineering Transfer <sup>5</sup>			AE.00039	
Environmental Studies			AAS.00176	
Environmental Science Technician		1YC.00276		
Fire Technology			AAS.00177	
Fire Technology with Academy			AAS.00177	
Fire Fighter Technology		1YC.00149		
Health Information Technology <sup>1</sup>			AAS.00153	
Coding Specialist <sup>1</sup>		1YC.00240		
Health Transfer <sup>5</sup>			AA.00600	
Homeland Security			AAS.00252	
Laser Technology		1YC.00059		
Liberal Arts Transfer <sup>5</sup>			AA.00042	
Manufacturing—Advanced Manufacturing			AAS.00135	
Massage Therapy <sup>1</sup>		1YC.00255	AAS.00266	
Medical Assisting <sup>1</sup>		1YC.00026		
Medical Biller/Receptionist	CRT.00350			
Phlebotomy	CRT.00325			
Physician Office Medical Transcription	CRT.00330			
Medical Transcription <sup>1</sup>		1YC.00029		
Metallurgy and Materials Science			AAS.00184	PAC.00179
Metallurgy—Applied Physical		1YC.00124		
Music—				
Foundations		1YC.00162		
Intermediate		1YC.00163		
Piano Teacher		1YC.00115		
Recording Technology		1YC.00144	AAS.00244	
Nursing—				
Nursing Assistant Training Program <sup>1</sup>	CRT.00321			
Licensed Practical <sup>1</sup>		1YC.00017		
Registered <sup>1</sup>			AAS.00000	
Office Information Systems—				
Office Administration			AAS.00133	
Office Specialist	CRT.00370	1YC.00166		
Theatre <sup>5</sup>			AA.00042	
Welding Technology—				
Fabrication		1YC.00127		
Joining Technology			AAS.00082	
Associate Degree Seeking, Undecided <sup>3</sup>			00800	
Transfer Degree Seeking, Undecided <sup>3</sup>			00801	
Non-Degree Seeking <sup>4</sup> <b>00900</b>				

<sup>1</sup> Students must be officially admitted to the program prior to selecting core/major courses. Call the Admissions and Enrollment Center at 734-462-4426 for more information.

<sup>2</sup> Prior associate degree in the program required. See the Schoolcraft College catalog for additional information.

<sup>3</sup> Students are degree seeking and pursuing General Education Requirements.

<sup>4</sup> Federal financial aid may not be available for this option.

<sup>5</sup> Transfer program. See list on this page.

These programs and courses are described in the current Schoolcraft College catalog. College catalogs are available online at [www.schoolcraft.edu](http://www.schoolcraft.edu) or in the Admissions and Enrollment Center, McDowell Center, 734-462-4426.

**Transfer Programs**

Business ..... AA.00500	Liberal Arts..... AA.00042
Accounting	Anthropology
Advertising	Art
Business	Biology
Administration	Chemistry
Computer Science	Communications
Hotel Management	Conservation
Education ..... AA.00700	Criminal Justice
Elementary	Economics
Secondary	English
Special	Foreign Language
Engineering.... AE.00039	Geography
Chemical	Geology
Civil	History
Computer Systems	Mathematics
Electrical	Music
Environmental	Philosophy
Industrial	Physics
Manufacturing	Political Science
Materials Science	Psychology
Mechanical	Public Administration
Health ..... AA.00600	Social Work
Pre-Dental Hygiene	Sociology
Pre-Dentistry	Statistics
Pre-Medicine	Theatre
Pre-Mortuary Science	
Pre-Nursing	
Pre-Occupational Therapy	
Pre-Optometry	
Pre-Pharmacy	
Pre-Physical Therapy	
Pre-Veterinary	

**Areas of Study**

*Schoolcraft offers courses in the following disciplines. Many of these courses can be transferred to a four-year college or university.*

Allied Health  
 Anthropology  
 Arabic  
 Art and Design  
 Biology  
 Chemistry  
 Chinese  
 Collegiate Skills  
 Communication Arts  
 Corrections  
 Design  
 Drafting  
 Economics  
 Engineering  
 English  
 English as a Second Language  
 French  
 Geography  
 Geology  
 German  
 History  
 Human Development Services  
 Humanities  
 Italian  
 Mathematics  
 Philosophy  
 Physical Education, Health & Recreation  
 Physics  
 Political Science  
 Psychology  
 Quality Management  
 Sociology  
 Spanish

# 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 training for those planning to seek a career in accounting.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ACCT 201	Principles of Accounting 1 .....	4	
CIS 120	Software Applications .....	3	
ENG 101	English Composition 1 .....	3	
Math	Select 1 .....	3–4	
MATH 101	Business Mathematics		
MATH 113	Intermediate Algebra for College Students		
			<b>13–14</b>
	<b>Winter Semester</b>		
ACCT 202	Principles of Accounting 2 .....	4	
CIS 180	Spreadsheet Applications—Current Software.....	3	
Elective	Select 1 .....	3	
ACCT 260	Computer Based Accounting		
ACCT 261	Computerized Accounting		
ACCT 263	Computerized Accounting for Small Business		
ECON 201	Principles of Macroeconomics .....	4	
			<b>14</b>
	<b>Spring/Summer Session</b>		
COMA 103	Fundamentals of Speech.....	3	
ENG 106	Business English.....	3	
			<b>6</b>

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
ACCT 221	Intermediate Accounting 1 .....	4	
ACCT 226	Cost Accounting .....	4	
BUS 207	Business Law 1 .....	3	
Elective	Select 1 .....	3–4	
ACCT 262	Payroll Accounting—Manual to Computerized		
BUS 101	Introduction to Business		
ECON 202	Principles of Economics		
			<b>14–15</b>

		<b>Winter Semester</b>	
ACCT 222	Intermediate Accounting 2 .....	4	
Elective	Select 4 tax credit hours below.....	4	
ACCT 238	Federal Tax Accounting.....	4	
	<b>OR</b>		
ACCT 138	Income Tax Preparation.....	2	
and			
ACCT 139	Michigan Taxes.....	2	
Elective	Select 1 .....	3–4	
BUS 202	Business Ethics		
BUS 240	International Business		
PSYCH 153	Human Relations		
POLS 209	International Relations		
PHIL 247	Logic		
SOC 201	Principles of Sociology		
Science*	Select any General Education Science course.....	4	
			<b>15–16</b>

**PROGRAM TOTAL 62–65 CREDITS**

\* Number of credits may vary depending on the General Education Science course selection.

**NOTE:** ACCT 221, ACCT 226, ACCT 261, and ACCT 262 are Fall only courses. ACCT 222, ACCT 238, ACCT 260, and ACCT 263 are Winter only courses.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.



**Accounting Certificate**

Schoolcraft program code # 1YC.00001

The Accounting Program is designed to familiarize students with the work and challenges facing accountants. This certificate program prepares the student for a job as an entry-level bookkeeper within an accounting department or firm.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

**FIRST YEAR Fall Semester**

ACCT 201	Principles of Accounting 1 .....	4
CIS 120	Software Applications .....	3
ENG 101	English Composition 1 .....	3
MATH 101	Business Mathematics .....	3
		<b>13</b>

**Winter Semester**

ACCT 202	Principles of Accounting 2 .....	4
Elective	Select 4 tax credit hours below.....	4
ACCT 238	Federal Tax Accounting.....	4
<b>OR</b>		
ACCT 138	Income Tax Preparation.....	2
and		
ACCT 139	Michigan Taxes.....	2
BUS 207	Business Law 1.....	3
Elective	Select 1 .....	3
ACCT 260	Computer Based Accounting	
ACCT 261	Computerized Accounting	
ACCT 263	Computerized Accounting for Small Business	
		<b>14</b>

**SECOND YEAR Fall Semester**

COMA 103	Fundamentals of Speech.....	3
ACCT 262	Payroll Accounting—Manual to Computerized .....	3
		<b>6</b>

**PROGRAM TOTAL 33 CREDITS**

**NOTE:** ACCT 261 and ACCT 262 are Fall only courses.  
ACCT 238, ACCT 260, and ACCT 263 are Winter only courses.

**Accounting for Small Business Skills Certificate**

Schoolcraft program code # CRT.00365

The Accounting Program is designed to familiarize students with the work and challenges facing accountants. This certificate program is designed for those who seek entry level bookkeeping positions in specialized areas; who seek a credential in order to receive pay raises, promotions, or benefits from employers; or who currently own or are starting a small business.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

**FIRST YEAR Fall Semester**

ACCT 201	Principles of Accounting 1 .....	4
CIS 120	Software Applications .....	3
		<b>7</b>

**Winter Semester**

ACCT 263	Computerized Accounting for Small Business.....	3
Elective	Select 4 tax credit hours below.....	4
ACCT 238	Federal Tax Accounting.....	4
<b>OR</b>		
ACCT 138	Income Tax Preparation.....	2
and		
ACCT 139	Michigan Taxes.....	2
		<b>7</b>

**SECOND YEAR Fall Semester**

Elective	Select 1 .....	3
CIS 180	Spreadsheet Applications—Current Software	
ACCT 262	Payroll Accounting—Manual to Computerized	

**PROGRAM TOTAL 17 CREDITS**

**NOTE:** ACCT 262 is a Fall only course.  
ACCT 238 and ACCT 263 are Winter only courses.



# AVIATION MANAGEMENT

## Aviation Management Associate Degree

Schoolcraft program code # AAS.00261

The Aviation Management program provides an excellent broad exposure to key areas of aviation leading to an associate degree. The nature of the program recognizes that there are many individuals working in the field of aviation who may wish to broaden their aviation knowledge. This program has been designed to prepare and/or enhance a student's readiness for growth in an aviation career or in further aviation education. Course content includes the basics of flight and airspace/navigation, the evolution of aviation through to the latest advancements, meteorology, a broad perspective of corporate operations and aircraft maintenance businesses, aviation regulations/legislation and law, and the planning and operations of airports.

Three student profiles were considered in the development of this program:

- 1) The person who is already involved in a career in aviation who wishes to obtain a certificate or degree to enhance career growth potential, or simply wishes to obtain more knowledge in a specific area of aviation.
- 2) The student just entering the college environment who wishes to explore aviation as a career possibility while obtaining initial college course credit OR who definitely wants to obtain a certificate or associate degree leading to an aviation career.
- 3) The student who wishes to obtain initial credit at the community college level for economical or convenience reasons and intends to transfer to a four-year aviation degree program with either a flight or non-flight focus.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an associate degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
ENG 101	English Composition 1 .....	3
CIS 120	Software Applications .....	3
AVM 101	Perspectives in Aviation .....	3
AVM 103	Aviation Meteorology.....	3
AVM 104	Aviation Legislation .....	3
		<b>15</b>
	<b>Winter Semester</b>	
English	Select 1 .....	3
ENG 102	English Composition 2 .....	
ENG 106	Business English .....	
AVM 102	Aviation History .....	3
AVM 203	Airport Planning and Management .....	3
Elective	Select from the list below .....	3
		<b>12</b>
	<b>Spring Session</b>	
AVM 201	Aviation Law .....	3
Elective	Select from the list below .....	3
		<b>6</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
POLS 105	Survey of American Government.....	3
Social Science	Select 1 .....	3–4
PSYCH 153	Human Relations .....	
PSYCH 201	General Psychology .....	
HUM 106	Introduction to Art and Music .....	1
Elective	Select from the list below .....	6–7
		<b>13–15</b>

### Winter Semester

PHYS 104	Introduction to Astronomy .....	4
COMA 103	Fundamentals of Speech.....	3
MATH 111	Applications—Utility of Math .....	4
Elective	Select from the list below.....	3–4
		<b>14–15</b>

### PROGRAM TOTAL 60–63 CREDITS

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### ELECTIVES

AVM 202	Aviation Maintenance Management.....	3
AVM 204	Corporate Aviation Management.....	3
BUS 101	Introduction to Business .....	3
BUS 207	Business Law 1 .....	3
BUS 217	Business Management.....	3
BUS 220	Supervision .....	3
BUS 230	Human Resource Management.....	3
GEOG 130	Physical Geography.....	4
GEOG 133	World Regional Geography .....	4
PHIL 243	An Introduction to Philosophy .....	3
SOC 201	Principles of Sociology.....	3
SOC 210	Cultural Diversity .....	3

## Aviation Management Skills Certificate

Schoolcraft program code # CRT.00302

This certificate has been designed to prepare and/or enhance career growth potential or simply provide more knowledge in a specific area of aviation. The certificate is appropriate for the student entering the college environment who wishes to explore aviation as a career possibility OR who definitely wants to obtain a certificate to enhance an aviation career.

The Aviation Management Skills Certificate provides excellent broad exposure to key areas of aviation. Course content includes basics of flight and airspace/navigation, the evolution of aviation through to the latest advancements, meteorology, a broad perspective of corporate operations and aircraft maintenance businesses, aviation regulations/legislation and law, and the planning and operations of airports.

A certificate is granted after completing 18 credit hours of the following courses to complete a Certificate in Aviation Management.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
AVM 101	Perspectives in Aviation .....	3
AVM 104	Aviation Legislation .....	3
Elective	Select from the list below.....	3
		<b>9</b>
	<b>Winter Semester</b>	
AVM 102	Aviation History .....	3
AVM 203	Airport Planning and Management .....	3
Elective	Select from the list below.....	3
		<b>9</b>
	<b>PROGRAM TOTAL 18 CREDITS</b>	
<b>ELECTIVES</b>		
AVM 103	Aviation Meteorology.....	3
AVM 201	Aviation Law .....	3
AVM 202	Aviation Maintenance Management.....	3
AVM 204	Corporate Aviation Management.....	3

## BIOMEDICAL ENGINEERING TECHNOLOGY

### Biomedical Engineering Technologist Associate Degree

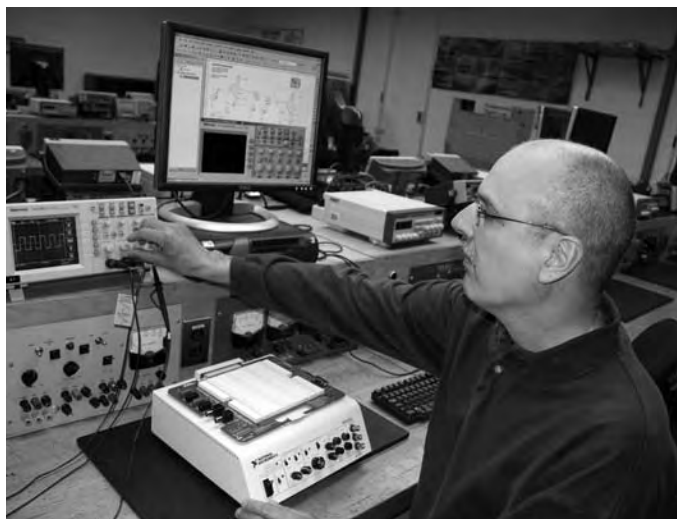
Schoolcraft program code # AAS.00128

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.

As part of the BMET program, students will be required to complete 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 internship, students will return to campus to continue studies. After completing an additional semester, students may take the second internship course, BMET 255. Students must meet with the BMET Internship Coordinator before enrolling in BMET 254 and BMET 255 to be eligible to fulfill program requirements. Students must complete internships to remain enrolled in the program.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

FIRST YEAR		Fall Semester		
ELECT 119	Basic Measurement and Reporting Skills.....	3		
ELECT 127	DC Circuits and Mathematical Modeling.....	5		
ENG 101	English Composition 1 .....	3		
Math	Select 1 .....	3-4		
MATH 101	Business Mathematics			
MATH 113	Intermediate Algebra for College Students			
				<b>14-15</b>
		Winter Semester		
BMET 116	Biomedical Instrumentation Terminology and Safety 1 .....	3		
ELECT 128	AC Circuits and Mathematical Modeling.....	5		
English	Select 1 .....	3		
ENG 102	English Composition 2			
ENG 116	Technical Writing			
COMPS 126	Technical Programming.....	3		
				<b>14</b>
		Spring/Summer Session		
BMET 254	Biomedical Equipment Internship 1.....	3		
BIOL 105	Basic Human Anatomy and Physiology 1.....	4		
				<b>7</b>



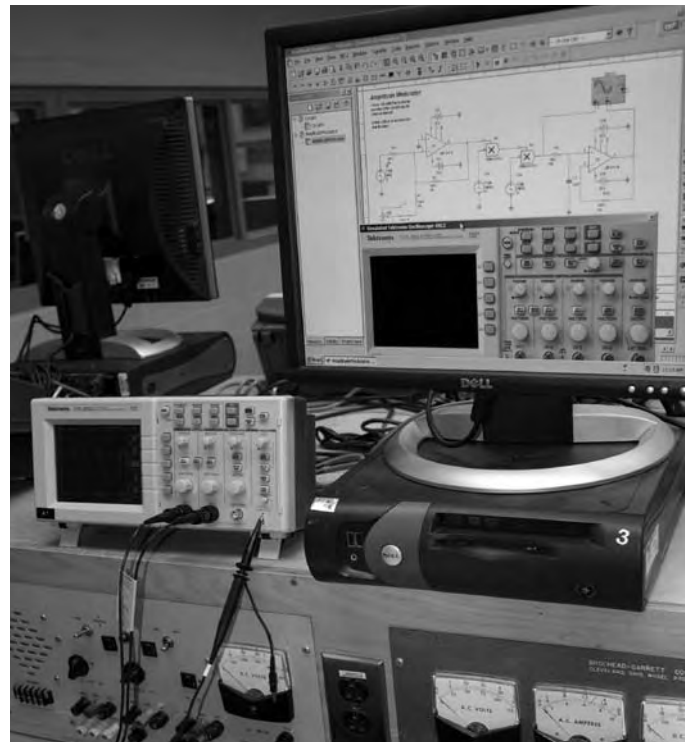
SECOND YEAR		Fall Semester		
BMET 204	Biomedical Instrumentation Terminology and Safety 2 .....	4		
BMET 255	Biomedical Equipment Internship 2.....	3		
ELECT 129	Diodes and Transistors .....	3		
Social Science	Select 1 .....	3		
POLS 209	International Relations			
PSYCH 153	Human Relations			
SOC 210	Cultural Diversity			
Elective	Select from the list below.....	3		
				<b>16</b>

		Winter Semester		
ELECT 206	Operational Amplifiers and Linear Integrated Circuits.....	4		
ELECT 226	Digital Logic Circuits.....	4		
Elective	Select from the list below.....	6		
HUM 106	Introduction to Art and Music .....	1		
				<b>15</b>

### PROGRAM TOTAL 66-67 CREDITS

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

ELECTIVES		
CIS 171	Introduction to Networking.....	3
CIS 235	Managing and Troubleshooting PCs .....	3
COMPS 124	Introduction to Personal Computers and Software.....	3
ELECT 134	Introduction to Microcontrollers .....	3
ELECT 135	Fluid Power .....	4
ELECT 207	AC/DC Motors .....	3
ELECT 229	Electronics Troubleshooting.....	3
ELECT 237	Programmable Logic and Industrial Controls .....	4
LASR 125	Laser Safety Concepts .....	3
MET 102	Introduction to Materials Science.....	3



**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 Biomedical Engineering opportunities to study new technologies and innovations.

Completion of this program will enhance a professional’s ability to meet the demands of rapidly changing technologies in 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 completed a minimum of an accredited Associate Degree in Applied Science. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. 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).

**PROGRAM COURSES**

A student may choose from any of the courses listed below:

BIOL 240	Anatomy and Physiology Review .....	2
CIS 120	Software Applications .....	3
CIS 171	Introduction to Networking .....	3
CIS 178	Technical Microsoft Windows.....	3
CIS 235	Managing and Troubleshooting PCs .....	3
CIS 271	Local Area Networks .....	3
CIS 273	TCP/IP and Network Architectures .....	3
ELECT 134	Introduction to Microcontrollers .....	3
LASR 103	Laser Concepts .....	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 # AAS.00041

Students will develop 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 credit hours are awarded for completion of the SHS Certificate Program and the remaining credit hours are taken at Schoolcraft.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The program can begin at either school. Students who satisfactorily complete all College Requirements qualify for the Associate of Arts Degree.

**TYPICAL PROGRAM SCHEDULE**

**Program Courses (Offered at Specs Howard School)**

Vocal Technique .....	1.5
Broadcast Concept .....	1.5
Broadcast Writing .....	1.5
Interpersonal Communication Development .....	0.5
Workshop .....	1.5
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
	<b>15</b>

**SCHOOLCRAFT COLLEGE**

**College Requirements**

Students are encouraged to take their College Requirements early in their program. However, these courses are not required before beginning Program Courses.

**FIRST YEAR**

<b>Math</b>	Select 1 .....	3–4
MATH 101	Business Mathematics	
MATH 113	Intermediate Algebra for College Students	
BUS 101	Introduction to Business .....	3
COMA 103	Fundamentals of Speech.....	3
ENG 101	English Composition 1 .....	3
THEA 208	Acting 1 .....	3
		<b>15–16</b>

**Winter Semester**

CIS 105	Computer Orientation.....	1
COMA 201	Discussion.....	3
GEOG 130	Physical Geography.....	4
PSYCH 201	General Psychology.....	4
THEA 241*	Oral Interpretation of Literature.....	3
		<b>15</b>

**SECOND YEAR Fall Semester**

ENG 107	Introduction to Journalism.....	3
GEOL 133	Physical Geology.....	4
POLS 105	Survey of American Government.....	3
SOC 201	Principles of Sociology.....	3
Elective**	.....	2–3
		<b>15–16</b>

**PROGRAM TOTAL 60–62 CREDITS**

\* This class is offered on a rotational basis. Contact Liberal Arts office for current offerings.

\*\* Any 100 or 200 level course not previously taken.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**BUSINESS****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 to develop 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BUS 101	Introduction to Business.....	3
MATH 101	Business Mathematics .....	3
BUS 122	Advertising .....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
Humanities*	Select any General Education Humanities course.....	3
	COMA 103 Fundamentals of Speech (recommended)	15
	<b>Winter Semester</b>	
BUS 120	Principles of Salesmanship.....	3
Elective	Select 1 .....	4
ACCT 103	Introduction to Accounting	
ACCT 201	Principles of Accounting 1	
English	Select 1 .....	3
ENG 102	English Composition 2	
ENG 106	Business English	
PSYCH 153	Human Relations .....	3
Science*	Select any General Education Science course.....	4
		17
	<b>SECOND YEAR</b>	
	<b>Fall Semester</b>	
BUS 217	Business Management .....	3
BUS 220	Supervision .....	3
ECON 201	Principles of Macroeconomics .....	4
BUS 202	Business Ethics.....	3
Elective	Select from the list below.....	3
		16
	<b>Winter Semester</b>	
BUS 207	Business Law 1 .....	3
BUS 215	Business on the Web.....	3
BUS 226	Principles of Marketing .....	3
Electives	Select from the list below.....	6
		15
	<b>PROGRAM TOTAL 63 CREDITS</b>	

\* Number of credits may vary depending on the General Education course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**ELECTIVES**

BUS 103	Organizing a Small Business.....	3
BUS 161	Retail Principles and Practices .....	3
BUS 162	Retail Merchandising.....	3
BUS 201	Business Statistics .....	3
BUS 204	Personal Finance.....	3
BUS 205	Personal Investing .....	3
BUS 206**	Foundation of Business Information Technology .....	3
BUS 208	Business Law 2.....	3
BUS 221**	Statistical Inference for Management Decisions.....	3
BUS 230	Human Resource Management.....	3
BUS 240	International Business .....	3
CIS 120	Software Applications .....	3
CIS 215	Advanced Software Applications .....	3
ENG 116	Technical Writing .....	3

\*\* These courses are designed for students pursuing the Walsh College Honors Fast Track Program.

**Business—Basic One-Year Certificate**

Schoolcraft program code # 1YC.00002

The Basic Business Program introduces students to accounting, economics and the basics of business. Completion of the program positions the student for pursuit of an associates degree or for transition into the business community.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BUS 101	Introduction to Business.....	3
MATH 101	Business Mathematics .....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
COMA 103	Fundamentals of Speech.....	3
BUS 220	Supervision.....	3
		15
	<b>Winter Semester</b>	
English	Select 1 .....	3
ENG 102	English Composition 2	
ENG 106	Business English	
Accounting	Select 1 .....	4
ACCT 103	Introduction to Accounting	
ACCT 201	Principles of Accounting 1	
ECON 201	Principles of Macroeconomics .....	4
PSYCH 153	Human Relations .....	3
		14
	<b>Spring Session</b>	
BUS 202	Business Ethics.....	3
	<b>PROGRAM TOTAL 32 CREDITS</b>	

**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 knowledge of business.

Career opportunities are available in occupations ranging from buying and selling to distribution management.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BUS 101	Introduction to Business .....	3
BUS 122	Advertising .....	3
BUS 161	Retail Principles and Practices .....	3
Elective	Select 1 .....	4
ACCT 103	Introduction to Accounting	
ACCT 201	Principles of Accounting 1	
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
		<b>16</b>
	<b>Winter Semester</b>	
MATH 101	Business Mathematics .....	3
BUS 120	Principles of Salesmanship.....	3
English	Select 1 .....	3
ENG 102	English Composition 2	
ENG 106	Business English	
PSYCH 153	Human Relations .....	3
BUS 215	Business on the Web.....	3
		<b>15</b>
	<b>SECOND YEAR Fall Semester</b>	
BUS 217	Business Management.....	3
BUS 220	Supervision .....	3
Humanities	Select any General Education Humanities course.....	3
ECON 201	COMA 103 Fundamentals of Speech (recommended)	
Principles of Macroeconomics .....		4
Elective	Select from the list below .....	2–3
		<b>15–16</b>
	<b>Winter Semester</b>	
BUS 226	Principles of Marketing .....	3
BUS 202	Business Ethics .....	3
BUS 230	Human Resource Management.....	3
Science*	Select any General Education Science course.....	4
Elective	Select from the list below .....	3
		<b>16</b>
	<b>PROGRAM TOTAL 62–63 CREDITS</b>	

\* Number of credits may vary depending on the General Education course selection.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

<b>ELECTIVES</b>		
BUS 103	Organizing a Small Business.....	3
BUS 162	Retail Merchandising.....	3
BUS 201	Business Statistics .....	3
BUS 206**	Foundation of Business Information Technology .....	3
BUS 204	Personal Finance.....	3
BUS 205	Personal Investing .....	3
BUS 208	Business Law 2.....	3
BUS 221**	Statistical Inference for Management Decisions.....	3
BUS 240	International Business .....	3
CIS 120	Software Applications .....	3
CIS 180	Spreadsheet Applications—Current Software.....	3
CIS 215	Advanced Software Applications .....	3
ENG 116	Technical Writing .....	3
OIS 100	Keyboarding 1 .....	2

\*\* These courses are designed for students pursuing the Walsh College Honors Fast Track Program.

**Business—Small Business for Entrepreneurs One-Year Certificate**

Schoolcraft program code # IYC.00213

The Small Business for Entrepreneurs one-year certificate is for individuals considering starting a small business, those who already own a business, or students who seek employment opportunities managing a small business. The coursework prepares learners for the unique challenges small business owners and entrepreneurs routinely deal with in today’s highly competitive business world.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BUS 103	Organizing a Small Business.....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
BUS 220	Supervision .....	3
Elective	Select 1 .....	4
ACCT 103	Introduction to Accounting	
ACCT 201	Principles of Accounting 1	
		<b>13</b>
	<b>Winter Semester</b>	
BUS 104	Operating a Small Business.....	3
BUS 122	Advertising .....	3
English	Select 1 .....	3
ENG 102	English Composition 2	
ENG 106	Business English	
PSYCH 153	Human Relations .....	3
Elective	Select from the list below .....	3
		<b>15</b>
	<b>Spring Session</b>	
BUS 202	Business Ethics .....	3
		<b>PROGRAM TOTAL 31 CREDITS</b>

<b>ELECTIVES</b>		
Select one course from the list below to fulfill the elective requirement:		
ACCT 263	Computerized Accounting for Small Business.....	3
BUS 120	Principles of Salesmanship.....	3
BUS 215	Business on the Web.....	3

**Small Business for Entrepreneurs Associate Degree**

Schoolcraft program code # AAS.00011

The Small Business for Entrepreneurs 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 for Entrepreneurs curriculum is designed for those who already own and operate a small business, who are contemplating starting their own small business, or who seek employment opportunities as managers in small business.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BUS 101	Introduction to Business.....	3
BUS 103	Organizing a Small Business.....	3
BUS 122	Advertising.....	3
MATH 101	Business Mathematics.....	3
English	Select 1.....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
		<b>15</b>

	<b>Winter Semester</b>	
BUS 104	Operating a Small Business.....	3
Elective	Select 1.....	4
ACCT 103	Introduction to Accounting	
ACCT 201	Principles of Accounting 1	
English	Select 1.....	3
ENG 102	English Composition 2	
ENG 106	Business English	
Science*	Select any General Education Science course.....	4
Elective	Select from the list below.....	3
		<b>17</b>

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
BUS 204	Personal Finance.....	3
BUS 220	Supervision.....	3
BUS 202	Business Ethics.....	3
HUM 106	Introduction to Art and Music.....	1
BUS 215	Business on the Web.....	3
Elective	Select from the list below.....	3
		<b>16</b>

	<b>Winter Semester</b>	
BUS 207	Business Law 1.....	3
BUS 226	Principles of Marketing.....	3
BUS 230	Human Resource Management.....	3
PSYCH 153	Human Relations.....	3
Elective	Select from the list below.....	3
		<b>15</b>

**PROGRAM TOTAL 63 CREDITS**

\* Number of credits may vary depending on the General Education Science course selection.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**ELECTIVES**

ACCT 263	Computerized Accounting for Small Business.....	3
BUS 120	Principles of Salesmanship.....	3
BUS 161	Retail Principles and Practices.....	3
BUS 162	Retail Merchandising.....	3
BUS 205	Personal Investing.....	3
BUS 208	Business Law 2.....	3
BUS 217	Business Management.....	3
BUS 240	International Business.....	3
CIS 120	Software Applications.....	3
CIS 215	Advanced Software Applications.....	3
ECON 201	Principles of Macroeconomics.....	4
ENG 116	Technical Writing.....	3



# BUSINESS INFORMATION TECHNOLOGY

## Business Information Technology Associate Degree

Schoolcraft program code # AAS.00277

The Business Information Technology program is designed to meet the growing needs of industry for a new category of Information Technology professional. Today's employers increasingly request graduates who have a sound business background combined with the ability to develop or manage business computer systems.

This is a fast growing field with continual changes in hardware, software and procedures. The widespread use of computers in all areas of businesses has generated new positions and expanded opportunities in Information Technology. Effective use of technology enables businesses to serve customers better, access more information, be more flexible in responding to business changes and increase employee productivity.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

### FIRST YEAR

#### Fall Semester

ENG 101	English Composition 1 .....	3
BUS 101	Introduction to Business .....	3
CIS 125	Principles of Information Security .....	3
CIS 120	Software Applications .....	3
Elective	Select from the list below .....	3
		<b>15</b>

#### Winter Semester

English	Select 1 .....	3
ENG 102	English Composition 2 .....	
ENG 106	Business English .....	
MATH 113	Intermediate Algebra for College Students .....	4
BUS 217	Business Management .....	3
CIS 129	Introduction to Programming Logic .....	3
CIS Elective	Select any CIS course from the list below .....	3
		<b>16</b>

#### Spring/Summer Session

Social Science	Select 1 .....	3–4
POLS 105	Survey of American Government .....	
PSYCH 153	Human Relations .....	
PYSCH 201	General Psychology .....	
COMA 103	Fundamentals of Speech .....	3
		<b>6–7</b>

### SECOND YEAR

#### Fall Semester

BUS 220	Supervision .....	3
CIS 250	Systems Development and Design .....	4
CIS Elective	Select any CIS course from the list below .....	3–4
Science*	Select any General Education Science course .....	4
		<b>14–15</b>

#### Winter Semester

CIS 251	IT Project Management .....	3
ACCT 201	Principles of Accounting 1 .....	4
ECON 201	Principles of Macroeconomics .....	4
Elective	Select from the list below .....	3
		<b>14</b>

### PROGRAM TOTAL 65–67 CREDITS

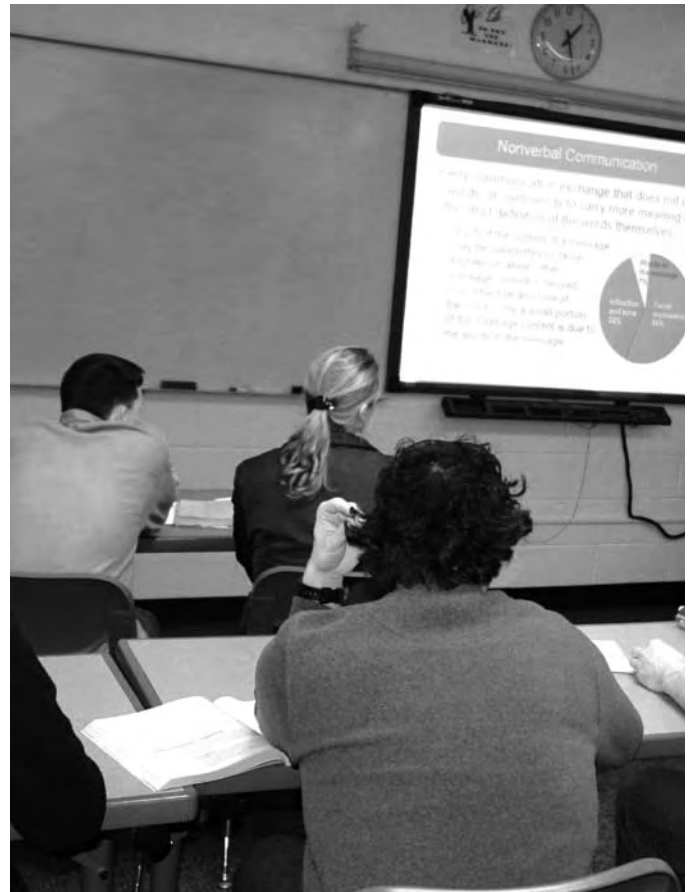
\* Number of credits may vary depending on the General Education Science course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### ELECTIVES

BUS 201	Business Statistics .....	3
BUS 207	Business Law 1 .....	3
BUS 208	Business Law 2 .....	3
BUS 215	Business on the Web .....	3
BUS 221**	Statistical Inference for Management Decisions .....	3
BUS 226	Principles of Marketing .....	3
CIS 123	Introduction to E-Commerce .....	3
CIS 170	Microsoft Windows .....	3
CIS 171	Introduction to Networking .....	3
CIS 176	Visual Basic.NET .....	3
CIS 185	Introduction to HTML .....	3
CIS 211	Introduction to C++ .....	2
CIS 221	Advanced C++ .....	2
CIS 223	Introduction to C# .....	3
CIS 225	Database Management Systems .....	3
CIS 227	Introduction to Structured Query Language (SQL) .....	1
CIS 235	Managing and Troubleshooting PCs .....	3
CIS 239	Advanced C# .....	3
CIS 256	Introduction to XML .....	3
CIS 265	Networking 1 .....	3
CIS 276	Networking 2 .....	3
CIS 290	Object-Oriented Programming With Java .....	3

\*\* This course is designed for students pursuing the Walsh College Honors Fast Track Program.



**Business Information Technology  
One-Year Certificate**

Schoolcraft program code # 1YC.00242

The Business Information Technology program is designed to meet the growing needs of industry for a new category of Information Technology professional. Today’s employers increasingly requests graduates who have of a sound business background combined with the ability to develop or manage business computer systems.

This is a fast growing field with continual changes in hardware, software and procedures. The widespread use of computers in all areas of business has generated new positions and expanded opportunities Information Technology. Effective use of technology enables businesses to serve customers better, access more information, be more flexible in responding to business changes and increase employee productivity.

This certificate is designed to provide students with an overview of business and computer systems. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses and Electives qualify for a Certificate of Program Completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
BUS 101	Introduction to Business.....	3	
CIS 120	Software Applications .....	3	
CIS 129	Introduction to Programming Logic.....	3	
CIS 125	Principles of Information Security .....	3	
CIS Elective	Select any CIS course listed below .....	3-4	
			<b>15-16</b>

	<b>Winter Semester</b>		
ACCT 201	Principles of Accounting 1 .....	4	
CIS 251	IT Project Management .....	3	
BUS 220	Supervision .....	3	
CIS 250	Systems Development and Design .....	4	
			<b>14</b>

	<b>Spring Session</b>		
BUS 217	Business Management .....	3	
Elective	Select from the list below .....	3	
			<b>6</b>

**PROGRAM TOTAL 35-36 CREDITS**

<b>Electives</b>		
BUS 201	Business Statistics .....	3
BUS 207	Business Law 1.....	3
BUS 208	Business Law 2.....	3
BUS 215	Business on the Web.....	3
BUS 226	Principles of Marketing.....	3
CIS 123	Introduction to E-Commerce.....	3
CIS 170	Microsoft Windows .....	3
CIS 171	Introduction to Networking .....	3
CIS 176	Visual Basic.NET .....	3
CIS 185	Introduction to HTML.....	3
CIS 211	Introduction to C++ .....	2
CIS 221	Advanced C++.....	2
CIS 223	Introduction to C#.....	3
CIS 225	Database Management Systems .....	3
CIS 227	Introduction to Structured Query Language (SQL).....	1
CIS 235	Managing and Troubleshooting PCs .....	3
CIS 239	Advanced C# .....	3
CIS 256	Introduction to XML .....	3
CIS 265	Networking 1 .....	3
CIS 276	Networking 2.....	3
CIS 290	Object-Oriented Programming With Java .....	3



## CHILD AND FAMILY SERVICES

### Child Care and Development Associate Degree

Schoolcraft program code # AAS.00020

To work effectively with children, early childhood educators must be sensitive to and understand the developmental stages of children. This curriculum contains theoretical and practical experiences to prepare students to work in early childhood programs in a variety of settings.

The required practicum experiences at the College’s lab school, the Children’s Center, expose students to best practices in early childhood.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ENG 100	Communication Skills.....	3	
CCD 116	Child Development.....	3	
CCD 100	Introduction to Child Welfare Services .....	3	
CCD 102	Foundations of Early Childhood Education.....	3	
Social Science	Select 1 .....	3–4	
PSYCH 153	Human Relations		
PSYCH 201	General Psychology		
			<b>15–16</b>
		<b>Winter Semester</b>	
ENG 106	Business English.....	3	
CCD 118	Infant and Toddler Care.....	3	
CCD 101	Preschool Child Care.....	3	
CCD 115	School-Age Child Care.....	3	
CCD 150	Child Care Practicum 1 .....	3	
COLLS 111	Electronic Portfolio .....	1	
			<b>16</b>

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
Math	Select any General Education Mathematics course ....	3–4	
CCD 126	Creative Activities .....	3	
CCD 200	Child Care Practicum 2 .....	3	
Science	Select 1 .....	4–5	
BIOL 101	General Biology		
CHEM 111	General Chemistry 1		
GEOG 105	Earth Science for Elementary Teachers		
GEOL 133	Physical Geology		
PHYS 104	Introduction to Astronomy		
PHYS 123	Applied Physics		
HUM 106	Introduction to Art and Music .....	1	
			<b>14–16</b>

		<b>Winter Semester</b>	
CCD 211	Children and Youth in Groups.....	3	
CCD 214	Operation and Maintenance of a Child Care Facility ...	3	
CCD 216	The Child With Special Needs .....	3	
CCD Elective	Select 1 .....	3	
CCD 121	The Adolescent		
CCD 221	Early Literacy and Numerical Thinking		
POLS 105	Survey of American Government.....	3	
COLLS 211	Electronic Portfolio—Exit Course .....	1	
			<b>16</b>

**PROGRAM TOTAL 61–64 CREDITS**

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CCD 116	Child Development.....	3	
CCD 126	Creative Activities .....	3	
CCD 214	Operation and Maintenance of a Child Care Facility...	3	
CCD 216	The Child With Special Needs .....	3	
CCD 100	Introduction to Child Welfare Services .....	3	
			<b>15</b>
		<b>Winter Semester</b>	
CCD 101	Preschool Child Care.....	3	
CCD 102	Foundations of Early Childhood Education .....	3	
CCD 118	Infant and Toddler Care.....	3	
CCD 150	Child Care Practicum 1 .....	3	
			<b>12</b>
		<b>Spring Session</b>	
CCD 200	Child Care Practicum 2 .....	3	
CCD 211	Children and Youth in Groups.....	3	
			<b>6</b>

**PROGRAM TOTAL 33 CREDITS**



### Child Care—Special Needs Paraprofessional Associate Degree

Schoolcraft program code # AAS.00021

Working with disabled children and adults 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 coaching 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 No Child Left Behind legislation.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
ENG 100	Communication Skills .....	3
CCD 116	Child Development.....	3
CCD 100	Introduction to Child Welfare Services .....	3
Social Science	Select 1 .....	3–4
PSYCH 153	Human Relations	
PSYCH 201	General Psychology	
CCD 216	The Child With Special Needs .....	3
		<b>15–16</b>
	<b>Winter Semester</b>	
ENG 106	Business English.....	3
CCD Elective	Select 1 .....	3
CCD 101	Preschool Child Care	
CCD 115	School-Age Child Care	
CCD 105	Introduction to Developmental Disabilities.....	3
SOC 201	Principles of Sociology.....	3
CCD 150	Child Care Practicum 1 .....	3
COLLS 111	Electronic Portfolio .....	1
		<b>16</b>

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
BIOL 101	General Biology .....	4
Math	Select any General Education Mathematics course ...	3–4
CCD 215	Methods and Curricula for Persons With Developmental Disabilities .....	3
CCD 211	Children and Youth in Groups.....	3
HUM 106	Introduction to Art and Music .....	1
		<b>14–15</b>

	<b>Winter Semester</b>	
CCD 113	Special Educational Programs and Supported Living.....	3
CCD 126	Creative Activities .....	3
CCD 130	Learning Disabilities .....	3
CCD 200	Child Care Practicum 2 .....	3
CCD 140	Emotional Impairment.....	3
COLLS 211	Electronic Portfolio—Exit Course .....	1
		<b>16</b>

#### PROGRAM TOTAL 61–63 CREDITS

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### 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 the handicap.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a certificate of program completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CCD 116	Child Development.....	3
CCD 216	The Child With Special Needs .....	3
CCD 215	Methods and Curricula for Persons With Developmental Disabilities .....	3
CCD 113	Special Educational Programs and Supported Living .....	3
		<b>12</b>
	<b>Winter Semester</b>	
CCD 105	Introduction to Developmental Disabilities.....	3
CCD 150	Child Care Practicum 1 .....	3
CCD 140	Emotional Impairment.....	3
CCD 130	Learning Disabilities .....	3
		<b>12</b>
	<b>Spring Session</b>	
CCD 200	Child Care Practicum 2 .....	3
CCD 211	Children and Youth in Groups.....	3
		<b>6</b>

#### PROGRAM TOTAL 30 CREDITS



**Child Development Associate (CDA) Skills Certificate**

Schoolcraft program code # CRT.00315

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 six 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.\*

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The following are the required courses necessary to meet CDA competencies.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CCD 102	Foundations of Early Childhood Education .....	3
CCD 116	Child Development.....	3
CCD 221	Early Literacy and Numerical Thinking.....	3
		<b>9</b>
	<b>Winter Semester</b>	
CCD 118	Infant and Toddler Care.....	3
<b>**OR</b>		
CCD 101	Preschool Child Care.....	3
CCD 150	Child Care Practicum 1 .....	3
		<b>6</b>
	<b>Spring Session</b>	
CCD 155	CDA Assessment Preparation.....	1
	<b>PROGRAM TOTAL 16 CREDITS</b>	

\* 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.

\*\* Choose course depending upon the type of CDA Credentials the student is pursuing. Check with the Child Care Department for more information.



**COMPUTER AIDED DESIGN (CAD)**

**CAD-Mechanical Associate Degree**

Schoolcraft program code # AAS.00170

Technology improvements have moved the world of design from the drafting arena to the data management and design world. The designer now must produce multiple design proposals through a process which includes modeling, simulation, performance analysis and free form fabrication. Product Life Cycle Management concepts are ingrained into this program addressing the management of all data related to the design, production and support of manufactured goods.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
ENG 100*	Communication Skills .....	3
CAD 103	Engineering Graphics .....	3
MET 102	Introduction to Materials Science.....	3
MATH 113**	Intermediate Algebra for College Students .....	4
HUM 106*	Introduction to Art and music.....	1
		<b>14</b>
	<b>Winter Semester</b>	
MET 114	Engineering Materials .....	3
CAD 106	Advanced Drawing Views and Descriptive Geometry ...	4
MFG 105	Manufacturing Processes .....	4
Elective	Select 1 .....	4
CAD 211	CATIA—Level 1	
CAD 221	SolidWorks—Level 1	
		<b>15</b>
	<b>Spring/Summer Session</b>	
MATH 119	Trigonometry .....	3
ENG 106*	Business English.....	3
		<b>6</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
DSGN 180	Machine Elements and Design .....	4
PHYS 123	Applied Physics .....	5
MFG 102	Basic Machining Processes .....	3
CAD 107	Detailing .....	4
		<b>16</b>
	<b>Winter Semester</b>	
DSGN 250	Tool, Die, and Fixture Design .....	4
DSGN 280	Capstone Project.....	4
CAM 102	Introduction to Computer Numerical Control (CNC)...	3
PSYCH 153*	Human Relations .....	3
		<b>14</b>
	<b>PROGRAM TOTAL 65 CREDITS</b>	

\* Other courses meeting the College Requirements may be substituted.

\*\* Math 113 may be waived if student has successfully completed high school Algebra II or based on student’s placement test score.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**COMPUTER AIDED DRAFTING (CAD)****CAD-Drafting-Technical One-Year Certificate**

Schoolcraft program code # 1YC.00119

Skills developed in these courses prepare the student for employment as a CAD drafter or detailer. Students at any time may transfer into the Computer Aided Design–Mechanical Associate Degree Program.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a certificate of program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>		
CAD 103	Engineering Graphics .....		3	
MET 102	Introduction to Materials Science.....		3	
MFG 102	Basic Machining Processes .....		3	
MATH 113*	Intermediate Algebra for College Students .....		4	
				<b>13</b>
		<b>Winter Semester</b>		
CAD 106	Advanced Drawing Views and Descriptive Geometry.....		4	
MATH 119	Trigonometry .....		3	
MFG 105	Manufacturing Processes.....		4	
Elective	Select 1 .....		4	
CAD 211	CATIA—Level 1			
CAD 221	SolidWorks—Level 1			
				<b>15</b>
				<b>PROGRAM TOTAL 28 CREDITS</b>

\* Math 113 may be waived if student has successfully completed high school Algebra II or based on student's placement test score.

**COMPUTER ASSISTED MANUFACTURING****Computer Assisted Manufacturing Associate Degree**

Schoolcraft program code # AAS.00150

The Computer Assisted Manufacturing 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 Computer Numerical Control coding.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>		
ENG 100	Communication Skills .....		3	
MFG 102	Basic Machining Processes .....		3	
CAM 102	Introduction to Computer Numerical Control (CNC) ...		3	
CAD 101	Introduction to Computer Aided Drafting .....		3	
CIS 105	Computer Orientation.....		1	
COMPS 126	Technical Programming.....		3	
				<b>16</b>
		<b>Winter Semester</b>		
MATH 113*	Intermediate Algebra for College Students .....		4	
MFG 103	Manufacturing Operations.....		3	
CAM 103	Computer Numerical Control (CNC)—Programming ...		3	
ELECT 135	Fluid Power .....		4	
				<b>14</b>
		<b>Spring/Summer Session</b>		
HUM 106	Introduction to Art and Music .....		1	
ENG 106	Business English.....		3	
				<b>4</b>
		<b>SECOND YEAR</b>		
		<b>Fall Semester</b>		
MATH 119	Trigonometry .....		3	
MET 102	Introduction to Materials Science.....		3	
Science**	Select any General Education Science course.....		4–5	
	PHYS 123 Applied Physics (recommended)			
LASR 103	Laser Concepts .....		4	
				<b>14–15</b>
		<b>Winter Semester</b>		
MET 114	Engineering Materials .....		3	
QM 106	Introduction to Quality Systems.....		3	
CAM 205	CAD/CAM—Computer Aided Machining.....		3	
Social Science	Select 1 .....		3	
POLS 105	Survey of American Government			
SOC 201	Principles of Sociology			
PSYCH 153	Human Relations			
				<b>12</b>
				<b>PROGRAM TOTAL 60-61 CREDITS</b>

\* Math 113 may be waived based on student's placement test score. Student may need to add a 1-2 credit hour elective course to complete the degree requirements.

\*\* Number of credits may vary depending on the General Education Science course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.



## COMPUTER GRAPHICS TECHNOLOGY

The Computer Graphics Technology Programs prepare students 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. It is highly recommended that students meet with faculty for advice in selecting their electives. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree. Students wishing to pursue a Post-Associate Certificate must have a Computer Graphics Technology Associate Degree or equivalent professional experience.

### Computer Graphics Technology— Digital Art Associate Degree

Schoolcraft program code # AAS.00028

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
ART 105	Basic Drawing .....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
ENG 101	English Composition 1 .....	3
MATH 113	Intermediate Algebra for College Students .....	4
		<b>16</b>
	<b>Winter Semester</b>	
CGT 123	Illustration—Illustrator .....	3
CGT 127	Publishing—InDesign .....	3
Science	Select 1 .....	4
BIOL 101	General Biology	
CHEM 111	General Chemistry 1	
PHYS 104	Introduction to Astronomy	
ART 125	Life Drawing 1 .....	3
		<b>13</b>
	<b>SECOND YEAR Fall Semester</b>	
CGT 226	Digital Imaging 2—Photoshop.....	3
ENG 102	English Composition 2 .....	3
ART 205	Life Drawing 2 .....	3
ART 115	Art History 1.....	4
or		
ART 116	Art History 2.....	4
COMA 103	Fundamentals of Speech.....	3
		<b>16</b>
	<b>Winter Semester</b>	
ART 243	Sculpture 1.....	3
Social Science	Select 1 .....	3
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
CGT 257	Portfolio Preparation .....	3
Capstone	Select 1 .....	3
CGT 250	Practical Application	
CGT 270*	Internship	
CGT 298*	Honors Studies	
Elective	Any ART or CGT course not previous taken .....	3
		<b>15</b>
	<b>PROGRAM TOTAL 60 CREDITS</b>	

\* These classes are offered as independent learning. Contact CGT faculty.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### Computer Graphics Technology— 3D and Video Graphics Associate Degree

Schoolcraft program code # AAS.00028

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
CGT 123	Illustration—Illustrator.....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CGT 166	Photography.....	3
ENG 101	English Composition 1 .....	3
		<b>15</b>
	<b>Winter Semester</b>	
CGT 168	Storyboarding .....	3
CGT 244	History of Animation.....	3
CGT 247	3D Animation—Introduction.....	3
ENG 102	English Composition 2 .....	3
MATH 113	Intermediate Algebra for College Students .....	4
		<b>16</b>
	<b>Spring Session</b>	
COMA 103	Fundamentals of Speech.....	3
		<b>3</b>
	<b>SECOND YEAR Fall Semester</b>	
CGT 208	Digital Video Production.....	3
CGT 215	Motion Graphics 1—After Effects .....	3
Track Option	Select 1 .....	3
3D Track:	CGT 254 3D Animation—Advanced Models and Textures	
Video Track:	CGT 226 Digital Imaging 2—Photoshop	
Science	Select 1 .....	4
BIOL 101	General Biology	
CHEM 111	General Chemistry 1	
PHYS 104	Introduction to Astronomy	
BUS 122	Advertising .....	3
		<b>16</b>
	<b>Winter Semester</b>	
CGT 246	Motion Graphics 2—After Effects .....	3
Track Option	Select 1 .....	2–3
3D Track:	CGT 252 3D Animation—Animating	
Video Track:	CGT 149 Typography	
	CGT 211 Flash	
	CGT 154 Sound Editing for Graphic Artists	
Capstone	Select 1 .....	3
CGT 250	Practical Application	
CGT 270*	Internship	
CGT 298*	Honors Studies	
Social Science	Select 1 .....	3
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
CGT 256	Portfolio—3D Reel Development.....	3
		<b>14–15</b>
	<b>PROGRAM TOTAL 64–65 CREDITS</b>	

\* These classes are offered as independent learning. Contact CGT faculty.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

## Computer Graphics Technology— Graphic Design Associate Degree

Schoolcraft program code # AAS.00028

<b>FIRST YEAR</b>		<b>Fall semester</b>	
CGT 109	Design Concepts and Technology .....	3	
CGT 123	Illustration—Illustrator .....	3	
CGT 125	Digital Imaging 1—Photoshop .....	3	
ENG 101	English Composition 1 .....	3	
MATH 113	Intermediate Algebra for College Students .....	4	
		<b>16</b>	

		<b>Winter Semester</b>	
CGT 127	Publishing—InDesign .....	3	
CGT 135	Web Graphics .....	3	
CGT 162	XHTML—CSS Standards .....	3	
ENG 102	English Composition 2 .....	3	
COMA 103	Fundamentals of Speech .....	3	
		<b>15</b>	

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
CGT 161	History of Graphic Design .....	3	
Track Option	Select 1 .....	3	
	Publishing Track: CGT 149 Typography		
	Web Track: CGT 211 Flash		
Track Option	Select 1 .....	2–3	
	Publishing Track: CGT 166 Photography		
	CGT 157 Prepress		
	Web Track: CGT 236 Web Design		
CGT 226	Digital Imaging 2—Photoshop .....	3	
BUS 122	Advertising .....	3	
		<b>14–15</b>	

		<b>Winter Semester</b>	
CGT 257	Portfolio Preparation .....	3	
Track Option	Select 1 .....	3	
	Publishing Track: CGT 231 Electronic Publishing		
	Web Track: CGT 237 Dynamic Web Design With ColdFusion		
Science	Select 1 .....	4	
BIOL 101	General Biology		
CHEM 111	General Chemistry 1		
PHYS 104	Introduction to Astronomy		
Social Science	Select 1 .....	3	
POLS 105	Survey of American Government		
PSYCH 153	Human Relations		
Capstone	Select 1 .....	3	
CGT 250	Practical Application		
CGT 270*	Internship		
CGT 298*	Honors Studies		
		<b>16</b>	

### PROGRAM TOTAL 61–62 CREDITS

\* These classes are offered as independent learning. Contact CGT faculty.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

## Computer Graphics Technology—Interactive Media and Game Design Associate Degree

Schoolcraft program code # AAS.00028

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3	
CGT 123	Illustration—Illustrator .....	3	
CGT 125	Digital Imaging 1—Photoshop .....	3	
CGT 166	Photography .....	3	
ENG 101	English Composition 1 .....	3	
		<b>15</b>	

		<b>Winter Semester</b>	
CGT 149	Typography .....	3	
CGT 168	Storyboarding .....	3	
CGT 244	History of Animation .....	3	
Track Option	Select 1 .....	3	
	Director Track: CGT 141 Introduction to Interactive Media and Game Design		
	Flash Track: CGT 211 Flash		
ENG 102	English Composition 2 .....	3	
		<b>15</b>	

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
CGT 154	Sound Editing for Graphic Artists .....	2	
Track Option	Select 1 .....	3	
	Director Track: CGT 206 Scripting for Interactive Media and Game Design		
	Flash Track: CGT 212 Flash Action Scripting		
COMA 103	Fundamentals of Speech .....	3	
Science	Select 1 .....	4	
BIOL 101	General Biology		
CHEM 111	General Chemistry 1		
PHYS 104	Introduction to Astronomy		
BUS 122	Advertising .....	3	
		<b>15</b>	

		<b>Winter Semester</b>	
CGT 242	Advanced Interactive Media and Game Design .....	3	
CGT 256	Portfolio—3D Reel Development .....	3	
Capstone	Select 1 .....	3	
	CGT 250 Practical Application		
	CGT 270* Internship		
	CGT 298* Honors Studies		
Social Science	Select 1 .....	3	
	PSYCH 153 Human Relations		
	POLS 105 Survey of American Government		
MATH 113	Intermediate Algebra for College Students .....	4	
		<b>16</b>	

### PROGRAM TOTAL 61 CREDITS

\* These classes are offered as independent learning. Contact CGT faculty.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**Computer Graphics Technology—  
3D Animation Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
CGT 123	Illustration—Illustrator .....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CGT 166	Photography.....	3
		<b>12</b>
	<b>Winter Semester</b>	
CGT 168	Storyboarding .....	3
CGT 244	History of Animation.....	3
CGT 247	3D Animation—Introduction.....	3
CGT 215	Motion Graphics 1—After Effects .....	3
		<b>12</b>
	<b>Spring Session</b>	
CGT 254	3D Animation—Advanced Models and Textures.....	3
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
CGT 246	Motion Graphics 2—After Effects .....	3
CGT 252	3D Animation—Animating .....	3
		<b>6</b>
		<b>PROGRAM TOTAL 33 CREDITS</b>

**Computer Graphics Technology—  
Digital Art One-Year Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
ART 105	Basic Drawing .....	3
CGT 123	Illustration—Illustrator .....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
		<b>12</b>
	<b>Winter Semester</b>	
CGT 127	Publishing—InDesign .....	3
ART 115	Art History 1.....	4
or		
ART 116	Art History 2.....	4
CGT 226	Digital Imaging 2—Photoshop.....	3
ART 125	Life Drawing 1 .....	3
ART 243	Sculpture 1.....	3
		<b>16</b>
		<b>PROGRAM TOTAL 28 CREDITS</b>

**Computer Graphics Technology—  
Publishing One-Year Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
CGT 123	Illustration—Illustrator.....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CGT 127	Publishing—InDesign .....	3
CGT 149	Typography.....	3
		<b>15</b>
	<b>Winter Semester</b>	
CGT 161	History of Graphic Design.....	3
CGT 135	Web Graphics .....	3
CGT 166	Photography.....	3
or		
CGT 157	Prepress.....	2
CGT 226	Digital Imaging 2—Photoshop.....	3
CGT 231	Electronic Publishing.....	3
		<b>14–15</b>
		<b>PROGRAM TOTAL 29–30 CREDITS</b>

**Computer Graphics Technology—  
Video Graphics Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3
CGT 123	Illustration—Illustrator.....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CGT 166	Photography.....	3
		<b>12</b>
	<b>Winter Semester</b>	
CGT 168	Storyboarding .....	3
CGT 149	Typography.....	3
CGT 215	Motion Graphics 1—After Effects .....	3
CGT 247	3D Animation—Introduction.....	3
		<b>12</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
CGT 208	Digital Video Production.....	3
CGT 246	Motion Graphics 2—After Effects .....	3
		<b>6</b>
		<b>PROGRAM TOTALS 30 CREDITS</b>



**Computer Graphics Technology—  
Web Design Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3	
CGT 123	Illustration—Illustrator.....	3	
CGT 125	Digital Imaging 1—Photoshop.....	3	
CGT 127	Publishing—InDesign .....	3	
			<b>12</b>
		<b>Winter Semester</b>	
CGT 135	Web Graphics .....	3	
CGT 161	History of Graphic Design.....	3	
CGT 162	XHTML—CSS Standards.....	3	
CGT 211	Flash .....	3	
			<b>12</b>

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
CGT 236	Web Design.....	3	
		<b>Winter Semester</b>	
CGT 237	Dynamic Web Design With ColdFusion .....	3	

**PROGRAM TOTAL 30 CREDITS**

**Computer Graphics Technology—Interactive Media  
and Game Design One-Year Certificate**

Schoolcraft program code # 1YC.00136

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3	
CGT 123	Illustration—Illustrator.....	3	
CGT 125	Digital Imaging 1—Photoshop.....	3	
Track Option	Select 1 .....	3	
Director Track:	CGT 141 Introduction to Interactive Media and Game Design		
Flash Track:	CGT 211 Flash		
CGT 166	Photography.....	3	
			<b>15</b>
		<b>Winter Semester</b>	
CGT 149	Typography.....	3	
CGT 168	Storyboarding .....	3	
Track Option	Select 1 .....	3	
Director Track:	CGT 206 Scripting for Interactive Media and Game Design		
Flash Track:	CGT 212 Flash Action Scripting		
CGT 154	Sound Editing for Graphic Artists .....	2	
			<b>11</b>

		<b>Spring Session</b>	
CGT 242	Advanced Interactive Media and Game Design.....	3	

**PROGRAM TOTAL 29 CREDITS**



**Computer Graphics Technology—  
Foundation Skills Certificate**

Schoolcraft program code # CRT.00364

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CGT 109	Design Concepts and Technology .....	3	
CGT 123	Illustration—Illustrator.....	3	
CGT 125	Digital Imaging 1—Photoshop.....	3	
CGT 127	Publishing—InDesign .....	3	
CGT 161	History of Graphic Design.....	3	
or			
CGT 244	History of Animation.....	3	
CGT Elective	.....	3	

**PROGRAM TOTAL 18 CREDITS**

**Computer Graphics Technology—  
Post-Associate Certificate**

Schoolcraft program code # PAC.00181

The Post-Associate Certificate is for those students who have a degree in Computer Graphics and/or are working in the profession and wish to add an additional area of specialty to their portfolio. Students should take a combination of 6 courses based on the specific area of study. It is highly recommended that CGT faculty be consulted when selecting courses. Students can assemble courses to develop expertise in Interactive Media and Game Design, Digital Art, Web Design, Publishing, Video Graphics, Graphic Design, or 3D Animation.

**PROGRAM COURSES**

ART 105	Basic Drawing .....	3
ART 115	Art History 1.....	4
ART 116	Art History 2.....	4
ART 125	Life Drawing 1 .....	3
ART 243	Sculpture 1.....	3
CGT 135	Web Graphics .....	3
CGT 141	Introduction to Interactive Media and Game Design ..	3
CGT 149	Typography.....	3
CGT 154	Sound Editing for Graphic Artists .....	2
CGT 157	Prepress.....	2
CGT 162	XHTML—CSS Standards.....	3
CGT 166	Photography.....	3
CGT 168	Storyboarding .....	3
CGT 206	Scripting for Interactive Media and Game Design.....	3
CGT 208	Digital Video Production.....	3
CGT 211	Flash .....	3
CGT 212	Flash Action Scripting .....	3
CGT 215	Motion Graphics 1—After Effects .....	3
CGT 226	Digital Imaging 2—Photoshop.....	3
CGT 231	Electronic Publishing.....	3
CGT 236	Web Design.....	3
CGT 237	Dynamic Web Design With ColdFusion .....	3
CGT 242	Advanced Interactive Media and Game Design.....	3
CGT 244	History of Animation.....	3
CGT 246	Motion Graphics 2—After Effects .....	3
CGT 247	3D Animation—Introduction.....	3
CGT 252	3D Animation—Animating .....	3
CGT 254	3D Animation—Advanced Models and Textures.....	3

**PROGRAM TOTAL 16–20 CREDITS**

## COMPUTER INFORMATION SYSTEMS

### Computer Information Systems— Programming Associate Degree

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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>
CIS 115	Introduction to Computer Based Systems .....	3
CIS 129	Introduction to Programming Logic .....	3
MATH 113	Intermediate Algebra for College Students .....	4
COMA 103	Fundamentals of Speech .....	3
ENG 101	English Composition 1 .....	3
		<b>16</b>

		<b>Winter Semester</b>
ENG 102	English Composition 2 .....	3
CIS Elective	Select 1 .....	3
CIS 170	Microsoft Windows	
CIS 178	Technical Microsoft Windows	
CIS 225	Database Management Systems .....	3
Science*	Select any General Education Science course .....	4
Elective	Select from the list below .....	3
		<b>16</b>

<b>SECOND YEAR</b>		<b>Fall Semester</b>
ACCT 201	Principles of Accounting 1 .....	4
CIS 176	Visual Basic.NET .....	3
CIS 211	Introduction to C++ .....	2
CIS Elective	Select 1 .....	3
CIS 255	Introduction to LINUX	
CIS 260**	Introduction to UNIX	
Elective	Select from the list below .....	3
		<b>15</b>

		<b>Winter Semester</b>
CIS 250	Systems Development and Design .....	4
CIS 290	Object-Oriented Programming With Java .....	3
CIS 221	Advanced C++ .....	2
Social Science	Select 1 .....	3-4
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
PSYCH 201	General Psychology	
Elective	Select from the list below .....	2-3
		<b>14-16</b>

**PROGRAM TOTAL 61-63 CREDITS**

\* Number of credits may vary depending on the General Education Science course selection.

\*\* CIS 260 is offered Winter Semester.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection

<b>ELECTIVES</b>		
CIS 120	Software Applications .....	3
CIS 122	Microsoft Outlook .....	2
CIS 125	Principles of Information Security .....	3
CIS 185	Introduction to HTML .....	3
CIS 212	Introduction to CGI using Perl .....	3
CIS 223	Introduction to C# .....	3
CIS 227	Introduction to Structured Query Language (SQL) .....	1
CIS 233	Active Server Pages .....	3
CIS 238	JavaScript .....	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 275	Advanced Visual Basic.NET .....	3
CIS 281	Data Structures and Introduction to Windows Programming .....	3

### Computer Information Systems— Introductory One-Year Certificate

Schoolcraft program code # 1YC.00004

The Computer Information Systems Certificate Program introduces students to the operating system and concepts surrounding programming logic. In addition, students obtain a basic knowledge of software applications and programming languages.

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

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>
CIS 115	Introduction to Computer Based Systems .....	3
CIS 120	Software Applications .....	3
CIS 129	Introduction to Programming Logic .....	3
CIS Elective	Select 1 .....	3
CIS 170	Microsoft Windows	
CIS 178	Technical Microsoft Windows	
		<b>12</b>

		<b>Winter Semester</b>
ENG 101	English Composition 1 .....	3
MATH 113	Intermediate Algebra for College Students .....	4
CIS 176	Visual Basic.NET .....	3
CIS 225	Database Management Systems .....	3
Elective	Select from the list below .....	2-3
		<b>15-16</b>

**PROGRAM TOTAL 27-28 CREDITS**

<b>ELECTIVES</b>		
CIS 122	Microsoft Outlook .....	2
CIS 125	Principles of Information Security .....	3
CIS 251	IT Project Management .....	3
CIS 255	Introduction to LINUX .....	3

## Computer Information Systems— Microcomputer Support Technician Associate Degree

Schoolcraft program code # AAS.00014

This program is designed to prepare the student for entry-level positions supporting users of 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CIS 115	Introduction to Computer Based Systems .....	3
CIS 129	Introduction to Programming Logic.....	3
MATH 113	Intermediate Algebra for College Students .....	4
ENG 101	English Composition 1 .....	3
		<b>13</b>
	<b>Winter Semester</b>	
CIS 120	Software Applications .....	3
CIS Elective	Select 1 .....	3
CIS 170	Microsoft Windows	
CIS 178	Technical Microsoft Windows	
ENG 102	English Composition 2 .....	3
CIS 176	Visual Basic.NET .....	3
CIS 235	Managing and Troubleshooting PCs .....	3
		<b>15</b>
	<b>Spring Session</b>	
Social Science	Select 1 .....	3–4
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
PSYCH 201	General Psychology	
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
CIS 180	Spreadsheet Applications—Current Software .....	3
CIS 225	Database Management Systems .....	3
CIS 265	Networking 1 .....	3
COMA 103	Fundamentals of Speech.....	3
Science*	Select any General Education Science course.....	4
		<b>16</b>
	<b>Winter Semester</b>	
CIS 215	Advanced Software Applications .....	3
CIS 250	Systems Development and Design .....	4
CIS 276	Networking 2 .....	3
Elective	Select from the list below .....	3–4
		<b>13–14</b>
<b>PROGRAM TOTAL 60–62 CREDITS</b>		

\* Number of credits may vary depending on the General Education Science course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection

## ELECTIVES

CIS 122	Microsoft Outlook .....	2
CIS 125	Principles of Information Security .....	3
CIS 171	Introduction to Networking .....	3
CIS 172	Network Security Fundamentals .....	3
CIS 173	Wireless Local Area Networks .....	3
CIS 227	Introduction to Structured Query Language (SQL).....	1
CIS 251	IT Project Management .....	3
CIS 255	Introduction to LINUX.....	3
ACCT 201	Principles of Accounting 1 .....	4
BUS 201	Business Statistics .....	3

## Computer Information Systems—Networking Technology Integration 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. This program provides a complete introductory program for students or adult learners who are new to the field. For students who have networking experience, this program also offers more advanced networking study.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CIS 171	Introduction to Networking .....	3
CIS 170	Microsoft Windows .....	3
or		
CIS 178	Technical Microsoft Windows.....	3
CIS 235	Managing and Troubleshooting PCs .....	3
CIS 267	Home Technology Integration .....	4
ENGR 100	Introduction to Engineering and Technology .....	3
		<b>16</b>
	<b>Winter Semester</b>	
CIS 251	IT Project Management .....	3
CIS 271	Local Area Networks.....	3
CIS 273	TCP/IP and Network Architectures .....	3
Electives	Select from the list below .....	6
		<b>15</b>
<b>PROGRAM TOTAL 31 CREDITS</b>		

## ELECTIVES

CIS 172	Network Security Fundamentals .....	3
CIS 173	Wireless Local Area Networks .....	3
CIS 272	Wide Area Networks .....	3
CIS 277	Network Infrastructure .....	3
CIS 278	Network Environment .....	3
CIS 284	Internetworking Devices .....	3
CIS 285	Process and Protocols .....	3
CIS 286	Network Analysis and Design .....	3

**Computer Information Systems—  
Web Specialist Associate Degree**

Schoolcraft program code # AAS.00275

The technology of the Internet is constantly evolving both in terms of delivery infrastructure and Web site development tools. To stay abreast of these technological advances requires programming and design knowledge, skills and experience. A good site must include both quality visual communication design and functionality. Programming is needed for interactivity to search databases and track usage. Visual Graphic Design is needed to convey the content message and provide branding for products and services.

This degree is designed to prepare the Internet Professional to design Web pages and to program for the Web. It provides the working knowledge of various programming languages, multimedia technologies, graphic development, and Web design tools. The Internet Professional may be involved with designing, developing, operating, maintaining and managing Web-based publishing.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

**FIRST YEAR Fall Semester**

ENG 101	English Composition 1 .....	3
CGT 123	Illustration—Illustrator.....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CIS 129	Introduction to Programming Logic.....	3
MATH 113	Intermediate Algebra for College Students .....	4
		<b>16</b>

**Winter Semester**

ENG 102	English Composition 2 .....	3
CIS 171	Introduction to Networking .....	3
CGT 162	XHTML—CSS Standards .....	3
CGT 135	Web Graphics .....	3
COMA 103	Fundamentals of Speech.....	3
		<b>15</b>

**Spring Session**

Elective	Select from the list below.....	3
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**SECOND YEAR Fall Semester**

CIS 250	Systems Development and Design .....	4
CGT 236	Web Design.....	3
CIS 238	JavaScript .....	3
Social Science	Select 1 .....	3
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
Elective	Select from the list below.....	3
		<b>16</b>

**Winter Semester**

HUM 106	Introduction to Art and Music .....	1
CGT 237	Dynamic Web Design With ColdFusion .....	3
CGT 211	Flash .....	3
Science*	Select any General Education Science course.....	4
Elective	Select from the list below.....	3
		<b>14</b>

**PROGRAM TOTAL 64 CREDITS**

\* Number of credits may vary depending on the General Education Science course selected.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**ELECTIVES**

CIS 123	Introduction to E-Commerce.....	3
CIS 125	Principles of Information Security .....	3
CIS 176	Visual Basic.NET .....	3
CIS 185	Introduction to HTML.....	3
CIS 212	Introduction to CGI Using Perl .....	3
CIS 223	Introduction to C#.....	3
CIS 225	Database Management Systems .....	3
CIS 233	Active Server Pages.....	3
CIS 239	Advanced C#.....	3
CIS 255	Introduction to LINUX.....	3
CIS 256	Introduction to XML .....	3
CIS 283	Introduction to Internet Technologies.....	3
CGT 141	Introduction Interactive Media and Game Design .....	3
CGT 206	Scripting for Interactive Media and Game Design.....	3

**Computer Information Systems—  
Web Specialist Certificate**

Schoolcraft program code #1YC.00241

The technology of the Internet is constantly evolving both in terms of delivery infrastructure and Web site development tools. To stay abreast of these technological advances requires programming and design knowledge, skills and experience. A good site must include both quality visual communication design and functionality. Programming is needed for interactivity to search databases and track usage. Visual Graphic Design is needed to convey the content message and provide branding for products and services.

This certificate is designed to provide students with an overview of the technical programming and graphic design areas for Web page development.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Student who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

**FIRST YEAR Fall Semester**

CIS 129	Introduction to Programming Logic.....	3
CGT 123	Illustration—Illustrator.....	3
CGT 125	Digital Imaging 1—Photoshop.....	3
CGT 162	XHTML—CSS Standards.....	3
		<b>12</b>

**Winter Semester**

CIS 171	Introduction to Networking .....	3
CGT 135	Web Graphics .....	3
CIS 238	JavaScript .....	3
CGT 211	Flash .....	3
		<b>12</b>

**SECOND YEAR Fall Semester**

CGT 236	Web Design.....	3
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**Winter Semester**

CGT 237	Dynamic Web Design With ColdFusion .....	3
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**PROGRAM TOTAL 30 CREDITS**

## Computer Information Systems— Programming Skills Certificate

Schoolcraft program code # CRT.00366

The Microsoft .NET framework is a common environment for building, deploying, and running Web Services and Web Applications in the Windows environment. This certificate is designed to prepare the student to be comfortable in the new .NET environment. Students will be exposed to the top two .NET languages that are currently used in industry. The student will use the new Visual Studio.NET, which is a common development environment for the new .NET Framework. The .NET Framework provides a feature-rich application execution environment, simplified development, and easy integration between a number of different development languages.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CIS 129	Introduction to Programming Logic.....	3
CIS 225	Database Management Systems .....	3
		<b>6</b>
	<b>Winter Semester</b>	
CIS 176	Visual Basic.NET .....	3
CIS 223	Introduction to C#.....	3
		<b>6</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
CIS 275	Advanced Visual Basic.NET .....	3
CIS 239	Advanced C# .....	3
		<b>6</b>

**PROGRAM TOTAL 18 CREDITS**

## 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. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The post-associate certificate is awarded upon successful completion of 15 credit hours (exact number may vary slightly due to credit value of courses).

### PROGRAM COURSES

CIS 185	Introduction to HTML.....	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 227	Introduction to Structured Query Language (SQL).....	1
CIS 233	Active Server Pages.....	3
CIS 235	Managing and Troubleshooting PCs .....	3
CIS 238	JavaScript .....	3
CIS 239	Advanced C# .....	3
CIS 250	Systems Development and Design .....	4
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.NET .....	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 can 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, PCs, 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 PCs, as well as network wiring and standards. The technician will also assist in the installation and maintaining of computer systems, networks, and software.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
CIS 235	Managing and Troubleshooting PCs .....	3	
COMPS 124	Introduction to Personal Computers and Software.....	3	
ELECT 119	Basic Measurement and Reporting Skills.....	3	
ELECT 127	DC Circuits and Mathematical Modeling.....	5	
		<b>14</b>	
		<b>Winter Semester</b>	
CIS 265	Networking 1 .....	3	
COMPS 126	Technical Programming.....	3	
COMPS 147	Computer and Peripheral Maintenance and Management .....	4	
CIS 120	Software Applications .....	3	
		<b>13</b>	
		<b>Spring Session</b>	
Elective*	CIS.....	3	
		<b>PROGRAM TOTAL</b>	<b>30 CREDITS</b>

\* Any CIS course not previously taken.



## 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 earn 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
BUS 101	Introduction to Business .....	3	
BUS 103	Organizing a Small Business.....	3	
MATH 101	Business Mathematics .....	3	
ENG 100	Communication Skills .....	3	
PSYCH 153	Human Relations .....	3	
		<b>15</b>	
		<b>Winter Semester</b>	
ACCT 103	Introduction to Accounting.....	4	
BUS 104	Operating a Small Business.....	3	
COMA 103	Fundamentals of Speech.....	3	
ENG 116	Technical Writing .....	3	
Social Science	Select 1 .....	3	
	POLS 105	Survey of American Government	
	SOC 201	Principles of Sociology	
		<b>16</b>	
		<b>Spring Session</b>	
BIOL 101	General Biology.....	4	
CIS 105	Computer Orientation.....	1	
HUM 106	Introduction to Art and Music .....	1	
		<b>6</b>	
		<b>PROGRAM TOTAL</b>	<b>37 CREDITS</b>

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.



**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. The Michigan Commission on Law Enforcement Standards (MCOLES) requires an Associate Degree for Certification of all pre-service candidates. 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully complete the Criminal Justice Program and all College Requirements qualify for an Associate in Applied Science Degree.

**Contact the Public Safety Education Office at 734-462-4747 for additional information.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CJ 113	Introduction to Criminal Justice System .....	3
CJ 102	Organization and Administration of Law Enforcement Agencies.....	3
POLS 105	Survey of American Government.....	3
COMA 103	Fundamentals of Speech.....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	

15

	<b>Winter Semester</b>	
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
English	Select 1 .....	3
ENG 116	Technical Writing	
ENG 102	English Composition 2	
CJ 107	Police Field Operations .....	3

16

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
CJ 209	Basic Criminalistics.....	3
CJ 211	Criminal Law and Procedures .....	3
BIOL 103	Health Education .....	3
CIS 105*	Computer Orientation.....	1
MATH 101	Business Mathematics .....	3
Elective**	.....	3

16

	<b>Winter Semester</b>	
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**

\* CIS 105 may be waived if student has successfully completed a high school computer course or equivalent.

\*\* Any 100 or 200 level course not previously taken.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

For more information about certification please contact:

Michigan Commission on Law Enforcement Standards (MCOLES)  
7426 North Canal Road, Lansing, MI 48913  
517-322-3966 mcoles.org

**Criminal Justice Associate Degree with Academy**

Schoolcraft program code # AAS.00086

In this program, the criminal justice courses are restricted to students who are 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 certifiable 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who complete the Criminal Justice Program and all College Requirements qualify for an Associate in Applied Science Degree.

**This program requires a special admissions process. Contact the Public Safety Education Office at 734-462-4747 to complete an application.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CJ 102	Organization and Administration of Law Enforcement Agencies.....	3
POLS 105	Survey of American Government.....	3
COMA 103	Fundamentals of Speech.....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
BIOL 103	Health Education .....	3

15

	<b>Winter Semester</b>	
COR 110	Introduction to Corrections.....	3
CJ 211	Criminal Law and Procedures .....	3
PSYCH 153	Human Relations .....	3
English	Select 1 .....	3
ENG 116	Technical Writing	
ENG 102	English Composition 2	
CIS 105*	Computer Orientation.....	1

13

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
MATH 101	Business Mathematics .....	3
CJ 209	Basic Criminalistics.....	3
CJ 212	Criminology.....	3
CJ 221	Juvenile Justice.....	3
SOC 201	Principles of Sociology.....	3

15

	<b>Winter Semester</b>	
CJ 286	Police Academy .....	21

**PROGRAM TOTAL 64 CREDITS**

\* CIS 105 may be waived if student has successfully completed a high school computer course or equivalent.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

For more information about certification please contact:

Michigan Commission on Law Enforcement Standards (MCOLES)  
7426 North Canal Road, Lansing, MI 48913  
517-322-3966 mcoles.org

## CULINARY ARTS

### Culinary Arts Associate Degree

Schoolcraft program code # AAS.00087

The Culinary Arts Associate Degree Program provides the skills necessary to enter food service occupations at advanced levels. 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 classical cooking techniques. Food purchasing and storage functions, menu formulation, terminology, and decorative culinary skills are also covered.

This program contains some courses restricted to students officially admitted to this program. Additionally, CAP 102, Culinary Sanitation or proof of current ServSafe certification as well as CAP 103, Introduction to Professional Cooking Skills and Techniques are pre-program requirements. The College Requirements portion of the curriculum is vital to students' development.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements, including electives, qualify for an Associate in Applied Science Degree.

**This program requires a special admissions process. Contact the Admission Office at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

#### ADMISSION PREREQUISITES

These courses are pre-program requirements and not included in degree program totals.

CAP 102*	Culinary Sanitation.....	2
CAP 103	Introduction to Professional Cooking Skills and Technique.....	5
		7

#### FIRST YEAR Fall Semester

CAP 144	Baking.....	4
CAP 124	Breakfast and Pantry.....	4
CAP 125	Pastries 1.....	4
ENG 100	Communication Skills.....	3
		15

#### Winter Semester

CAP 142	Butchery.....	4
CAP 128	Introduction to Food Techniques.....	4
CAP 143	Dining Room Service.....	4
MATH 101	Business Mathematics.....	3
		15

#### Spring/Summer Session

CHEM 100	Introduction to the Chemistry of Food for Culinary Arts.....	4
ENG 106	Business English.....	3
HUM 106	Introduction to Art and Music.....	1
CAP 241**	Culinary Nutrition.....	2
Elective***	Select one course from the list below.....	3–4

13–14

#### SECOND YEAR Fall Semester

CAP 227	Restaurant Cooking and Preparation.....	4
CAP 215	Charcuterie.....	4
CAP 244	International and American Cuisine.....	8
		16

#### Winter Semester

CAP 240	Pastries 2.....	4
CAP 242	À la Carte.....	4
CAP 243	Storeroom Operations.....	3
Social Science	Select 1.....	3
POLS 105	Survey of American Government.....	
PSYCH 153	Human Relations.....	
		14

#### PROGRAM TOTAL 73–74 CREDITS

\* If student provides documentation of current ServSafe certification, CAP 102 is not required. This course is also open to any Schoolcraft student.

\*\* Signifies culinary course is open to any Schoolcraft student.

\*\*\* If BUS 217 or BUS 226 is selected, student must first complete the prerequisite course of BUS 101.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection

#### ELECTIVES

Select one course (3–4 credit hours) from the classes listed below to fulfill the elective requirement:

ART 105	Basic Drawing 1.....	3
BUS 122	Advertising.....	3
BUS 207	Business Law 1.....	3
BUS 217***	Business Management.....	3
BUS 220	Supervision.....	3
BUS 226***	Principles of Marketing.....	3
CIS 120	Software Applications.....	3
CM 107**	Culinary Management—Food and Culture.....	3
CM 109**	Hospitality Law.....	3
CM 203	Restaurant Concepts and Design.....	3
CM 210**	Wine and Spirits.....	3
CAP 104	Culinary Technology and Research.....	3
CAP 190	Externship.....	3
CAP 247**	Banquets and Catering.....	3
CAP 260**	Competitive Ice Carving.....	3
CAP 265**	Advanced Competitive Ice Carving.....	3
CAP 267	Chocolatier.....	4
CAP 295	Salon Competition 1.....	3
CAP 297	Salon Competition 2.....	4



**Culinary Arts One-Year Certificate**

Schoolcraft program code # 1YC.00079

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. 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 College Requirements.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

**ADMISSION PREREQUISITES**

These courses are pre-program requirements and not included in program totals.

CAP 102*	Culinary Sanitation.....	2
CAP 103	Introduction to Professional Cooking Skills and Technique.....	5
		7

**FIRST YEAR Fall Semester**

CAP 144	Baking.....	4
CAP 124	Breakfast and Pantry.....	4
CAP 125	Pastries 1.....	4
MATH 101	Business Mathematics .....	3
ENG 100	Communication Skills .....	3
		<b>18</b>

**Winter Semester**

CAP 142	Butchery .....	4
CAP 128	Introduction to Food Techniques.....	4
CAP 143	Dining Room Service .....	4
ENG 106	Business English.....	3
CAP 241**	Culinary Nutrition .....	2
		<b>17</b>

**PROGRAM TOTAL 35 CREDITS**

\* If student provides documentation of current ServSafe certification, CAP 102 is not required. This course is also open to any Schoolcraft student.

\*\* Signifies culinary course is open to any Schoolcraft student.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor.



**CULINARY BAKING AND PASTRY ARTS**

**Culinary Baking and Pastry Arts One-Year Certificate**

Schoolcraft program code # 1YC.00247

The Baking and Pastry Arts Certificate Program provides the skills necessary to enter bakeries, pastry shops, restaurants and hotel bakery and pastry kitchens.

The curriculum prepares students in quality baking and pastry preparation. The two core courses start with the fundamental skills and build gradually to the more advanced and refined skills. Topics covered include professionalism, safety and sanitation, dietetic baking, baking processes and techniques, pies, tarts, contemporary tortes, French pastry, cold and frozen desserts, chocolates, cake decoration, breads, cookies, and many other related nutritional desserts.

This program contains some courses restricted to students officially admitted to this program. Students who satisfactorily complete this program qualify for a certificate in Baking and Pastry Arts.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

**ADMISSION PREREQUISITES**

These courses are pre-program requirements and not included in program totals.

CAP 102*	Culinary Sanitation.....	2
CBPA 103	Introduction to Baking and Pastry Skills and Techniques .....	2
		<b>4</b>

**FIRST YEAR Fall Semester**

CBPA 125	Pastries.....	<b>20</b>
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**Winter Semester**

CBPA 144	Baking.....	<b>15</b>
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**PROGRAM TOTAL 35 CREDITS**

\* If student provides documentation of current ServSafe certification, CAP 102 is not required. This course is also open to any Schoolcraft student.



## 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ELECT 119	Basic Measurement and Reporting Skills.....	3	
ELECT 127	DC Circuits and Mathematical Modeling.....	5	
ENG 101	English Composition 1 .....	3	
Math	Select 1 .....	3–4	
MATH 101	Business Mathematics		
MATH 113	Intermediate Algebra for College Students		
			<b>14–15</b>
		<b>Winter Semester</b>	
Science	Select 1 .....	4–5	
BIOL 105	Basic Human Anatomy and Physiology		
CHEM 111	General Chemistry 1		
PHYS 123	Applied Physics		
ELECT 128	AC Circuits and Mathematical Modeling.....	5	
English	Select 1 .....	3	
ENG 102	English Composition 2		
ENG 116	Technical Writing		
COMPS 126	Technical Programming.....	3	
			<b>15–16</b>
		<b>Spring/Summer Session</b>	
HUM 106	Introduction to Art and Music .....	1	
<b>SECOND YEAR</b>		<b>Fall Semester</b>	
ELECT 134	Introduction to Microcontrollers .....	3	
ELECT 207	AC/DC Motors .....	3	
ELECT 129	Diodes and Transistors .....	3	
Social Science	Select 1 .....	3	
POLS 209	International Relations		
PSYCH 153	Human Relations		
SOC 210	Cultural Diversity		
Elective*	Select from the list below .....	3	
			<b>15</b>
		<b>Winter Semester</b>	
ELECT 206	Operational Amplifiers and Linear Integrated Circuits 4		
ELECT 226	Digital Logic Circuits.....	4	
ELECT 237	Programmable Logic and Industrial Controls .....	4	
Elective*	Select from the list below .....	3	
			<b>15</b>
<b>PROGRAM TOTAL 60–62 CREDITS</b>			

<b>ELECTIVES</b>		
MET 102	Introduction to Materials Science.....	3
CIS 171	Introduction to Networking .....	3
CIS 235	Managing and Troubleshooting PCs .....	3
COMPS 124	Introduction to Personal Computers and Software.....	3
ELECT 135	Fluid Power .....	4
ELECT 229	Electronics Troubleshooting.....	3
ELECT 239	Programmable Logic System Design .....	4
LASR 125	Laser Safety Concepts .....	3

\* Number of credits may vary depending on the course selection.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### Electronic Technology Skills Certificate

Schoolcraft program code # CRT.00320

The Electronic Technology Certificate is intended for students wishing to gain the basic skills needed for entry-level jobs in electronics. Completion of the skills certificate permits the student to take electrical measurements, understand DC and AC signals, and apply solid state troubleshooting techniques used in modern jobs involving electronics.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ELECT 119	Basic Measurement and Reporting Skills.....	3	
ELECT 127	DC Circuits and Mathematical Modeling.....	5	
			<b>8</b>
		<b>Winter Semester</b>	
ELECT 128	AC Circuits and Mathematical Modeling.....	5	
ELECT 207	AC/DC Motors .....	3	
			<b>8</b>
<b>PROGRAM TOTAL 16 CREDITS</b>			

### Electronic Technology Certificate

Schoolcraft program code # 1YC.00125

The certificate for electronics provides the student with a solid foundation for many jobs that require a thorough understanding of electronic fundamentals. Completion of the certificate program also offers the student the opportunity to pursue advanced technical credentials in health care, in manufacturing, or in computer systems.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ELECT 119	Basic Measurement and Reporting Skills.....	3	
ELECT 127	DC Circuits and Mathematical Modeling.....	5	
COMPS 126	Technical Programming.....	3	
MET 102	Introduction to Materials Science.....	3	
			<b>14</b>
		<b>Winter Semester</b>	
ELECT 128	AC Circuits and Mathematical Modeling.....	5	
ELECT 237	Programmable Logic and Industrial Controls .....	4	
ELECT 207	AC/DC Motors .....	3	
			<b>12</b>
<b>SECOND YEAR</b>		<b>Fall Semester</b>	
ELECT 129	Diodes and Transistors .....	3	
<b>PROGRAM TOTAL 29 CREDITS</b>			

## EMERGENCY MEDICAL TECHNOLOGY

### Emergency Medical Technology Associate Degree

Schoolcraft program code # AAS.00250

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 Labor and Economic Growth 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. Students achieving an 80 percent or higher will receive a certificate of completion and be eligible for the State licensure. 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 which is good for one year.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully pass the Emergency Medical Technology: Basic, Paramedic Technology courses, and Internship Experience qualify for the Emergency Medical Technology One-Year Certificate.

Upon successfully completing all College Requirements, a student will qualify for an Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BIOL 105	Basic Human Anatomy and Physiology .....	4
ENG 100	Communication Skills .....	3
MATH 101	Business Mathematics .....	3
PSYCH 153	Human Relations .....	3
		<b>13</b>

	<b>Winter Semester</b>	
EMT 108	Emergency Medical Technology—Basic .....	10.5
PE 202	Lifestyle Fitness—Wellness .....	2
		<b>12.5</b>

	<b>Spring/Summer Session</b>	
CIS 105	Computer Orientation .....	1
HUM 106	Introduction to Art and Music .....	1
ENG 116	Technical Writing .....	3
		<b>5</b>

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
EMT 201	Paramedic Technology 1 .....	12.5

	<b>Winter Semester</b>	
EMT 202	Paramedic Technology 2 .....	12.5

	<b>Spring/Summer Session</b>	
EMT 203	Internship Experience .....	9.5

### PROGRAM TOTAL 65 CREDITS

#### ELECTIVE (OPTIONAL)

EMT 114	Emergency Medical Technology—Specialist.....	7
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Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

See revised Emergency Medical Technology program requirements effective Winter 2009.  
www.schoolcraft.edu/programs/programs.asp

### Emergency Medical Technology Certificate

Schoolcraft program code # 1YC.00024

The Emergency Medical Technology One-Year Certificate will be awarded to students who successfully complete EMT 108, 201, 202 and 203 with 80 percent or higher. This will qualify those students as eligible for the State licensure examination as a paramedic.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them.

<b>FIRST YEAR</b>	<b>Spring Session</b>	
EMT 108*	Emergency Medical Technology—Basic .....	10.5

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
EMT 201	Paramedic Technology 1 .....	12.5

	<b>Winter Semester</b>	
EMT 202	Paramedic Technology 2 .....	12.5

	<b>Spring Session</b>	
EMT 203	Internship Experience .....	9.5

### PROGRAM TOTAL 45 CREDITS

#### ELECTIVE (OPTIONAL)

EMT 114	Emergency Medical Technology—Specialist.....	7
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\* BIOL 105 is a recommended prerequisite of EMT 108.

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.



## ENVIRONMENTAL STUDIES

### Environmental Studies Associate Degree

Schoolcraft program code # AAS.00176

The Environmental Studies Program is an interdisciplinary program that concentrates on the identification of environmental problems and the analysis of the complex interactions of human populations with the earth. The program includes discussions of technology and how it impacts the environment. Program courses incorporate the concept of sustainable development, a form of economic development that encourages economic growth while at the same time improving quality of life and preserving the environment. The capstone course is a Field Experience course where students apply classroom knowledge to a field environmental issue. Students in the Environmental Studies program can transfer to a four year Environmental Studies or Environmental Science program, or complete an Environmental Technician Certificate.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Environmental Studies Program and all College Requirements qualify for an Associate Degree in Applied Science.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
ENG 101	English Composition 1 .....	3	
COMA 103	Fundamentals of Speech.....	3	
MATH 113	Intermediate Algebra for College Students .....	4	
GEOG 130	Physical Geography.....	4	
CIS 105	Computer Orientation.....	1	
		<b>15</b>	

		<b>Winter Semester</b>	
ENG 102	English Composition 2 .....	3	
GEOG 212	Environmental Science.....	3	
ENVR Elective	Select 1 .....	3–4	
ENVR 107	Soil Mechanics		
ENVR 204*	Introductory Surveying		
ART 115	Art History 1.....	4	
		<b>13–14</b>	

<b>SECOND YEAR</b>		<b>Fall Semester</b>	
POLS 105	Survey of American Government.....	3	
PSYCH 201	General Psychology.....	4	
ENVR 230	Energy Resources .....	3	
GEOG 225	Introduction to Geographic Information Systems—GIS .....	4	
		<b>14</b>	

		<b>Winter Semester</b>	
CHEM 111	General Chemistry 1 .....	4	
GEOG 217	Water Resources .....	3	
ENVR 206	Environmental Law .....	3	
GEOG 203	Weather and Climate .....	3	
		<b>13</b>	

		<b>Spring Session</b>	
ENVR 231	Environmental Field Experience .....	5	

**PROGRAM TOTAL 60–61 CREDITS**

\* NOTE: ENVR 204 is a Spring Only Class.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### Environmental Science Technician One-Year Certificate

Schoolcraft program code #1YC.00276

Environmental science technicians provide technical assistance to engineers and scientists by performing tasks such as sample collection, laboratory tests, monitoring, and data management. The Environmental Science Technician applies scientific and technical skills and knowledge to specific tasks. Technicians have strong written and oral communication skills, computer skills, and practical hands on training in the field and laboratory. Technicians can problem solve quickly and apply their classroom knowledge to real world situations. The Environmental Science Technician Program provides students with the necessary background to be successful technicians.

Upon completion of this certificate program, it is highly recommended that students complete the 40 hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training from any certified location.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>	
GEOG 130	Physical Geography.....	4	
MATH 113	Intermediate Algebra for College Students .....	4	
GEOG 225	Introduction to Geographic Information Systems—GIS .....	4	
		<b>12</b>	

		<b>Winter Semester</b>	
ENVR Elective	Select 1 .....	3–4	
ENVR 107	Soil Mechanics		
ENVR 204*	Introductory Surveying		
ENVR 206	Environmental Law .....	3	
GEOG 212	Environmental Science.....	3	
GEOG 217	Water Resources .....	3	
		<b>12–13</b>	

		<b>Spring Session</b>	
ENVR 231	Environmental Field Experience .....	5	

**PROGRAM TOTAL 29–30 CREDITS**

\* NOTE: ENVR 204 is a Spring Only Class.



## FIRE TECHNOLOGY

### Fire Technology Associate Degree

Schoolcraft program code # AAS.00177

Recognizing the need for more highly skilled fire fighters, 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. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The student who successfully completes the requirements for this program and meets all College Requirements qualifies for an Associate in Applied Science Degree with emphasis in Fire Technology.

Contact the Public Safety Education Office at 734-462-4747 for additional information.

FIRST YEAR	Fall Semester	
FIRE 112	Fire Fighter 1—Basic Fire Suppression .....	10
ENG 100	Communication Skills .....	3
MATH 101	Business Mathematics .....	3
		<b>16</b>

	Winter Semester	
FIRE 119	Fire Fighter 2—Advanced Fire Suppression .....	10
BIOL 105	Basic Human Anatomy and Physiology .....	4
PE 202	Lifestyle Fitness—Wellness .....	2
		<b>16</b>

	Spring/Summer Session	
CIS 105*	Computer Orientation .....	1
HUM 106	Introduction to Art and Music .....	1
		<b>2</b>

SECOND YEAR	Fall Semester	
EMT 108	Emergency Medical Technology—Basic .....	10.5
ENG 116	Technical Writing .....	3
Elective**	Select from the list below .....	3
		<b>16.5</b>

	Winter Semester	
FIRE 128	Fire Fighting—Hydraulics and Water Supply .....	4
PSYCH 153	Human Relations .....	3
Elective**	Select from the list below .....	3
FIRE ***	Special Topics—Select from the list below .....	1
FIRE 200	Fire and Arson Investigation .....	4
		<b>15</b>

### PROGRAM TOTAL 65.5 CREDITS

\* CIS 105 may be waived if student has successfully completed a high school computer course or equivalent.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

#### \*\* ELECTIVES

CJ 104	Introduction to Security .....	3
FIRE 130	Fire Fighting—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	Special Topic—Incident Command System .....	1
FIRE 142	Special Topic—Terrorism Awareness .....	1

See revised Fire Technology program requirements effective Winter 2009.

[www.schoolcraft.edu/programs/programs.asp](http://www.schoolcraft.edu/programs/programs.asp)

### Fire Technology Associate Degree with Academy

Schoolcraft program code # AAS.00177

The Fire Technology Associate Degree with Academy is designed for students who wish to attend full time.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The student who successfully completes the requirements for this program and meets all College Requirements qualifies for an Associate in Applied Science Degree with emphasis in Fire Technology.

Contact the Public Safety Education Office at 734-462-4747 for additional information.

FIRST YEAR	Fall Semester	
FIRE 124	Fire Academy .....	20
		<b>20</b>

	Winter Semester	
ENG 100	Communication Skills .....	3
MATH 101	Business Mathematics .....	3
FIRE 200	Fire and Arson Investigation .....	4
BIOL 105	Basic Human Anatomy and Physiology .....	4
		<b>14</b>

	Spring/Summer Session	
CIS 105*	Computer Orientation .....	1
HUM 106	Introduction to Art and Music .....	1
		<b>2</b>

SECOND YEAR	Fall Semester	
ENG 116	Technical Writing .....	3
EMT 108	Emergency Medical Technology—Basic .....	10.5
Elective**	Select from the list below .....	3
		<b>16.5</b>

	Winter Semester	
FIRE 128	Fire Fighting—Hydraulics and Water Supply .....	4
PSYCH 153	Human Relations .....	3
PE 202	Lifestyle Fitness—Wellness .....	2
Elective**	Select from the list below .....	3
FIRE***	Special Topics—Select from the list below .....	1
		<b>13</b>

### PROGRAM TOTAL 65.5 CREDITS

\* CIS 105 may be waived if student has successfully completed a high school computer course or equivalent.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

#### \*\* ELECTIVES

CJ 104	Introduction to Security .....	3
FIRE 130	Fire Fighting—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	Special Topics—Incident Command System .....	1
FIRE 142	Special Topics—Terrorism Awareness .....	1

**Fire Fighter Technology One-Year Certificate**

Schoolcraft program code # 1YC.00149

The Fire Fighter 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, currently seeking employment, and/or volunteer 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 percent or better on test scores and to score at least 70 percent on their final exam to receive a passing grade of 2.0. The EMT course requires an average of 80 percent on tests and an 80 percent on the final for a grade of 3.0. Those scoring below 80 percent 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully complete the requirements for this program will qualify for a Fire Fighter Technology Certificate.

**This program requires a special admissions process. Contact the Public Safety Education Office at 734-462-4747 to complete an application.**

**FIRST YEAR Fall Semester**  
 FIRE 112 Fire Fighter 1—Basic Fire Suppression ..... 10

**Winter Semester**  
 FIRE 119 Fire Fighter 2—Advanced Fire Suppression..... 10

**Spring Session**  
 EMT 108\* Emergency Medical Technology—Basic ..... 10.5

**PROGRAM TOTAL 30.5 CREDITS**

**(ALTERNATE) FIRST YEAR Fall Semester**  
 FIRE 124 Fire Academy..... 20

**Winter Semester**  
 EMT 108\* Emergency Medical Technology—Basic ..... 10.5

\* BIOL 105 is a recommended prerequisite of EMT 108.



## HEALTH INFORMATION TECHNOLOGY

### Health Information Technology Associate Degree

Schoolcraft program code # AAS.00153

The Health Information Technology 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 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 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 the 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 program is designed for the full-time or part-time student.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

#### ADMISSION PREREQUISITES

BIOL 236*	Human Anatomy and Physiology .....	5
HIT 104	Medical Terminology .....	4
CIS 120	Software Applications .....	3
		<b>12</b>

#### FIRST YEAR Fall Semester

HIT 109	Principles of Health Information Management .....	3
HIT 110	Human Diseases .....	4
HIT 112	Basic Laboratory and Diagnostic Tests .....	2
HIT 114	Pharmacology for Health Professionals .....	2
HIT 220	Legal Aspects of Health Information .....	3
		<b>14</b>

#### Winter Semester

HIT 111	ICD-9-CM Classification .....	3
HIT 154	Health Record Practicum .....	3
HIT 156	Clinical Affiliation 1 .....	2
COMA 103	Fundamentals of Speech .....	3
ENG 101	English Composition 1 .....	3
		<b>14</b>

#### Spring/Summer Session

ENG 102	English Composition 2 .....	3
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#### SECOND YEAR Fall Semester

HIT 210	Healthcare Statistics for Health Information Management .....	3
HIT 216	Healthcare Delivery Systems .....	2
HIT 217	Quality Management in Health Care .....	2
HIT 221	Basic Ambulatory Coding .....	3
HIT 256**	Clinical Affiliation 2 .....	2
HIT 152	Computer Applications in Healthcare .....	2
		<b>14</b>

#### Winter Semester

HIT 213	Health Information Technology Seminar .....	1
HIT 219	Organization and Management .....	2
HIT 227	Intermediate ICD-9-CM Coding .....	3
HIT 229	Intermediate Ambulatory Coding .....	3
HIT 258**	Clinical Affiliation 3 .....	2
		<b>11</b>

### PROGRAM TOTAL 68 CREDITS

#### ELECTIVE (OPTIONAL)

HIT 240	Healthcare Reimbursement Methodologies .....	2
HIT 230**	ICD-9-CM Coding Practicum .....	2
HIT 231**	Ambulatory Coding Practicum .....	2

\* Students desiring transfer credit should substitute BIOL 237 & BIOL 238. BIOL 101 is a prerequisite to BIOL 236 and the BIOL 237-238 sequence. Please review and follow all course prerequisites. Students planning to transfer should take the following courses: POLS 105, PSYCH 201, HUM 106 and MATH 111.

\*\* Contact HIT faculty to consider substitution.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

For more information on accreditation please contact:

Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)  
233 N. Michigan Ave., Suite 2150  
Chicago, Illinois 60611-5519  
312-233-1129  
[www.cahiim.org](http://www.cahiim.org)



**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; applying 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.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BIOL 236*	Human Anatomy and Physiology.....	5
HIT 104	Medical Terminology .....	4
HIT 109	Principles of Health Information Management .....	3
		<b>12</b>
	<b>Winter Semester</b>	
HIT 110	Human Diseases .....	4
HIT 111	ICD-9-CM Classification.....	3
		<b>7</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
HIT 112	Basic Laboratory and Diagnostic Tests .....	2
HIT 114	Pharmacology for Health Professionals .....	2
HIT 221	Basic Ambulatory Coding .....	3
		<b>7</b>
	<b>Winter Semester</b>	
HIT 227	Intermediate ICD-9-CM Coding .....	3
HIT 229	Intermediate Ambulatory Coding .....	3
		<b>6</b>
	<b>Spring Session</b>	
HIT 230	ICD-9-CM Coding Practicum .....	2
HIT 231	Ambulatory Coding Practicum.....	2
		<b>4</b>
<b>PROGRAM TOTAL</b>		<b>36 CREDITS</b>

\* Students desiring transfer credit should substitute BIOL 237 & BIOL 238. BIOL 101 is a prerequisite to BIOL 236 and the BIOL 237–238 sequence. Please review and follow all course prerequisites.

All courses may be applied toward the Associate of General Studies Degree.

**HOMELAND SECURITY**

**Homeland Security Associate Degree**

Schoolcraft program code # AAS.000252

After 9/11 the security industry has expanded rapidly. The United States Department of Homeland Security employs over 180,000 individuals. Coupled with that, the private security industry employs nearly 1.5 million security personnel. The Homeland Security Degree Program is focused on providing students with a foundation of private and homeland security knowledge to build upon as a transfer to a specialty degree. The objectives of the Homeland Security Associate Degree Program are to upgrade personnel employed in the security industry and to prepare students for full-time employment in this field.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully complete the Homeland Security Associate Degree Program and all College Requirements qualify for an Associate in Applied Science Degree.

**Contact the Public Safety Education Office at 734-462-4747 for more information.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CIS 105	Computer Orientation.....	1
CJ 102	Organization and Administration of Law Enforcement Agencies.....	3
COMA 103	Fundamentals of Speech.....	3
English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
POLS 105	Survey of American Government.....	3
PSYCH 153	Human Relations .....	3
		<b>16</b>
	<b>Winter Semester</b>	
MATH 101	Business Mathematics .....	3
English	Select 1 .....	3
ENG 116	Technical Writing	
ENG 102	English Composition 2	
CJ 104	Introduction to Security.....	3
CJ 113	Introduction to Criminal Justice System .....	3
HS 101	Introduction to Homeland Security .....	3
HUM 106	Introduction to Art and Music .....	1
		<b>16</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
BIOL 103	Health Education .....	3
CJ 201	Criminal Investigation.....	3
HS 102	Understanding Terrorism.....	3
HS 202	Introduction to Emergency Management .....	3
SOC 201	Principles of Sociology.....	3
		<b>15</b>
	<b>Winter Semester</b>	
CIS 115	Introduction to Computer Based Systems .....	3
CJ 211	Criminal Law and Procedures .....	3
HS 201	Organizational and Facility Security .....	3
HS 203	Introduction to Intelligence Systems.....	3
Elective*	.....	3
		<b>15</b>
<b>PROGRAM TOTAL</b>		<b>62 CREDITS</b>

\* Any 100 or 200 level course not previously taken.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

## LASER TECHNOLOGY

### Laser Technology 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully complete the Program Courses qualify for a certificate of program completion.

FIRST YEAR	Fall Semester	
LASR 103	Laser Concepts .....	4
ELECT 119	Basic Measurement and Reporting Skills.....	3
MATH 113	Intermediate Algebra for College Students .....	4
		<b>11</b>
	Winter Semester	
LASR 104	Laser Optics and Components.....	5
ELECT 127	DC Circuits and Mathematical Modeling.....	5
ELECT 237	Programmable Logic and Industrial Controls .....	4
		<b>14</b>
SECOND YEAR	Fall Semester	
ELECT 128	AC Circuits and Mathematical Modeling.....	5
LASR 232	Laser Systems and Applications 1 .....	4
		<b>9</b>
<b>PROGRAM TOTAL 34 CREDITS</b>		



## MANUFACTURING

### Advanced Manufacturing Associate Degree

Schoolcraft program code # AAS.00135

The Advanced Manufacturing Associate Degree Program is designed to provide learners with growth and development in a variety of manufacturing processes, to expose them to materials and methods of production and make them aware of quality systems and tools. While this program offers an entry level certification for individuals pursuing a career in manufacturing, it has been designed to enable individuals the opportunity to continually expand and upgrade their applied skills as well as to maintain a thorough mastery of evolving manufacturing technologies.

Protective shop clothing and eye protection supplies required for the program will be purchased by the student.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The student who successfully completes all College 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
MET 102	Introduction to Materials Science.....	3
MFG 102	Basic Machining Processes .....	3
		<b>16</b>
	Winter Semester	
ENG 106*	Business English.....	3
MET 114	Engineering Materials .....	3
CAM 103	Computer Numerical Control (CNC)—Programming....	3
ENGR 100	Introduction to Engineering and Technology .....	3
MFG 103	Manufacturing Operations.....	3
		<b>15</b>
	Spring Session	
CAD 103	Engineering Graphics .....	3
CHEM 111*	General Chemistry I.....	4
		<b>7</b>
SECOND YEAR	Fall Semester	
SOC 201*	Principles of Sociology.....	3
MFG 203	Advanced Manufacturing Operations.....	3
HUM 106*	Introduction to Art and Music .....	1
Electives**	Select from the list below.....	5–8
		<b>12–15</b>
	Winter Semester	
CAM 205	CAD/CAM—Computer Aided Machining.....	3
QM 108	Quality Statistical Methods .....	3
MFG 241	Quantitative Metrology .....	3
WELD 113	Shielded Metallic Arc Welding (S.M.A.W.).....	3
		<b>12</b>
<b>PROGRAM TOTAL 62–65 CREDITS</b>		

\* Other courses meeting the College requirements may be substituted.

\*\* Number of credits may vary depending on the course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### ELECTIVES

CAD 106	Advanced Drawing Views and Descriptive Geometry ...	4
CAM 201	Coding and Materials Processing .....	5
ELECT 237	Programmable Logic and Industrial Controls .....	4
LASR 103	Laser Concepts .....	4
MFG 180	Industrial Entrepreneurship .....	2
MFG 243	Manufacturing Systems Analysis .....	3

## MASSAGE THERAPY

### Massage Therapy Associate Degree

Schoolcraft program code # AAS.00266

Massage therapy is the systematic manipulation of the soft tissues of the body for the purpose of increased circulation of blood and lymph, pain reduction, relaxation and restoration of health and well being of the client. The Massage Therapy Program is designed to prepare an individual in the field of soft tissue manipulation and is taught from a clinical perspective. Massage therapists may be employed in a private practice, a spa, or a variety of health care settings including hospitals and managed care centers, rehabilitation and sports medicine clinics and group and private practices.

The Massage Therapy Associate Degree is offered to meet the expanding needs of both the allied and complementary health care systems. Those students who are interested in additional education and wish to enter either field with a broad background and the ability to work with a diverse group of clients and practitioners will do well to add the general education courses. This associate degree program integrates traditional and non-traditional knowledge bases regarding massage therapy and bodywork. Course work includes six semesters of anatomy and physiology, a variety of massage and bodywork techniques and practices, and general education courses. Massage therapists who attain this degree may also plan to pursue a baccalaureate degree in a health or medical program, or an individualized area of study.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who successfully complete all College Requirements qualify for an Associate in Applied Science Degree.

The massage therapy program is dedicated to advancing the science and art of massage therapy.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MAS 101	Theory and Fundamentals of Massage Therapy.....	2
MAS 102	Basic Massage Applications.....	6
MAS 103	Fundamentals of Anatomy and Physiology.....	4
		<b>12</b>
	<b>Winter Semester</b>	
MAS 104	Intermediate Massage Applications.....	5
MAS 109	Systems of Support and Movement.....	5
MAS 110	Massage Therapy Student Clinic.....	2
		<b>12</b>
	<b>Spring/Summer Session</b>	
MAS 106	Palpatory and Assessment Skills.....	3.5
MAS 107	Organ Systems Anatomy and Physiology.....	4
MAS 108	Massage Therapy Externship.....	3
		<b>10.5</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
ENG 100	Communication Skills.....	3
CIS 120	Software Applications.....	3
BIOL 101	General Biology.....	4
POLS 105	Survey of American Government.....	3
		<b>13</b>

ENG 116	Technical Writing.....	3
MATH 111	Applications—Utility of Math.....	4
HUM 106	Introduction to Art and Music.....	1
BIOL 236*	Human Anatomy and Physiology.....	5
		<b>13</b>

### Spring/Summer Session

PSYCH 153	Human Relations.....	3
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### PROGRAM TOTAL 63.5 CREDITS

\* Students who may transfer to a baccalaureate program should elect the BIOL 237–238 sequence. BIOL 101 is a prerequisite to BIOL 236 and the BIOL 237–238 sequence. Please review and follow all course requirements.

Students planning to transfer should check the transfer institution’s requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

### Massage Therapy One-Year Certificate

Schoolcraft program code # 1YC. 00255

Massage therapy is the systematic manipulation of the soft tissues of the body for the purpose of increased circulation of blood and lymph, pain reduction, relaxation and restoration of health and well being of the client. The Massage Therapy Program is designed to prepare an individual in the field of soft tissue manipulation and is taught from a clinical perspective. It offers the opportunity to earn a Certificate in Massage Therapy. The certificate is granted after the successful completion of 34.5 credit hours of designated course work.

Massage therapists may be employed in private practice, spa, or a variety of health care settings including hospitals and managed care centers, rehabilitation and sports medicine clinics and group and private practices. Successful completion of the certificate readies the individual to sit for testing through the National Certification Board for Therapeutic Massage and Bodywork.

The massage therapy program is dedicated to advancing the science and art of massage therapy.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or admissions@schoolcraft.edu to complete an application.**

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MAS 101	Theory and Fundamentals of Massage Therapy.....	2
MAS 102	Basic Massage Applications.....	6
MAS 103	Fundamentals of Anatomy and Physiology.....	4
		<b>12</b>
	<b>Winter Semester</b>	
MAS 104	Intermediate Massage Applications.....	5
MAS 109	Systems of Support and Movement.....	5
MAS 110	Massage Therapy Student Clinic.....	2
		<b>12</b>
	<b>Spring/Summer Session</b>	
MAS 106	Palpatory and Assessment Skills.....	3.5
MAS 107	Organ Systems Anatomy and Physiology.....	4
MAS 108	Massage Therapy Externship.....	3
		<b>10.5</b>

### PROGRAM TOTAL 34.5 CREDITS

## MEDICAL ASSISTING

### Medical Assisting One-Year Certificate

Schoolcraft program code # 1YC.00026

The Medical Assisting Program is designed to prepare the student for entry-level employment as a Medical Assistant. The curriculum is designed to prepare the student to acquire knowledge, skills and behavior necessary for a competent entry-level medical assistant in a healthcare setting. 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 multi-skilled 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 HIT and MA 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.

The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the 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.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application. Students may apply while enrolled in Fall Semester courses.**

FIRST YEAR	Fall Semester	
MA 134	Medical Insurance Coding.....	3
MA 140	Medical Office Procedures .....	3
HIT 104	Medical Terminology .....	4
BIOL 105	Basic Human Anatomy and Physiology 1 .....	4
		<b>14</b>
	Winter Semester	
MA 110	Phlebotomy.....	4
MA 174	Medical Laboratory Techniques .....	4
MA 180	Medical Office Clinical Procedures.....	4
MA 155*	Medical Insurance Billing .....	3
		<b>15</b>
	Spring Session	
MA 195	Office Practicum.....	3
CIS 120	Software Applications .....	3
		<b>6</b>
		<b>PROGRAM TOTAL 35 CREDITS</b>

\* This course may be taken prior to admission to the Medical Assisting Program.

For more information about accreditation please contact:

Commission on Accreditation of Allied Health  
Education Programs (CAAHEP)  
33 East Wacker Drive, Suite 1970  
Chicago, Illinois 60601-2208  
727-210-2350

[www.aama-ntl.org](http://www.aama-ntl.org)

### Medical Biller/Receptionist Skills Certificate

Schoolcraft program code # CRT.00350

The Medical Biller/Receptionist Certificate prepares the student to answer telephones, route calls, greet visitors, respond to inquiries from the public, perform medical insurance billing and provide information about the healthcare facility. Job opportunities are in medical offices, hospitals, clinics, health-related facilities, urgent care centers, and surgical centers.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

FIRST YEAR	Fall Semester	
CIS 120	Software Applications .....	3
HIT 104*	Medical Terminology .....	4
MA 134*	Medical Insurance Coding.....	3
		<b>10</b>
	Winter Semester	
MA 155*	Medical Insurance Billing .....	3
MA 140*	Medical Office Procedures .....	3
		<b>6</b>
		<b>PROGRAM TOTAL 16 CREDITS</b>

\* Courses apply to the Medical Assisting Program.

### Phlebotomy Skills Certificate

Schoolcraft program code # CRT.00325

The Phlebotomy Certificate prepares the student for employment as a phlebotomist with job opportunities in a medical office, clinic or healthcare facility. The phlebotomist is trained to draw blood through a method called venipuncture. A venipuncture is performed when a large specimen of blood is needed for testing.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

FIRST YEAR	Fall Semester	
BIOL 105*	Basic Human Anatomy and Physiology 1 .....	4
CIS 105	Computer Orientation .....	1
HIT 104*	Medical Terminology .....	4
		<b>9</b>
	Winter Semester	
MA 110*	Phlebotomy.....	4
MA 140*	Medical Office Procedures .....	3
		<b>7</b>
		<b>PROGRAM TOTAL 16 CREDITS</b>

\* Courses apply to the Medical Assisting Program.

All courses may be applied toward the Associate of General Studies Degree.

**Physician Office Medical Transcription Skills Certificate**

The Physician Office Medical Transcription Certificate prepares the student for employment as a transcriptionist with job opportunities in a medical office, clinic, or physician office. The physician office transcriptionist is responsible for typing medical letters, chart notes, consultations, history, physicals, discharge notes, and initial office evaluations.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
BIOL 105*	Basic Human Anatomy and Physiology 1 .....	4
HIT 104*	Medical Terminology .....	4
OIS 100	Keyboarding 1 .....	2
		<b>10</b>
	<b>Winter Semester</b>	
HIT 114*	Pharmacology for Health Professionals .....	2
MA 140*	Medical Office Procedures .....	3
MT 108	Physician Office Transcription .....	2
		<b>7</b>
	<b>PROGRAM TOTAL</b>	<b>17 CREDITS</b>

\* Courses apply to the Medical Assisting Program

All courses may be applied toward the Associate of General Studies Degree.



**MEDICAL TRANSCRIPTION**

**Medical Transcription One-Year Certificate**

Schoolcraft program code # 1YC.00029

Medical Transcription Program students must be officially admitted to the program. The Medical Transcription Program prepares the student for entry-level employment as a medical transcriptionist in a variety of health-care 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 patho physiology.
- 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 specialties 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.

Upon completion of two-three years of experience in performing medical transcription in a variety of medical and surgical specialties, 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).

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

**ADMISSION PREREQUISITES**

BIOL 105*	Basic Human Anatomy and Physiology 1 .....	4
HIT 104*	Medical Terminology .....	4
OIS 105*	Office Communications—Editing Skills .....	3
		<b>11</b>

**SAMPLE SCHEDULE OF COURSES Fall Semester**

MT 106*	Principles of Medical Transcription .....	2
MT 108	Physician Office Transcription .....	2
OIS 165*	Microsoft Word for Windows .....	3
HIT 112	Basic Laboratory and Diagnostic Tests .....	2
		<b>9</b>

**Winter Semester**

HIT 114	Pharmacology for Health Professionals .....	2
HIT 110	Human Diseases .....	4
MT 157	Medical Transcription Seminar .....	1
MT 158	Hospital Medical Transcription 1 .....	5
		<b>12</b>

**Spring Session**

MT 159	Hospital Medical Transcription 2 .....	5
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**PROGRAM TOTAL 37 CREDITS**

\* These courses may be taken prior to admission to the Medical Transcription Program, according to prerequisites.

## METALLURGY AND MATERIALS SCIENCE

### **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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

Students seeking transfer to a baccalaureate program should request transfer guides provided by the department.

#### **FIRST YEAR Fall Semester**

MET 102	Introduction to Materials Science.....	3
MET 120*	Hazardous Materials Management.....	2
ENGR 100	Introduction to Engineering and Technology .....	3
MET 152	Structure and Properties Laboratory.....	3
MATH 113	Intermediate Algebra for College Students .....	4
HUM 106	Introduction to Art and Music .....	1
		<b>16</b>

#### **Winter Semester**

English	Select 1 .....	3
ENG 100	Communication Skills	
ENG 101	English Composition 1	
CAD 103	Engineering Graphics .....	3
MET 114	Engineering Materials .....	3
Science**	Select 1 .....	4–5
PHYS 123	Applied Physics	
CHEM 111	General Chemistry 1	
BIOL 105	Basic Human Anatomy and Physiology	
MET 211	Physical Metallurgy Structures.....	3
		<b>16–17</b>

#### **Spring/Summer Session**

Social Science	Select 1 .....	3
POLS 105	Survey of American Government	
PSYCH 153	Human Relations	
SOC 201	Principles of Sociology	
English	Select 1 .....	3
ENG 102	English Composition 2	
ENG 106	Business English	
ENG 116	Technical Writing	
		<b>6</b>

#### **SECOND YEAR Fall Semester**

MET 215*	Mechanical Properties of Metals.....	3
MET 217*	Computer Applications in Materials Science .....	3
MFG 102	Basic Machining Processes .....	3
WELD 113	Shielded Metallic Arc Welding (S.M.A.W.).....	3
		<b>12</b>

#### **Winter Semester**

MET 271*	Corrosion and Corrosion Analysis.....	4
MET 280*	Special Problems in Materials Science.....	4
WELD 262	Welding Metallurgy .....	3
Elective	Select from the list below.....	3–5
		<b>14–16</b>

### **PROGRAM TOTAL 64–67 CREDITS**

\* These classes are offered on a rotational basis. Contact Metallurgy faculty for current and projected offerings.

\*\* Number of credits may vary depending on the course selection.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

#### **ELECTIVES**

BUS 103	Organizing a Small Business.....	3
CAM 102	Introduction to Computer Numerical Control (CNC) ....	3
LASR 103	Laser Concepts .....	4
LASR 104	Laser Optics and Components.....	5
MET 160*	Composite Materials.....	3
MET 248*	Electron Microscopy and Image Analysis.....	3
MFG 105	Manufacturing Processes.....	4

### **Metallurgy—Applied Physical 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 the 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

#### **FIRST YEAR Fall Semester**

MET 102	Introduction to Materials Science.....	3
MFG 102	Basic Machining Processes .....	3
MET 120*	Hazardous Materials Management.....	2
MET 152	Structure and Properties Laboratory.....	3
		<b>11</b>

#### **Winter Semester**

MET 114	Engineering Materials .....	3
WELD 113	Shielded Metallic Arc Welding (S.M.A.W.).....	3
Elective**	MET.....	3
		<b>9</b>

#### **SECOND YEAR Fall Semester**

MET 211	Physical Metallurgy Structures.....	3
MET 215*	Mechanical Properties of Metals.....	3
		<b>6</b>

#### **Winter Semester**

MET 280*	Special Problems in Materials Science.....	4
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### **PROGRAM TOTAL 30 CREDITS**

\* These classes are offered on a rotational basis.

Contact Metallurgy faculty for current and projected offerings.

\*\* Any Metallurgy course not previously taken.

**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 students must have earned a minimum of an accredited Associate Degree in Applied Science.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. 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).

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MET 211	Physical Metallurgy Structures .....	3
MET 215*	Mechanical Properties of Metals .....	3
Elective	Select any applicable MET-200 level course .....	3-4
		<b>9-10</b>

	<b>Winter Semester</b>	
MET 280*	Special Problems in Materials Science.....	4
Elective	Select any applicable MET-200 level course .....	3-4
		<b>7-8</b>

Completion of a minimum of 15 credit hours is required.

Courses can be taken through independent study.

\* These classes are offered on a rotational basis. Contact Metallurgy faculty for current and projected offerings.



**MUSIC****Music—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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses, and upon recommendation of the music faculty, qualify for a Certificate of Program completion. Applied Music has an added fee.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MUSIC 131	Applied Music—Piano 1 .....	2
MUSIC 143	Practice Teaching and Practicum in Piano Teaching 1 .....	2
MUSIC 153	Music Theory 1 .....	3
MUSIC 164	Music History 1 .....	3
MUSIC 201	Keyboard Skills for Piano Teachers 1 .....	2
		<b>12</b>
	<b>Winter Semester</b>	
MUSIC 132	Applied Music—Piano 2 .....	2
MUSIC 144	Practice Teaching and Practicum in Piano Teaching 2 .....	2
MUSIC 154	Music Theory 2 .....	3
MUSIC 165	Music History 2 .....	3
MUSIC 247*	Piano Teaching Techniques and Materials 1 .....	3
		<b>13</b>
<b>SECOND YEAR</b>	<b>Fall Semester</b>	
MUSIC 137	Sight Singing and Ear Training 1 .....	2
MUSIC 202	Keyboard Skills for Piano Teachers 2 .....	2
MUSIC 231	Applied Music—Piano 3 .....	2
MUSIC 243	Practice Teaching and Practicum in Piano Teaching 3 .....	2
		<b>8</b>
	<b>Winter Semester</b>	
MUSIC 138	Sight Singing and Ear Training 2 .....	2
MUSIC 232	Applied Music—Piano 4 .....	2
MUSIC 244	Practice Teaching and Practicum in Piano Teaching 4 .....	2
MUSIC 257*	Piano Teaching Techniques and Materials 2 .....	3
		<b>9</b>
		<b>PROGRAM TOTAL 42 CREDITS</b>

\* These classes are offered on a rotational basis.  
Contact Liberal Arts office for current offerings.

**Music Foundations 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program Completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MUSIC 104	Basic Materials in Music Theory .....	3
Music	Select 1 .....	2
MUSIC 121	Class Piano 1 .....	
MUSIC 131	Applied Music—Piano 1 .....	
MUSIC 105	Music Appreciation .....	3
Music	Select 1 .....	2
MUSIC 133	Applied Music—Voice 1 .....	
MUSIC 135	Applied Music—Instrumental 1 .....	
MUSIC 164	Music History 1 .....	3
Music*	Select 1 Music course not already taken from the list below .....	minimum 1
		<b>14</b>
	<b>Winter Semester</b>	
Music	Select 1 .....	2
MUSIC 122**	Class Piano 2 .....	
MUSIC 132	Applied Music—Piano 2 .....	
Music	Select 1 .....	2
MUSIC 134	Applied Music—Voice 2 .....	
MUSIC 136	Applied Music—Instrumental 2 .....	
HUM 106	Introduction to Art and Music .....	1
Electives	English Literature or Poetry, Art Appreciation Suggested.....	6
MUSIC 171	Music Technology 1 .....	3
Music*	Select 1 Music course not already taken from the list below .....	minimum 1
		<b>15</b>
		<b>PROGRAM TOTAL 29 CREDITS</b>

\* Number of credits may vary depending on the course selection.

**MUSIC COURSES:**

MUSIC 117**	Choir 1 .....	2
MUSIC 118**	Choir 2 .....	2
MUSIC 124**	Chamber Singers 1 .....	1
MUSIC 127**	Chamber Singers 2 .....	1
MUSIC 133	Applied Music—Voice 1 .....	2
MUSIC 134	Applied Music—Voice 2 .....	2
MUSIC 135	Applied Music—Instrumental 1 .....	2
MUSIC 136	Applied Music—Instrumental 2 .....	2
MUSIC 141	Wind Ensemble 1 .....	2
MUSIC 142	Jazz Band 1 .....	2
MUSIC 143	Practice Teaching and Practicum in Piano Teaching 1.....	2
MUSIC 168	Synthesizer Ensemble 1 .....	3
MUSIC 169	Synthesizer Ensemble 2 .....	3

\*\* Requires Audition.

**Music Intermediate One-Year Certificate**

Schoolcraft program code # 1YC.00163

Students must successfully complete the Music Foundations Certificate to begin the Music Intermediate Certificate.

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 in performing as soloists in voice or as instrumentalists in public recitals and concerts.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

Students are advised to consult with Music Department Faculty before beginning classes in this certificate.

**FIRST YEAR Fall Semester**

MUSIC 137	Sight Singing and Ear Training 1 .....	2
MUSIC 153	Music Theory 1.....	3
Music	Select 1 .....	2
	MUSIC 131***Applied Music—Piano 1	
	MUSIC 231***Applied Music—Piano 3	
Music	Select 1 .....	2
	MUSIC 233***Applied Music—Voice 3	
	MUSIC 235***Applied Music—Instrumental 3	
Music*	Select 1 or 2 Music courses not already taken from the list below .....	minimum 3
		<b>12</b>

**Winter Semester**

Music	Select 1 .....	2
	MUSIC 132***Applied Music—Piano 2	
	MUSIC 232***Applied Music—Piano 4	
Music	Select 1 .....	2
	MUSIC 234***Applied Music—Voice 4	
	MUSIC 236***Applied Music—Instrumental 4	
MUSIC 138	Sight Singing and Ear Training 2 .....	2
MUSIC 165	Music History 2 .....	3
MUSIC 154	Music Theory 2.....	3
Music*	Select 1 or 2 Music courses not already taken from the list below .....	minimum 3
		<b>15</b>

**Spring/Summer Session**

Elective	English Literature, Poetry, or Art Appreciation Suggested.....	3
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**PROGRAM TOTAL 30 CREDITS**

\* Number of credits may vary depending on the course selection.

\*\*\* Course selection dependent on courses taken in Foundations One-Year certificate.

**MUSIC COURSES:**

**(CHECK COURSE PREREQUISITES BEFORE MAKING SELECTION)**

MUSIC 117**	Choir 1 .....	2
MUSIC 118**	Choir 2 .....	2
MUSIC 217**	Choir 3 .....	2
MUSIC 218**	Choir 4 .....	2
MUSIC 124**	Chamber Singers 1 .....	1
MUSIC 127**	Chamber Singers 2 .....	1
MUSIC 224**	Chamber Singers 3 .....	1
MUSIC 227**	Chamber Singers 4 .....	1
MUSIC 133	Applied Music—Voice 1 .....	2
MUSIC 134	Applied Music—Voice 2 .....	2
MUSIC 233	Applied Music—Voice 3 .....	2
MUSIC 234	Applied Music—Voice 4 .....	2
MUSIC 135	Applied Music—Instrumental 1 .....	2
MUSIC 136	Applied Music—Instrumental 2 .....	2
MUSIC 235	Applied Music—Instrumental 3 .....	2
MUSIC 236	Applied Music—Instrumental 4 .....	2
MUSIC 141	Wind Ensemble 1 .....	2
MUSIC 241	Wind Ensemble 2 .....	2
MUSIC 142	Jazz Band 1 .....	2
MUSIC 242	Jazz Band 2 .....	2
MUSIC 168	Synthesizer Ensemble 1 .....	3
MUSIC 169	Synthesizer Ensemble 2 .....	3
MUSIC 268	Synthesizer Ensemble 3 .....	3
MUSIC 269	Synthesizer Ensemble 4 .....	3

\*\* Requires Audition.



**Music—Recording Technology Associate Degree**

Schoolcraft program code # AAS.00244

The Recording Technology Associate Degree Program 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 recording.

Understanding the musical perspective is an important focus of the program. The required music courses will assist the recording engineer in better understanding 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
HUM 106	Introduction to Art and Music .....	1
MUSIC 104	Basic Materials in Music Theory .....	3
MUSIC 121	Class Piano 1 .....	2
MUSIC 173	Basic Studio Techniques 1.....	3
MATH 113	Intermediate Algebra for College Students .....	4
ENG 101	English Composition 1 .....	3
		<b>16</b>
	<b>Winter Semester</b>	
Music	Select 1 .....	1–3
MUSIC 117	Choir 1 .....	
MUSIC 124	Chamber Singers 1 .....	
MUSIC 168	Synthesizer Ensemble 1 .....	
MUSIC 141	Wind Ensemble 1 .....	
MUSIC 123	Keyboard Skills for Recording Engineers.....	1
MUSIC 174	Basic Studio Techniques 2.....	3
PHYS 123	Applied Physics .....	5
MUSIC 175	Ear Training for Recording Engineers.....	2
		<b>12–14</b>
	<b>Spring/Summer Session</b>	
ENG 102	English Composition 2 .....	3
COMA 103	Fundamentals of Speech.....	3
		<b>6</b>

<b>SECOND YEAR</b>	<b>Fall Semester</b>	
MUSIC 171	Music Technology 1 .....	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
		<b>15</b>
	<b>Winter Semester</b>	
MUSIC 138	Sight Singing and Ear Training 2 .....	2
Music	Select 1 .....	3
MUSIC 105	Music Appreciation .....	
MUSIC 149	Popular Music Culture in America .....	
MUSIC 172	Music Technology 2 .....	3
MUSIC 274	Advanced Studio Techniques 2 .....	3
GEOG 133	World Regional Geography .....	4
		<b>15</b>

**PROGRAM TOTAL 64–66 CREDITS**

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

**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 the student 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 musician's 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program Completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
MUSIC 104	Basic Materials in Music Theory .....	3
MUSIC 105	Music Appreciation .....	3
MUSIC 121	Class Piano 1 .....	2
MUSIC 173	Basic Studio Techniques 1.....	3
ELECT 119	Basic Measurement and Reporting Skills.....	3
		<b>14</b>
	<b>Winter Semester</b>	
MUSIC 123	Keyboard Skills for Recording Engineers.....	1
MUSIC 171	Music Technology 1 .....	3
MUSIC 172	Music Technology 2 .....	3
MUSIC 174	Basic Studio Techniques 2.....	3
MUSIC 175	Ear Training for Recording Engineers.....	2
		<b>12</b>
	<b>Spring Session</b>	
MUSIC 273	Advanced Studio Techniques 1 .....	3
	<b>Summer Session</b>	
MUSIC 274	Advanced Studio Techniques 2 .....	3
		<b>PROGRAM TOTAL 32 CREDITS</b>



## NURSING

### **Nursing—Registered Associate Degree (ADN)**

Schoolcraft program code # AAS.00000

**Nursing courses are open only to students who are officially admitted to the ADN Program.**

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 and Enrollment Center 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. Academic courses other than nursing must be finished by the completion of the nursing courses. Students must furnish and maintain uniforms, lab coats, or other appropriate apparel required by the institution to which 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.

Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree and are eligible to apply to write the National Council Licensure Examination for Registered Nursing (NCLEX-RN). This Nursing Program is offered at the Livonia Campus.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

#### **SAMPLE SCHEDULE OF COURSES**

##### **Admission Prerequisites and Supportive Courses**

BIOL 236*	Human Anatomy and Physiology .....	5
ENG 101	English Composition 1 .....	3
BIOL 243	Microbiology .....	4
AHE 101	Introduction to Health Care .....	1
		<b>13</b>

##### **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
		<b>14</b>

##### **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 or PSYCH 229	Child Psychology .....	3
	Life-Span Developmental Psychology .....	4
		<b>13–14</b>

##### **Spring Session**

NURS 122	Psychiatric—Mental Health Nursing .....	4
ENG 102	English Composition 2 .....	3
		<b>7</b>

##### **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
		<b>13</b>

##### **Winter Semester**

NURS 213	Adult Medical—Surgical Nursing 3 .....	5
NURS 214	Leadership and Nursing Management of Complex Clients .....	5
HUM 106	Introduction to Art and Music .....	1
		<b>11</b>

#### **PROGRAM TOTAL 71–72 CREDITS**

\* Students who may transfer to a baccalaureate program should elect the BIOL 237-238 sequence. BIOL 101 is a prerequisite to BIOL 236 and the BIOL 237-238 sequence. Please review and follow all course prerequisites.

**NOTE:** In addition, COLLS 130, Applied Learning Theory—Nursing, is an available elective for pre-nursing students to develop study skills and success strategies. In addition to the above schedule, it is recommended that students take BIOL 115, Nutrition, prior to entering the program.

For more information on accreditation and licensure please contact:

State of Michigan Department of Community Health  
 Bureau of Health Professionals  
 Board of Nursing  
 P.O. Box 30670  
 Lansing, MI 48909  
[www.michigan.gov](http://www.michigan.gov)

### **Advanced Placement—Mobility Option for LPNs**

The Associate Degree Nursing Program offers an advanced placement/mobility option for students who are already Licensed Practical Nurses (LPNs).

#### **NURSING COURSE SAMPLE PROGRESSION FOR LPN TO ADN OPTION Spring Session**

NURS 122	Psychiatric Mental Health Nursing .....	4
	<b>Summer Session</b>	
NURS 130	LPN to RN Transition Course .....	3
	<b>Fall Semester</b>	
NURS 211	Nursing Care of Women and Childbearing Families... 5	
NURS 213	Adult Medical—Surgical Nursing 3 .....	5
		<b>10</b>

##### **Winter Semester**

NURS 212	Nursing Care of Children and Families .....	5
NURS 214	Leadership and Nursing Management of Complex Clients .....	5
		<b>10</b>

#### **PROGRAM TOTAL 27 CREDITS**

In addition to these nursing courses, LPN to ADN students are required to complete the same supportive courses listed in the schedule of courses for the Nursing—ADN program.

## Nursing — Nursing Assistant Training Program Skills Certificate

Schoolcraft program code # CRT.00321

The Nursing Assistant course is open only to students who are officially admitted to the Nursing Assistant Program.

This curriculum is designed to prepare the student for an entry-level nursing assistant position with potential for employment opportunities primarily in extended care facilities. Classroom lectures, hands-on practice of skills as well as supervised experience in an extended care facility are provided. Students must furnish and maintain uniforms, lab coats or other appropriate apparel as required by the institution to which they are assigned for clinical instruction. This program meets federal and state requirements and is offered at the Livonia campus. Theory and practice in nursing support services prepare students for entry-level positions primarily in extended care facilities with some application to hospitals, clinics, doctors' offices and patients' homes.

Students who satisfactorily complete NATP 110 are eligible to apply to write the State of Michigan written and clinical skills certification evaluations. Graduates of the Nursing Assistant Training Program qualify for a Certificate of Completion and may wish to consider completing a General Studies Associate Degree or the Practical Nursing (PN) or Associate Degree Nursing (ADN) program at Schoolcraft College.

The Nursing Assistant Training Program has pre-admission requirements that are reviewed each year. It is essential to contact the Admissions and Enrollment Center for a current copy of the prerequisites to enter the program. Students are admitted several times each year.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

FIRST YEAR	Fall Semester	
NATP 110	Nursing Assistant Preparation .....	10
BIOL 105*	Basic Human Anatomy and Physiology .....	4
AHE 101	Introduction to Healthcare .....	1
HUM 106	Introduction to Art and Music .....	1

### PROGRAM TOTAL 16 CREDITS

\* Students who may pursue the ADN program should elect BIOL 236 or the BIOL 237–238 sequence for Anatomy and Physiology.

All courses may be applied toward the Associates of General Studies Degree.



See revised Nursing program requirements effective Fall 2009.  
[www.schoolcraft.edu/programs/programs.asp](http://www.schoolcraft.edu/programs/programs.asp)

## 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 to prepare graduates for entry-level positions in hospitals, nursing homes, clinics, doctors' offices and patients' homes. Courses must be taken in sequence. A minimum grade of 2.0 is required in each practical nursing course 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 and Enrollment Center 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 Nursing 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.

Graduates of the Practical Nursing program may wish to consider completing a General Studies Associate Degree or the LPN to ADN option at Schoolcraft College.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

FIRST YEAR	Prerequisite	
BIOL 105	Basic Human Anatomy and Physiology 1 .....	4
<b>Fall Semester</b>		
AHE 101	Introduction to Health Care .....	1
PN 111	Fundamentals of Practical Nursing .....	9
PN 112	Nursing Dynamics .....	4
		<b>14</b>
<b>Winter Semester</b>		
PN 125	Mental Health Nursing .....	3
PN 124	Nursing Adult Patients .....	12
		<b>15</b>
<b>Spring Session</b>		
PN 126	Maternal and Child Nursing .....	5
<b>Summer Session</b>		
PN 137	Advanced Concepts in Practical Nursing .....	3

### PROGRAM TOTAL 41 CREDITS

## 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, communication skills, and leadership/management skills with an emphasis on the professional work ethic.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for the Associate in Applied Science Degree.

<b>FIRST YEAR</b>		<b>Fall Semester</b>		
OIS 100	Keyboarding 1 .....	2		
OIS 102	Keyboarding 2 .....	2		
OIS 195	Time and Project Management.....	1		
ENG 101	English Composition 1 .....	3		
BUS 101	Introduction to Business .....	3		
OIS 105	Office Communications—Editing Skills.....	3		
				<b>14</b>
		<b>Winter Semester</b>		
CIS 120	Software Applications .....	3		
OIS 255	Office Procedures .....	2		
OIS 165	Microsoft Word for Windows.....	3		
ENG 106	Business English.....	3		
MATH 101	Business Mathematics .....	3		
				<b>14</b>
		<b>Spring/Summer Session</b>		
COMA 103	Fundamentals of Speech.....	3		
<b>SECOND YEAR</b>		<b>Fall Semester</b>		
OIS 260	Office Administration .....	3		
CIS 180	Spreadsheet Applications—Current Software.....	3		
OIS 185	Business Presentation 1—Fundamental Concepts .....	3		
ACCT 201	Principles of Accounting 1 .....	4		
CIS 225	Database Management Systems .....	3		
				<b>16</b>
		<b>Winter Semester</b>		
CIS 122	Microsoft Outlook .....	2		
OIS 265	Advanced Microsoft Word for Windows.....	3		
Science*	Select any General Education Science course.....	4		
CIS 215	Advanced Software Applications .....	3		
PSYCH 153	Human Relations .....	3		
				<b>15</b>

**PROGRAM TOTAL 62 CREDITS**

\* Number of credits may be higher dependent on the General Education Science course selected.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may be higher dependent on the course selection.

### Office Specialist Certificate

Schoolcraft program code # 1YC.00166

This certificate program focuses on office application software for today's administrative assistant. Computers 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program Completion.

<b>FIRST YEAR</b>		<b>Fall Semester</b>		
OIS 100	Keyboarding 1 .....	2		
OIS 102	Keyboarding 2 .....	2		
OIS 105	Office Communications—Editing Skills.....	3		
CIS 120	Software Applications .....	3		
OIS 195	Time and Project Management.....	1		
				<b>11</b>
		<b>Winter Semester</b>		
OIS 165	Microsoft Word for Windows.....	3		
CIS 122	Microsoft Outlook .....	2		
OIS 255	Office Procedures .....	2		
CIS 180	Spreadsheet Applications—Current Software.....	3		
CIS 215	Advanced Software Applications .....	3		
				<b>13</b>

<b>SECOND YEAR</b>		<b>Fall Semester</b>		
OIS 185	Business Presentation 1—Fundamental Concepts .....	3		
OIS 265	Advanced Microsoft Word for Windows.....	3		
				<b>6</b>

**PROGRAM TOTAL 30 CREDITS**



**Office Specialist Skills Certificate**

Schoolcraft program code # CRT.00370

This program is designed to help prepare students for today's technologically driven work environment. The program combines instruction in the most commonly used computer software packages as well as the critical areas of business communication and time and project management. Individuals who are already employed may find that the certificate increases their opportunity for promotion.

This certificate can be used as a building block toward the achievement of the Office Specialist One-Year Certificate or the Associate Degree in Applied Science in Office Administration. Successful completion of these courses will also provide the foundation for the Microsoft Office Specialist certification examination.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. A Certificate of Completion is granted after completion of required courses with a grade of 2.0 or better.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
CIS 105	Computer Orientation.....	1
OIS 100*	Keyboarding 1.....	2
OIS 195*	Time and Project Management.....	1
OIS 105*	Office Communication—Editing Skills.....	3
CIS 120*	Software Applications.....	3
		<b>10</b>
	<b>Winter Semester</b>	
OIS 165*	Microsoft Word for Windows.....	3
CIS 122*	Microsoft Outlook.....	2
Elective	Select from the list below.....	2–3
		<b>7–8</b>

**PROGRAM TOTAL 17–18 CREDITS****ELECTIVES**

BUS 204	Personal Finance.....	3
CIS 180*	Spreadsheet Applications—Current Software.....	3
HDS 110	Career Decision Making.....	2
OIS 185*	Business Presentation 1—Fundamental Concepts.....	3
OIS 255*	Office Procedures.....	2
OIS 265*	Advanced Microsoft Word for Windows.....	3

\* Courses are part of the Office Specialist Certificate and/or the Office Administration Associate Degree.

All courses may be applied toward the Associate of General Studies Degree.

**THEATRE****Theatre Program Associate Degree**

Schoolcraft program code # AA.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 to a four-year institution. This program includes performance and the technical aspects of theatre, including theory and practical experiences in theatre.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses and all College Requirements qualify for the Associate of Arts Degree.

Note: The Theatre Department has adopted a dinner-theatre format for production with two plays produced annually.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
ENG 101	English Composition 1.....	3
BIOL 101	General Biology.....	4
THEA 120	Theatre Activities 1.....	1
THEA 208	Acting 1.....	3
THEA 101*	Introduction to Theatre.....	3
CIS 105	Computer Orientation.....	1
		<b>15</b>

**Winter Semester**

ENG 102	English Composition 2.....	3
THEA 121	Theatre Activities 2.....	1
THEA 207	Stagecraft and Lighting.....	3
THEA 209	Acting 2.....	3
MATH 113	Intermediate Algebra for College Students.....	4
		<b>14</b>

**SECOND YEAR Fall Semester**

THEA 220	Theatre Activities 3.....	1
COMA 103	Fundamentals of Speech.....	3
HIST 153	Contemporary America—U.S. History.....	3
ENG 248	Introduction to Literature—Shakespeare.....	3
POLS 105	Survey of American Government.....	3
THEA 231*	History of Theatre 1.....	3
		<b>16</b>

**Winter Semester**

THEA 221	Theatre Activities 4.....	1
THEA 241*	Oral Interpretation of Literature.....	3
ENG 245	Introduction to Literature—Drama.....	3
PSYCH 201	General Psychology.....	4
THEA 232*	History of Theatre 2.....	3
THEA 204*	Stage Makeup.....	2
		<b>16</b>

**PROGRAM TOTAL 61 CREDITS**

\* These classes are offered on a rotational basis. Contact Liberal Arts office for current offerings.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

# WELDING TECHNOLOGY

## Welding—Joining Technology Associate Degree

Schoolcraft program code #AAS.00082

There is an ever increasing need for persons today that possess skills, both in welding and metallurgy. Materials of industry and new technology require highly skilled persons that understand material sciences, metallurgy, and the joining processes used to produce optimum quality fabrications. The quality conscience industry of today demands certified people that can perform tasks from the simplest, to more complex technical applications. The courses selected in this program will give the student the required skills needed to perform, both hands on and analytical tasks required by modern industrial technology.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete all college requirements qualify for the Associate in Applied Science Degree.

### FIRST YEAR

#### Fall Semester

ENG 100	Communication Skills .....	3
MET 102	Introduction to Materials Science.....	3
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
HUM 106	Introduction to Art and Music .....	1
		<b>13</b>

#### Winter Semester

ENG 106	Business English.....	3
Math	Select 1 .....	3-4
MATH 101	Business Mathematics	
MATH 111	Applications—Utility of Math	
WELD 119	Gas Tungsten Inert Arc Welding (G.T.A.W./T.I.G.)....	3
WELD 120	Advanced Processes—Stick Electrode and M.I.G. Welding.....	3
		<b>12-13</b>

#### Spring Session

WELD 205	Welder's Print Reading .....	2
Social Science	Select 1 .....	3
PSYCH 153	Human Relations (recommended)	
POLS 105	Survey of American Government	
SOC 201	Principles of Sociology	
		<b>5</b>

#### Summer Session

WELD 206	Welding Inspection and Qualification .....	2
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### SECOND YEAR

#### Fall Semester

MFG 102	Basic Machining Processes .....	3
MET 114	Engineering Materials .....	3
MET 152	Structure and Properties Laboratory.....	3
WELD 130	Advanced Processes—Gas Tungsten .....	3
		<b>12</b>

#### Winter Semester

WELD 118	Adhesive Joining Technology .....	4
WELD 262	Welding Metallurgy .....	3
Science*	Select any General Education Science course.....	3-5
MET 211	Physical Metallurgy Structures.....	3
		<b>13-15</b>

#### Spring Session

WELD 210-214**	Exam Preparation—Select from the list below .....	3
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#### Summer Session

WELD 223	Fabrication.....	4
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**PROGRAM TOTAL 64-67 CREDITS**

### ELECTIVE (OPTIONAL)

WELD 111	Project Mathematics .....	4
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\* Number of credits may vary depending on the General Education Science course selection.

### \*\* EXAM PREPARATION: (SELECT ONE)

WELD 210	Preparation for Welder Certification in Shielded Metallic Arc Welding (S.M.A.W.).....	3
WELD 211	Preparation for Welder Certification in Gas Metallic Arc Welding (G.M.A.W./M.I.G.) .....	3
WELD 212	Preparation for Welder Certification in G.T.A.W./T.I.G. ....	3
WELD 214	Preparation for Welder Certification in Pipe Welding.....	3

Exams will also be provided on an individual basis.

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.



**Welding—Fabrication One-Year Certificate**

Schoolcraft program code # 1YC.00127

The Welding-Fabrication Program prepares students for employment under classifications such as welders and/or industrial fabrications. 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.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

<b>FIRST YEAR</b>	<b>Fall Semester</b>	
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
		<b>9</b>
	<b>Winter Semester</b>	
WELD 111	Project Mathematics .....	4
WELD 120	Advanced Processes—Stick Electrode and M.I.G. Welding.....	3
WELD 130	Advanced Processes—Gas Tungsten .....	3
MET 102	Introduction to Materials Science.....	3
		<b>13</b>
	<b>Spring Session</b>	
WELD 205	Welder's Print Reading.....	2
WELD 210-214*	Exam Preparation .....	3
		<b>5</b>
	<b>Summer Session</b>	
WELD 206	Welding Inspection and Qualification .....	2
WELD 223	Fabrication.....	4
		<b>6</b>
		<b>PROGRAM TOTAL 33 CREDITS</b>

**\*EXAM PREPARATION: (SELECT ONE)**

WELD 210	Preparation for Welder Certification in Shielded Metallic Arc Welding (S.M.A.W.).....	3
WELD 211	Preparation for Welder Certification in Gas Metallic Arc Welding (G.M.A.W./M.I.G.) .....	3
WELD 212	Preparation for Welder Certification in G.T.A.W./T.I.G. ....	3
WELD 214	Preparation for Welder Certification in Pipe Welding...3	

Exams for above certificate will also be provided on an individual basis.





# Schoolcraft College



COURSES

# Course Formats

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 online courses, Open Entry/Open Exit courses or hybrid courses. There are classes offered at convenient community locations or on weekends to accommodate student schedules.

## Online Courses

McDowell Center Room 305  
734-462-4532  
dl@schoolcraft.edu  
www.schoolcraft.edu/dl

Students may earn associate degrees in many areas completely online.

Schoolcraft College Online brings a variety of courses to students in various disciplines. The convenience and accessibility of online courses make it easier than ever to learn more flexibly, perhaps while you earn and enhance your career prospects. Online course work takes place in a virtual environment, including frequent communication and interaction with the faculty and other students.

The keys to success in online courses are motivation, self-discipline, a working knowledge of computers and the Internet and effective time management.

Distance learning can be an effective solution for individuals who want to take college classes but, for various reasons, are better served by flexible online options due to life circumstances, learning preference, or other commitments. These classes expand learning opportunities while allowing students to balance educational demands with their work, travel or family. They allow study wherever and whenever a busy schedule permits.

Students who are admitted to the College can register for distance learning courses as they would for any credit course. Distance learning courses are a convenient way to earn regular college credit toward the goal of earning a degree, gaining a skill required for a job, or expanding knowledge. These courses tend to be highly interactive; they are not independent study courses.

Students are expected to keep up with weekly assignments; regular and active participation in online discussions is required. Some online classes require proctored exams. Textbooks are required for each course.

All Schoolcraft College online courses are offered through the Internet. For system hardware and software requirements, refer to [www.schoolcraft.edu/sysreq](http://www.schoolcraft.edu/sysreq).



## Open Entry/Open Exit Courses

McDowell Center Room 305  
734-462-4588  
oeoe@schoolcraft.edu  
www.schoolcraft.edu/oeoe

Open Entry/Open Exit courses provide an alternative to traditional classroom learning. OE/OE students have greater control over their learning schedules and can complete a course in several weeks, a month or a semester. Students attend no regular classes or lectures.

Students can complete these self-paced courses at home, in the College's computer labs, or in the OE/OE lab where instructors are available for help during posted hours. They may submit homework via e-mail, through Blackboard, or by using the designated OE/OE drop-off area. At least one on-campus assessment is required. Students may register for OE/OE classes before the semester starts, or up to the seventh week of the fall and winter semesters. Spring classes are offered in a seven-week format. All coursework must be completed by semester's end. All students registering for the OE/OE program must attend an orientation before beginning coursework. For more information, call 734-462-4588, send an e-mail to [oeoe@schoolcraft.edu](mailto:oeoe@schoolcraft.edu), or go to the College Web site at [www.schoolcraft.edu/oeoe](http://www.schoolcraft.edu/oeoe).

## 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 appropriate instructional administrator for more information. Students must obtain approval from an instructor and administrator to take an independent learning course.

## Hybrid Courses

734-462-4525  
hybrid@schoolcraft.edu  
www.schoolcraft.edu/hybrid

Hybrid classes combine in-class and online learning. Students meet on campus for the first class and for presentations, laboratory work and discussions. Reading assignments, research and some projects are completed online. Students get the flexibility of online classes with the personal interactions of classroom sessions.

On-campus meeting dates and times for hybrid courses are included in each semester's Credit Class Schedule or found on the Web at [www.schoolcraft.edu/hybrid](http://www.schoolcraft.edu/hybrid). For hardware and software requirements, refer to [www.schoolcraft.edu/sysreq](http://www.schoolcraft.edu/sysreq).

## Schoolcraft Scholars Honors Program

734-462-4400, ext. 5516  
fschuett@schoolcraft.edu  
www.schoolcraft.edu/scholars

Schoolcraft Scholars, the College honors program, links academic achievement with service to the community. Students accepted into the 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 an overall 3.5 grade-point average.

The first and final honors courses are taken with other honor students: Humanities 190, a social values colloquium, introduces students to community organizations; Sociology 290, a capstone course on social issues, supports the completion of 25-hour service projects. Students earn honors credit in four other courses of their choice by completing honors option projects with honors faculty.

Schoolcraft Scholars attend numerous field trips, lectures and workshops open to the College at large. The honors program accepts applications year-round. Among other requirements, applicants need a graduating high school grade-point average or 12-hour college grade-point average of 3.5.

## Global Endorsement

734-462-4400 ext. 5271  
international@schoolcraft.edu  
www.schoolcraft.edu/scii

Students who understand the global forces shaping their lives and the lives of people worldwide are better positioned for success in the 21st Century. At Schoolcraft, students have the opportunity to gain this international perspective by earning a Global Endorsement. This program, overseen by the College's International Institute, requires participating students to complete a minimum of 15 credit hours of classes designated as Internationalized and taken Fall 2006 or after. Such classes contain at least two weeks of global or multicultural content. Internationalized sections are available for a growing number of courses, including those required in various programs. The Global Endorsement is an attractive option for students pursuing programs where a global perspective is an asset.



# Course Descriptions

## KEY TO READING COURSE DESCRIPTIONS

### SAMPLE COURSE LISTING:

<b>Department</b>	<b>Course Name</b>	<b>Lecture Hours/Week</b>	<b>Lab Hours/Week</b>	<b>Credit Hours</b>
↓	↓	↓	↓	↓
<b>EMT 203</b>	<b>Internship Experience (6 - 5 - 3)</b>	<b>9.5 Cr. Hrs.</b>	<b>9.5 Cr. Hrs.</b>	<b>9.5 Cr. Hrs.</b>
	↓			
	<b>Prerequisite: EMT 202.</b>			
<b>Course required before taking this class</b>	This 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.			
<b>Course Description</b>	This course 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.			

Course offerings subject to change.  
See [www.schoolcraft.edu](http://www.schoolcraft.edu) for updates.

### Courses are numbered as follows:

1. Courses numbered from 001 to 099 are considered pre-college, may not be transferable, 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 have a prerequisite skill or lower level course necessary to complete before attempting more complex material. For maximum success, complete prerequisites before taking the actual course.
6. Some courses also list a corequisite course that is recommended to be taken in the same semester.

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## ACCOUNTING

Associate Dean: Bruce Sweet, MA

Instructors: Professor LaVonda Ramey, MBA, CPA

Associate Professor Michelle Randall, MBA, CPA  
Adjunct Faculty

### ACCT 103 Introduction to Accounting (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This is a beginning accounting course with emphasis on the accounting cycle for a sole proprietorship, journals, ledgers and basic financial statements.

Accounting for cash, payroll, taxes and plant assets are also covered. This course is intended for students who want some accounting instruction prior to the Principles of Accounting course and those not majoring in business or economics.

### ACCT 138 Income Tax Preparation (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This is an introductory course in Federal and Michigan individual income tax laws and return preparation. Special emphasis will be given to Federal Tax Form 1040 with accompanying Schedule A (itemized deductions). In addition, the course will include preparation of Michigan Tax Form MI-1040 and City of Detroit returns.

### ACCT 139 Michigan Taxes (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This is an introductory course in Michigan personal and business taxes. In addition, the individual income taxes of several Michigan cities will be covered. The course provides both non-accounting and accounting majors with knowledge of the Michigan tax structure. Special emphasis will be on regulations and tax requirements for income taxes, sales and use taxes, unemployment taxes, single business tax, and real and personal property taxes. Students will prepare tax returns while reviewing tax planning strategies.

### ACCT 201 Principles of Accounting 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course covers the 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 will also be covered.

### ACCT 202 Principles of Accounting 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* ACCT 201.

This course is a continuation of Accounting 201 expanding your exposure to accounting principles, financial statements, methods and applications. The course will focus on accounting for stockholder's equity, liabilities and investments. You will analyze and interpret financial statements and other accounting information used in making decisions. You will also explore managerial accounting and its applications in planning and controlling costs.

### ACCT 221 Intermediate Accounting 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* ACCT 202.

This course further explores accounting principles generally accepted in the United States, including the methods used to measure and report the financial transactions of corporations. The course focuses on the valuation of assets, such as cash and receivables, investments, inventory, and operational assets, but will also include preparation of financial statements, review of financial disclosures, and measurement of income and time value of money concepts.

### ACCT 222 Intermediate Accounting 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* ACCT 202 required. ACCT 260 recommended.

This course is a 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 will also be covered.

### ACCT 226 Cost Accounting (4-0) 4 Cr. Hrs.

*Prerequisite:* ACCT 202 and CIS 180. ACCT 260 recommended.

Concepts of cost accounting as a management tool for control and planning will be introduced. Actual and standard cost methods as applied to job and process cost systems; accounting for materials, labor, and manufacturing overhead; and direct costing method; and cost accounting projects will be covered.

### ACCT 238 Federal Tax Accounting (4-0) 4 Cr. Hrs.

*Prerequisite:* ACCT 201 recommended by accounting faculty.

Federal income tax laws with emphasis on the regulations that relate to individuals and small business including state and local tax implications will be addressed. Preparation of tax forms and introduction to tax research are also addressed in this course.

### ACCT 260 Computer Based Accounting (3-0) 3 Cr. Hrs.

*Prerequisite:* ACCT 201 and CIS 120.

The student will complete comprehensive accounting problems using commercial software 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.

### ACCT 261 Computerized Accounting (3-0) 3 Cr. Hrs.

*Prerequisite:* ACCT 201 and CIS 120.

The student will complete a comprehensive commercial accounting package. This package 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.

### ACCT 262 Payroll Accounting—Manual to Computerized (3-0) 3 Cr. Hrs.

*Prerequisite:* ACCT 201 and CIS 120.

The student will complete a manual and computerized payroll practice set. These practice sets will include computing and paying wages and salaries to employees. The various phases of the Social Security Taxes, Federal Income Taxes, State Income Taxes and Unemployment Compensation Insurance and the laws relating to them will be explained. The course emphasizes analysis and journalization of payroll transactions and filing of appropriate payroll reports. Outside lab time is required.

### ACCT 263 Computerized Accounting for Small Business (3-0) 3 Cr. Hrs.

*Prerequisite:* ACCT 103 or ACCT 201 and CIS 120.

The student will complete a comprehensive computerized software package for a small business company. This package shall include setting up a company, entering transactions which include accounts receivables, sales accounts payable, purchases, cash receipts and cash disbursements. The student will prepare bank reconciliations and financial statements. The student will generate payroll entries, print payroll tax returns, and payroll reports. Outside lab time is required.

## ALLIED HEALTH EDUCATION

Assistant Dean: Richard Weinkauff, MS

Instructors: Adjunct Faculty

- AHE 101 Introduction to Healthcare (1-0) 1 Cr. Hr.**  
*Prerequisite:* None. AHE 101 must be taken prior to completing the first 12 credit hours of Nursing Programs.  
 This course provides a comprehensive review of the healthcare industry. Trends and changes related to healthcare facilities, such as acute care hospitals, specialty hospitals, nursing homes, health maintenance organizations, hospice, and home healthcare will be covered. The course will also deal with the impact and use of computers in the delivery and documentation of healthcare and the role of the medical professional in response to the healthcare delivery system.

## ANTHROPOLOGY

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Associate Professor Josselyn Moore, MA  
 Adjunct Faculty

- ANTH 112 Introduction to Anthropology (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course provides an introduction to the origin and diversity of humans, which includes the evolution of humans and their cultures, contemporary cultural diversity, linguistics and applied anthropology. Biological and cultural adaptations are emphasized.
- ANTH 117 Introduction to Archaeology (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course is a general survey of Archaeology and includes an overview of the history of the field and the basic theories and methods employed in the study of archaeological cultures. Cultures from around the world are used as examples.
- ANTH 201 Cultural Anthropology (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 A comparison of the ways of life for societies worldwide using anthropological theory and methods is provided in this course. 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. Course focuses on non-Western societies.
- ANTH 211 Myth, Magic and World Religions (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ANTH 112 or ANTH 201 recommended.  
 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.
- ANTH 214 Native American Traditions (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ANTH 112 or ANTH 201 recommended but not required.  
 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.

## ARABIC

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Adjunct Faculty

- ARB 101 Elementary Arabic 1 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* None.  
 This course is intended for students who have no previous education in Arabic. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Arabic). An appreciation of the cultures of the Middle East will be an integral part of the course.
- ARB 102 Elementary Arabic 2 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* ARB 101; or one year of high school Arabic with a grade of 2.0 or better; or consent of department.  
 This course is a continuation of ARB 101 and continues to review the basic Arabic grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Arabic). An appreciation of the cultures of the Middle East will be an integral part of the course.
- ARB 201 Intermediate Arabic 1 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* Two years of high school Arabic; or a grade of 2.0 or better in ARB 102; or consent of instructor.  
 This course is a continuation of ARB 102 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Arabic). An appreciation of the cultures of the Middle East will be an integral part of the course.
- ARB 202 Intermediate Arabic 2 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* Three years of high school Arabic; or a grade of 2.0 or better in ARB 201; or consent of instructor.  
 This course is a continuation of ARB 202 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Arabic). An appreciation of the cultures of the Middle East will be an integral part of the course.



## ART AND DESIGN

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Associate Professor James Nissen, DMA  
Associate Professor Sarah Olson, MA  
Assistant Professor Holly Stevens, MA  
Adjunct Faculty

### ART 105 Basic Drawing (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This studio course provides training in recording observed spatial and value relationships. Basic approaches to drawing and media are introduced. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.

### ART 106 Basic Design 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides an introduction to the elements and principles of design. Students are assigned projects in various media which reinforce the effective application of design principles. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.

### ART 113 Art Education (3-0) 3 Cr. Hrs.

*Prerequisite:* PSYCH 201 recommended.

This course is a study of child growth and development through creativity. Students will study techniques and materials appropriate for use at various elementary grade levels. Emphasis will be placed 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.

### ART 115 Art History 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course examines the development of western art from prehistoric times through the Middle Ages with emphasis on various societies, artists, and art forms including painting, sculpture and architecture.

### ART 116 Art History 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This art history course examines the development of western art from the early Renaissance through contemporary art with emphasis on various societies, artists, and art forms including painting, sculpture and architecture.

### ART 118 Ceramics 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

Fundamentals of ceramics; study of materials and basic techniques in shaping, decorating and firing will be covered in this course. 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.

### ART 119 Ceramics 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 118.

This course is a continuation of ART 118. Emphasis on good ceramic form; work with various types of ceramic materials; advanced techniques in shaping, decorating, and firing will be covered. 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.

### ART 125 Life Drawing 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 105 or consent of instructor.

The major emphasis of this course is direct observation and expression of the human form using traditional media. Design and value relationships are studied, as are the superficial muscular and skeletal systems which affect surface form. Sessions on portraiture using an anatomical approach are included. Basic drawing concepts are reinforced through exploration of classic technique. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.

### ART 126 Basic Design 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 106.

This course is a continuation of ART 106 with emphasis on further development of concepts and refinement of skills. In addition to strengthening their own visual communication skills, students also learn to evaluate work of other artists and designers in terms of design cohesiveness. Students are required to spend three hours per week (in addition to regular class time) in a time-flexible studio lab provided by the college.

### ART 201 Art Appreciation (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides an introduction to the vast subject of visual art, including the effect of culture and history on the lives, aesthetics and creations of artists, and an exploration of technique and media employed by artists throughout time.

### ART 205 Life Drawing 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 105 and ART 125 or consent of instructor.

This course is a continuation of ART 125 with emphasis on further development of concepts and refinement of skills. Students will refine their aesthetic, expressive approach to the human figure while focusing on limited media. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.

### ART 211 Watercolor Painting 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 105 recommended or consent of instructor.

Introduction to color composition as it relates to still life and landscape painting will be covered in this course. Students will practice the use of dry-brush and wet-wash techniques. Project completion and exhibition of works will take place at the 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 open lab.

### ART 212 Watercolor Painting 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* ART 211.

This course is a continuation of ART 211 providing for further investigation of water-based media, techniques, and processes. Studio experiences with emphasis on individual experimentation and visual imagery will be part of this course. 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.

### ART 216 Women in Art (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

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 will be explored in this course.

- ART 218 Ceramics 3 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ART 119.  
An intermediate investigation of the art-making process using techniques specific to ceramics will be covered in this course. 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.
- ART 219 Ceramics 4 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ART 218.  
An intermediate investigation of the art-making process using techniques specific to ceramics will be covered in this course. 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.
- ART 236 Painting 1 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ART 105 recommended.  
This course introduces the student to fundamental painting techniques and processes through abstract, conceptual and representational imagery. Sessions on portraiture are included. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.
- ART 239 Painting 2 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ART 236.  
This course is a continuation of Painting 1, providing for further investigation of the painting media and processes. Students will work toward developing a focused approach both thematically and technically. Individual experimentation will be emphasized. In addition to regular class time, students are required to spend three hours per week in a time-flexible studio lab provided by the college.
- ART 243 Sculpture 1 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course focuses on the 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.
- ART 244 Sculpture 2 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ART 243.  
This course is a continuation of ART 243 providing for 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.
- ART 248 Portfolio Preparation (1-0) 1 Cr. Hr.**  
*Prerequisite:* ART 105, ART 106 and one of the following: ART 118, ART 125, ART 211, ART 236 or ART 243; or consent of instructor.  
This class enables the student to prepare a portfolio tailored to the specific entrance requirements of art schools and Bachelor of Fine Art Programs offered at 4-year colleges or universities. Strengths and weaknesses of existing student work will be addressed along with suggestions for possible further study to improve the content of the portfolio.

## AVIATION MANAGEMENT

Associate Dean: Robert F. Pearce, MPA

Instructors: Adjunct Faculty

- AVM 101 Perspectives in Aviation (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course provides the student with an overview of the development of aviation, the fundamentals of flight, the basic elements of airport infrastructure, airspace and navigation, aircraft operators, types and manufacturers. Students will learn about the evolution of domestic and international regulatory structure and specifically about the dimensions of U.S. federal regulations designed to ensure aviation safety. An overview of various aviation businesses with focus on career opportunities will also be provided.
- AVM 102 Aviation History (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course is structured to give the student a well-rounded review of the significant events, people, places and technologies in aviation as it progressed through history to the present day. The course will begin with a brief review of very early flight and then focus primarily on aviation advancements through the 20th century. Students will examine how the airline environment and general aviation are expected to change in the near future.
- AVM 103 Aviation Meteorology (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course provides an in-depth study of the basic concepts and processes of atmospheric phenomena and their relation to aeronautical conditions. Included is a systematic analysis and interpretation of the following: thermal patterns, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, local winds, tropical weather, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will acquire a working knowledge of all pertinent national weather reports and forecasts available to pilots and aviation operations personnel. The interpretation and use of meteorological information by pilots will be related for all conditions studied.
- AVM 104 Aviation Legislation (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course provides an opportunity to study the evolution of federal civil aviation regulations in the United States and will touch briefly on the international perspective. Students will learn the basic Federal Aviation Administration (FAA) requirements, regulations and certifications associated with the dimensions of aviation from the perspective of aircraft design, manufacturing, maintenance, the pilot, the aircraft owner, and the various types of flight operations (airlines, freight operators, executive flight, private pilot flight), and airports. Students will obtain an overview of the detailed requirements and an understanding of how the Federal Aviation Administration (FAA) is organized and operates to interface all aspects of aviation. The course will also cover the requirements of Homeland Security affecting aviation.

**AVM 201 Aviation Law (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course covers legal principles governing the aviation industry. Students will gain an understanding of historical precedents, regulatory agencies and statutes, standards, contracts for aircraft leasing and purchase, liability and insurance, Federal Aviation Administration (FAA) enforcement and airline labor laws. Students will become familiar with sources of power available to federal, state and local governments to deal with the problems created by airport development and operation.

**AVM 202 Aviation Maintenance Management (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course focuses on the organization, processes and operation of an aviation maintenance business. Students will learn about the types of maintenance businesses including airline maintenance, Maintenance Repair Overhaul (MRO) businesses, Original Equipment Manufacturer (OEM) maintenance, Fixed Base Operation (FBO), and airframe manufacturer maintenance. The course will include an overview of aircraft systems and basic maintenance requirements. Federal Aviation Administration (FAA) regulations and processes to ensure safety, quality and reliability associated with maintenance and repair will be covered. The perspective of the aircraft owner will also be discussed.

**AVM 203 Airport Planning and Management (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course is an introduction to airport facilities, airport operations, the business processes involved in managing an airport, and the development and maintenance of an airport master plan. The main focus will be on the typical large general aviation airport, but relevant differences will be explored for all airport sizes. The planning process will focus on the Federal Aviation Administration (FAA) advisory circular for airport planning. The course will also explore the relationship between the airport and the community, legislation affecting airports and planning, airport financing, and development/management of services. Emphasis will be on management functions, organizational aspects, administration, security and public safety.

**AVM 204 Corporate Aviation Management (3-0) 3 Cr. Hrs.***Prerequisite: None.*

The course provides an overview of the management and operation of an executive aviation business or corporate flight department for on-demand air travel. Students will be introduced to topics that include the value of using on-demand air travel, business organization, government regulation, aircraft and equipment evaluation, maintenance, flight operations, administration, and fiscal considerations.

**BIOLOGY**

Assistant Dean: Richard Weinkauff, MS

Instructors: Professor Mohammed Abbas, PhD

Professor Thomas O'Connor, PhD

Professor Michael Orick, MS

Professor Carolyn Steffen, PhD

Associate Professor Nickolas Butkevich, MS

Associate Professor Caroline McNutt, MS

Associate Professor Bonnita Taylor, MS

Instructor Stacey Gray, MS

Adjunct Faculty

**BIOL 050 Basic Biology (4-0) 4 Cr. Hrs.***Prerequisite: None.*

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.

**BIOL 101 General Biology (4-3) 4 Cr. Hrs.***Prerequisite: BIOL 050 or successful completion (2.0+) of introductory high school biology within the last five years.*

This course is a one-semester introductory course. 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. Science majors seeking to fulfill a two-semester introductory biology sequence should enroll in BIOL 120 and BIOL 130.

**BIOL 103 Health Education (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course provides a study of current health problems related to selected human organ systems, diet, population, environment, fitness, cancer, disease, sexuality and substance abuse.

**BIOL 104 Conservation and Natural Resources (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course introduces the basic principles of conservation biology as they relate to our critical need as global citizens to preserve and protect biodiversity and natural resources. In addition to studying the causes of extinction, habitat loss and restoration, management of populations, communities and ecosystems, students also explore philosophical issues in conservation values and ethics. This interdisciplinary course integrates contributions from the fields of law, political science, economics, history, and sociology into the fundamental biological principles of conservation. Practical applications, personal stewardship, and globally sustainable solutions are emphasized.

**BIOL 105 Basic Human Anatomy and Physiology (4-0) 4 Cr. Hrs.***Prerequisite: BIOL 050 or introductory high school biology within the last five years.*

This lecture course introduces fundamental terminology and concepts that will enable students to acquire a basic understanding of the structure and function of the human body. A survey of the anatomy and physiology of the major human organ systems and their association with health and disease is also emphasized. BIOL 105 is intended for students in allied health programs that do not require a lab course in human anatomy and physiology.

**BIOL 115 Nutrition (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course provides a study of the nature and role of nutrition with emphasis on the 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.

**BIOL 120 Principles of Biology 1 (4-3) 5 Cr. Hrs.**

*Prerequisite:* CHEM 111 recommended. Successful completion (2.0+) of high school introductory Biology and Chemistry within last five years.

This is a one-semester introductory course that 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. Science majors seeking to fulfill a two-semester introductory biology sequence should enroll in BIOL 120 and BIOL 130.

**BIOL 130 Principles of Biology 2 (4-3) 5 Cr. Hrs.**

*Prerequisite:* BIOL 120 with 2.0+ grade point or consent of department.

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.

**BIOL 211 Zoology (3-3) 4 Cr. Hrs.**

*Prerequisite:* BIOL 101.

Anatomy, physiology, genetics, development, ecology and classification of animals will be explored in this course.

**BIOL 212 Botany (3-3) 4 Cr. Hrs.**

*Prerequisite:* BIOL 101.

Anatomy, physiology, genetics, development, ecology and classification of plants will be explored in this course.

**BIOL 236 Human Anatomy and Physiology (4-3) 5 Cr. Hrs.**

*Prerequisite:* BIOL 101.

This one-semester course covers the gross and microscopic anatomy and physiology of the integumentary, skeletal, muscular, nervous, special senses, endocrine, circulatory, lymphatic, immune, respiratory, digestive, urinary and reproductive systems of the human body. Weekly instruction includes four hours of lecture and three hours of laboratory. The laboratory portion includes the use of prepared histological slides, anatomical models, bones, dissection of preserved specimens, blood typing, spirometry, urinalysis and blood pressure measurement. Students will also have an opportunity to examine a dissected cadaver.

**BIOL 237 Principles of Human Anatomy and Physiology 1 (3-2) 4 Cr. Hrs.**

*Prerequisite:* BIOL 101.

This is the first course in a two semester sequence in the comprehensive study of the structure and function of the human body. Emphasis will be placed upon the anatomy and physiology of the integumentary, skeletal, muscular, nervous and endocrine systems. Labs reinforce units of study and include the use of prepared histological slides, anatomical models, bones, dissection of preserved specimens, and computer simulations. In addition, students will have the opportunity to examine a dissected cadaver to enhance anatomical studies. BIOL 237 and BIOL 238 are designed for the student who plans to pursue a career in the health or biomedical field. Students attend three hours of lecture and two hours of lab each week.

**BIOL 238 Principles of Human Anatomy and Physiology 2 (3-2) 4 Cr. Hrs.**

*Prerequisite:* BIOL 237.

The second course in a two semester sequence (continuation of BIOL 237) in the comprehensive study of the structure and function of the human body. Emphasis will be placed upon the anatomy and physiology of the circulatory, lymphatic, respiratory, digestive, urinary and reproductive systems. Labs reinforce units of study and include the use of prepared histological slides, anatomical models, dissection of preserved specimens, blood pressure measurement, spirometry, urinalysis, and computer simulations. In addition, students will have the opportunity to examine a dissected cadaver to enhance anatomical studies. Students attend three hours of lecture and two hours of lab each week.

**BIOL 240 Anatomy and Physiology Review (2-0) 2 Cr. Hrs.**

*Prerequisite:* BIOL 237 and BIOL 238 or BIOL 236 or equivalent or BIOL 105; or consent of instructor.

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.

**BIOL 243 Microbiology (3-4) 4 Cr. Hrs.**

*Prerequisite:* BIOL 101.

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.



## BIOMEDICAL ENGINEERING TECHNOLOGY

Associate Dean: Bruce Sweet, MA

Program Coordinator: Professor William Schlick, CBET, BEE, MCSE

Internship Coordinator: Chris Peters, CBET

Instructors: Adjunct Faculty

### **BMET 116 Biomedical Instrumentation Terminology and Safety 1 (2-1) 3 Cr. Hrs.**

*Prerequisite:* ELECT 127 or equivalent with minimum grade of 2.0.

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.

### **BMET 204 Biomedical Instrumentation Terminology and Safety 2 (2-2) 4 Cr. Hrs.**

*Prerequisite:* ELECT 129 or equivalent with grade of 2.0.

This course is intended to provide students with knowledge of radiology, transducers, equipment management, intensive care equipment management, intensive care equipment and other fundamental principals related to Biomedical Engineering Technology.

### **BMET 254 Biomedical Equipment Internship 1 (0-24/40) 3 Cr. Hrs.**

*Prerequisite:* BMET 116, ELECT 129, approval of the BMET Coordinator and a 2.0 GPA.

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 to 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. A student on a BMET internship is considered a full time student with Schoolcraft College, with all rights and privileges of a full time student. (Usually 15 weeks)

### **BMET 255 Biomedical Equipment Internship 2 (0-24/40) 3 Cr. Hrs.**

*Prerequisite:* BMET 254, approval of the BMET Coordinator and a 2.0 GPA.

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)



## BUSINESS

Associate Dean: Bruce Sweet, MA

Instructors: Instructor Susan Ontko, MBA

Instructor Gerard J. Mellnick, MBA, CPA

Adjunct Faculty

### **BUS 101 Introduction to Business (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course introduces principles, problems and practices of business in areas of organization, management, information related management and e-business, labor, production, human relations, marketing, finance, insurance, regulation and government.

### **BUS 103 Organizing a Small Business (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course is designed to explore the advantages and disadvantages of entrepreneurship for those who may be considering starting, operating, or seeking employment in a small business. The course will emphasize the organization of the small business including the various forms of business ownership, business planning, starting the business, location, cash flow, and marketing concepts.

### **BUS 104 Operating a Small Business (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course is designed to explore the many considerations involved in owning and operating a small business. The course will emphasize the operation of a small business including insurance, employee relations, inventory control, purchasing, E-commerce, succession planning, financing, international business, legal, and ethical issues.

### **BUS 120 Principles of Salesmanship (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

Both the novice and the professional salesperson can benefit from this course. The personal selling process will be studied in detail, emphasizing topics ranging from prospecting and qualifying to closing the sale and after sale follow-up. Territory management, selling to organizational buyers and the techniques of ethical salesmanship will also be explored. Students will gain hands-on experience with the selling process through case studies, role playing exercises, and by creating a sales presentation for classroom demonstration.

### **BUS 122 Advertising (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course focuses on the information and skills required to create effective advertising. The student will learn to recognize effective advertising and gain an appreciation for the challenges advertisers face in trying to reach target audiences. The course also concentrates on market research, media strategy, integrated marketing communication, and the impact of advertising on consumer behavior.

### **BUS 161 Retail Principles and Practices (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course introduces basic elements of retail organization and operation. Problem situations related to retailing are identified along with specific applications of retail procedures.

### **BUS 162 Retail Merchandising (3-0) 3 Cr. Hrs.**

*Prerequisite:* MATH 101.

This course focuses on merchandising functions, fundamental activities involved in retailing, buying procedures, inventory control, and pricing.

**BUS 201 Business Statistics (3-0) 3 Cr. Hrs.***Prerequisite:* MATH 113.

Students will analyze data and apply statistical applications to solve practical research problems. Students will examine data sets, apply appropriate statistical tests, summarize results and draw conclusions from the data. Computer software is used to perform statistical calculations and generate charts and graphs.

**BUS 202 Business Ethics (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This course provides an overview of business ethics including its importance and its impact on stakeholders and society. The course will explore emerging ethical issues, the institutionalization of business ethics, the decision-making process and implementing business ethics in a global economy.

**BUS 204 Personal Finance (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This course is a practical study of problems and solutions facing the consumer in today's society. The major areas that are covered in this course include personal budgeting, bank and financial institution comparison, strategies in the use and application of credit, insurance alternatives, housing alternatives, large item purchasing (such as automobiles) and occupational choices.

**BUS 205 Personal Investing (3-0) 3 Cr. Hrs.***Prerequisite:* None.

A practical study of issues and solutions facing the investor in today's business environment. Major areas will be covered include the investment setting, participating in the stock, bond, futures, options, and real estate markets, industry analysis, and company evaluation. Also, the student will learn how to analyze and select these investment alternatives for individual portfolios.

**BUS 206 Foundation of Business Information Technology (3-0) 3 Cr. Hrs.***Prerequisite:* CIS 120.

This course provides a review of current Business Information Technologies, examines the role and functions of these technologies, and offers an opportunity to explore current and future issues related to technology in business operations. Major areas addressed include: security, researching and selecting technologies, training issues and incorporating technology into an overall business plan.

**BUS 207 Business Law 1 (3-0) 3 Cr. Hrs.***Prerequisite:* None.

Principles of law are introduced as applied to the legal environment of business, contracts, sales and consumer rights, bankruptcy and secured transactions—debtor/creditor rights.

**BUS 208 Business Law 2 (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 207 recommended.

This course is a continuation of BUS 207 with emphasis on negotiable instruments, real and personal property, agency, partnerships, corporations, employment, and wills and estates.

**BUS 215 Business on the Web (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 101 or equivalent.

This course introduces the student to the key business and technology elements of electronic commerce. Both the theory and practice of conducting business over the Internet and World Wide Web are presented. The major topics include: planning and building a Web presence, marketing on the Web, business-to-business strategies, online auctions, legal/ethical/tax issues, Web server hardware/software, security, payment systems, and technology infrastructure.

**BUS 217 Business Management (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 101 or consent of department.

This course centers on the basic functions of the management process which are decision making, organizing, staffing, planning, controlling, communicating, and directing.

**BUS 220 Supervision (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This is a course geared to better understanding the supervisor as a particularly critical position within an organization. It centers on the development of skills, attitudes and knowledge essential to job performance. Today's supervisor must be an effective communicator who possesses strong skills in problem solving, time management, multi-tasking and human relations. The course concentrates on leadership, motivation, communication, and other related topics.

**BUS 221 Statistical Inference for Management Decisions (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 201.

The course is an in-depth study of Probability and Statistics. The course concentrates on decisions based on statistical data and is a logical subsequent course to BUS 201 Business Statistics.

**BUS 226 Principles of Marketing (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 101 or consent of department.

This course is designed to present 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.

**BUS 230 Human Resource Management (3-0) 3 Cr. Hrs.***Prerequisite:* BUS 101 or consent of department.

This course emphasizes the management of procurement, development, compensation, integration, maintenance, and separation of human resources to accomplish individual, organizational, and social objectives.

**BUS 240 International Business (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This course focuses on the latest theories and concepts in international business while emphasizing the leading role culture plays in global commerce. The issues and challenges confronting international companies are explored along with the various strategies companies may pursue.



## CHEMISTRY

Assistant Dean: Richard Weinkauff, MS

Instructors: Associate Professor Cheryl Snyder, MS  
Associate Professor Michael Waldyke, MS  
Assistant Professor Paul Dickson, PhD  
Adjunct Faculty

### CHEM 051 Basic Chemistry (4-2) 4 Cr. Hrs.

*Prerequisite:* MATH 053 or equivalent.

This is an elementary course in chemistry for students who have not had high school chemistry or who wish to review basic chemical concepts. This 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.

### CHEM 100 Introduction to the Chemistry of Food for Culinary Arts (3-2) 4 Cr. Hrs.

*Prerequisite:* None.

This course is designed to familiarize the culinary arts student with a basic understanding of scientific principles as they apply to foods and culinary processes. The course will include a basic introduction to various aspects of chemistry. Classes of foodstuffs will be examined on a molecular level to ascertain an understanding of the interactions that occur in culinary applications. The laboratory portion of the course will emphasize the relationships between chemical principles/techniques and food preparation.

### CHEM 111 General Chemistry 1 (4-3) 4 Cr. Hrs.

*Prerequisite:* CHEM 051 or equivalent with grade of 2.0 and MATH 113 or equivalent. Math may be concurrent.

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.

### CHEM 117 General Chemistry and Qualitative Analysis 2 (4-4) 5 Cr. Hrs.

*Prerequisite:* CHEM 111 with a grade of 2.0 or better or consent of department.

This course is the second course in a traditional one-year general college chemistry program and 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.

### CHEM 120 Organic and Biochemistry (3-3) 4 Cr. Hrs.

*Prerequisite:* CHEM 111.

This course is an introduction to both organic chemistry and biochemistry. Major topics covered include structures, functions, and reactions of organic and biological compounds; the chemistry of metabolic processes; enzymatic processes; and related topics. The laboratory portion of the course includes exercises in organic and biochemistry designed to reinforce lecture topics.

### CHEM 213 Organic Chemistry 1 (4-4) 5 Cr. Hrs.

*Prerequisite:* CHEM 117 with a grade of 2.0 or better or consent of department.

This is an 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.

### CHEM 214 Organic Chemistry 2 (4-4) 5 Cr. Hrs.

*Prerequisite:* CHEM 213 with a grade of 2.0 or better or consent of instructor.

This course is a continuation of CHEM 213 with emphasis on mechanisms of organic reactions and interpretation of spectra. Lab work will emphasize preparation of organic compounds through multi-step synthesis.



## CHILD AND FAMILY SERVICES

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Associate Professor Diane Flynn-Hahn, MA  
Associate Professor Elizabeth Grace, MEd  
Adjunct Faculty

### CCD 100 Introduction to Child Welfare Services (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### CCD 101 Preschool Child Care (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

*Corequisite:* CCD 150 if not previously taken.

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 handling techniques. Observational skills will be sharpened, with concentration on signals alerting students to the children's levels of functioning.

### CCD 102 Foundations of Early Childhood Education (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

Students will be provided a general overview of Early Childhood Education. This review includes an introduction to early childhood education, theories of child development, information on key organizations, relevant laws and regulations, discussion on opportunities within this field, the NAEYC code of ethical conduct, core competencies for the field and developmentally appropriate practices. Students will spend time observing a variety of early childhood programs.

### CCD 105 Introduction to Developmental Disabilities (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

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.

### CCD 113 Special Educational Programs and Supported Living (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

Students will 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. In addition, the course will cover current laws and regulations regarding licensing, equipping and maintaining the physical plant, staffing, food services, health and social services, budgeting and program development.

### CCD 115 School-Age Child Care (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

*Corequisite:* CCD 150 if not previously taken.

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.

### CCD 116 Child Development (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### CCD 118 Infant and Toddler Care (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

*Corequisite:* CCD 150 if not previously taken.

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.

### CCD 121 The Adolescent (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

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.

### CCD 126 Creative Activities (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### CCD 130 Learning Disabilities (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 216 or consent of department.

This course is designed to acquaint the student with the perceptual and learning issues of learning disabled children and special education programs in the public school which provide specialized learning situations for them. The diagnosis of disorders of visual and auditory perception, language, motor coordination, cognition, and attention deficit related to the learning processes are discussed, as well as specific recommendations for remediation and implications for school planning.

### CCD 140 Emotional Impairment (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 216 or consent of department.

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.

### CCD 150 Child Care Practicum 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* CCD 116 or consent of department.

Students will have supervised experience working directly with children and youth in settings such as child development centers and group homes. They will have the opportunity to integrate classroom material and personal life experiences with on-the-job experience and evaluate the experiences of children in light of the concepts they have learned. Emphasis will be placed on observing and reporting activities of the children.

- CCD 155 CDA Assessment Preparation (1-0) 1 Cr. Hr.**  
*Prerequisite:* CCD 101 or CCD 118, CCD 102, CCD 116, CCD 150, and CCD 221.  
 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.
- CCD 200 Child Care Practicum 2 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CCD 101 and CCD 150 for Child Care and Development students. CCD 150 and CCD 215 for Child Care Special Needs and Paraprofessional students.  
 This course provides continued supervised experience working directly with children and youth in child development settings. Students will have increased responsibility planning and implementing activities for children. Emphasis will be placed on working as a contributing member of teaching team.
- CCD 211 Children and Youth in Groups (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CCD 150 if not previously taken.  
 This course is designed to introduce students to the principles of group functioning and techniques of helping children become accepted members of peer groups. Productive membership of child care workers in professional groups will also be covered.
- CCD 214 Operation and Maintenance of a Child Care Facility (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This 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.
- CCD 215 Methods and Curricula for Persons With Developmental Disabilities (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 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 the developmentally disabled is included.
- CCD 216 The Child With Special Needs (2-2) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course is designed to introduce students to children, youth and adults who have special needs. Included are individuals who are cognitively impaired, emotionally impaired, visual and/or hearing impaired, learning disabled, and those who experience orthopedic or other health disabilities/handicaps.
- CCD 221 Early Literacy and Numerical Thinking (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course explores literacy and numerical thinking in early childhood. An emphasis will be placed on constructivist and sociolinguistic views of learning. Experiential exercises and reading will provide students with opportunities to plan developmentally appropriate learning activities, to record observations of children, and to generate developmental analyses that support literacy and numerical thinking development.

## CHINESE

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Adjunct Faculty

### CHIN 101 Elementary Chinese 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course is intended for students who have no previous education in Chinese. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Chinese). An appreciation of Chinese culture will be an integral part of the course.

### CHIN 102 Elementary Chinese 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* CHIN 101 with a grade of 2.0 or better or one year of high school Chinese or consent of instructor.

This course is a continuation of CHIN 101 and continues to review the basic grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Chinese). An appreciation of Chinese culture will be an integral part of the course.



## COLLEGIATE SKILLS

Associate Dean: Deborah B. Daiek, PhD

Instructors: Adjunct Faculty

### COLLS 050 Learning Power (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course focuses on developing vocabulary and comprehension skills in group and lab settings. Students will explore and develop reading strategies to improve efficiency.

### COLLS 053 Critical Thinking Applications (4-0) 4 Cr. Hrs.

*Prerequisite:* COLLS 050 or appropriate reading placement score.

This course is designed to prepare students 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.

### COLLS 055 College Notetaking (1-0) 1 Cr. Hr.

*Prerequisite:* None.

*Corequisite:* Recommended enrollment in another class requiring notetaking.

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.

### COLLS 101 College Success (3-0) 3 Cr. Hrs.

*Prerequisite:* COLLS 053 or equivalent skill level.

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 covered in the 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.

### COLLS 105 Learning Skills 1 (1-0) 1 Cr. Hr.

*Prerequisite:* Consent of department.

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.

### COLLS 110 Learning Skills LD (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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.

### COLLS 111 Electronic Portfolio (1-0) 1 Cr. Hr.

*Prerequisite:* None.

This course introduces the Schoolcraft College Electronic Portfolio. Students will engage the college learning experience by 1) growing an awareness of the college's expectations that they will acquire the attitudes, skills, knowledge and ability characteristic of generally educated persons, 2) understanding the changing nature of the college learning focus from acquisition of courses and credits to providing demonstrable evidence of their learning outcomes, and 3) starting the process of creating their personal electronic portfolios as the primary vehicle for showcasing their demonstrable evidence. Students will leave the course with some experience in the college learning environment, knowing the kind of expectations they will meet in their courses and programs, and the beginnings of their own Schoolcraft College Electronic Portfolio on electronic media. The portfolio becomes an ongoing project during their studies at the college.

### COLLS 130 Applied Learning Theory for Nursing Majors (3-0) 3 Cr. Hrs.

*Prerequisite:* COLLS 053 or college level reading placement score and BIOL 050.

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 in the course are reading speed/comprehension, reading study system, lecture note taking, time/goal management, test preparing/test taking, and communications skills.

### COLLS 211 Electronic Portfolio—Exit Course (1-0) 1 Cr. Hr.

*Prerequisite:* COLLS 111.

This course concludes the process of building the Schoolcraft College Electronic Portfolio begun in COLLS 111. Students will review their college learning experience as well as collect, organize, and reflect upon evidence that they have developed attitudes, skills, knowledge, and abilities associated with a generally educated person during that experience. Students will create personal program-level portfolios following the college's specified guidelines that demonstrate their academic achievements and showcase what they have to offer as Schoolcraft College graduates. The college may select a sample of the portfolios produced for assessment of institutional or program outcomes.



## COMMUNICATION ARTS

Associate Dean: Cheryl D. Hawkins, MS  
Instructors: Professor JuJuan C. Taylor, PhD  
Adjunct Faculty

### COMA 103 Fundamentals of Speech (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course develops essential skills through directed practice in a variety of speech situations and furnishes basic knowledge necessary for intelligent speech improvement; stress is on speaker's ideas, attitudes, and audience adjustment.

### COMA 200 Interpersonal Communications (3-0) 3 Cr. Hrs.

*Prerequisite:* COMA 103 or consent of instructor.

This course provides 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.

### COMA 201 Discussion (3-0) 3 Cr. Hrs.

*Prerequisite:* COMA 103 or equivalent.

This course conveys a better understanding of human affairs. The student will review attitudes and skills for effective participating in discussion; including cooperative thinking, exchange of ideas, and problem solving.

### COMA 205 Argumentation and Persuasion (3-0) 3 Cr. Hrs.

*Prerequisite:* COMA 103.

This course is a journey into the theories and practices of argumentation and persuasion from the classical to the contemporary period. Understanding of structure and the use of logic and evidence when presenting in a persuasive situation will be explored.

### COMA 210 Communication for Leaders (3-0) 3 Cr. Hrs.

*Prerequisite:* COMA 103.

This course is an exploratory examination of the leadership role within today's professional arena. The course is designed as an overview to develop communication awareness and effectiveness in teams of leaders within the community, corporate interviews, small group discussions and problem-solving in staff meetings and presentations as well as an examination of communication barriers.

### COMA 230 Introduction to Mass Communication (3-0) 3 Cr. Hrs.

*Prerequisite:* COMA 103.

Understanding media in today's world is more than a scholarly exercise; it is a necessary survival skill in a world that has been utterly changed by mass communication. All students, whether they will be practitioners, critics, or consumers, have to be able to analyze the ways in which mass media is being used to change the world. This course provides the tools needed to accomplish this analysis.

## COMPUTER AIDED DESIGN

Associate Dean: Bruce Sweet, MA  
Instructors: Professor Catherine Ferman, MS, PE  
Associate Professor Lisa Zaccone, MS, PE  
Adjunct Faculty

### CAD 101 Introduction to Computer Aided Drafting (2-2) 3 Cr. Hrs.

*Prerequisite:* Drafting experience and consent of department.

This course is designed for the experienced drafter who wants to obtain some CAD skills. Topics to be covered will 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.

### CAD 102 Advanced Topics in CAD (2-2) 3 Cr. Hrs.

*Prerequisite:* CAD 101 or equivalent course. Industry experience will be considered.

This course is designed as an advanced course in computer aided drafting for the non-degree seeking design professional such as 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 apply towards a degree in Computer Aided Design.

### CAD 103 Engineering Graphics (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

This course is designed to introduce the student to the basic concepts and standard practices necessary for the graphical communication of technical data which includes 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.

### CAD 105 Mechanical Engineering Drawing (3-2) 4 Cr. Hrs.

*Prerequisite:* CAD 103 or equivalent.

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, 3D 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.

### CAD 106 Advanced Drawing Views and Descriptive Geometry (3-2) 4 Cr. Hrs.

*Prerequisite:* CAD 103 or equivalent.

This course is designed to teach the student advanced skills in drawing view creation. Sketching and computer aided drafting (CAD) will be the tools for communicating mechanical product information. Topics to be covered will include projection methods for creating orthographic, auxiliary and section views. Descriptive Geometry will be used to solve advanced drawing problems. This course is designed for those who have chosen a career as a mechanical or tool designer.

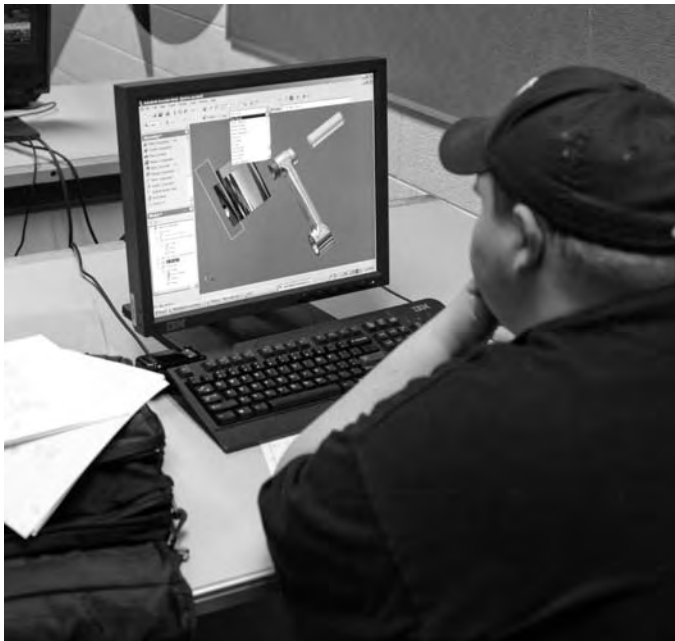
- CAD 107 Detailing (2-4) 4 Cr. Hrs.**  
*Prerequisite:* CAD 106 or equivalent.  
 This course is designed to teach the student the concepts and standard practices involved in the creation of detail and assembly drawings. Geometric Dimensioning and Tolerancing philosophy will be employed for controlling 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 stack-up evaluation, G.D. and T. methods, 3D modeling, 2D and data extraction from 3D models.
- CAD 211 CATIA—Level 1 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* None.  
 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.
- CAD 212 CATIA—Surfacing (2-2) 4 Cr. Hrs.**  
*Prerequisite:* CAD 211 or equivalent.  
 This course is designed to present higher level part modeling commands for CATIA Modeler. Particular attention will be paid to surfacing.
- CAD 213 CATIA—Knowledgeware (1-1) 2 Cr. Hrs.**  
*Prerequisite:* CAD 211 or equivalent.  
 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.
- CAD 221 SolidWorks—Level 1 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* None.  
 This first level SolidWorks 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.

## 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.**  
*Prerequisite:* Windows experience highly recommended.  
*Corequisite:* MFG 102 and/or previous machining experience.  
 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.
- CAM 103 Computer Numerical Control (CNC)—Programming (2-2) 3 Cr. Hrs.**  
*Prerequisite:* CAM 102 or basic knowledge of Mastercam.  
 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, tool paths will be verified by using a graphical (animation) solid-model tool path verification to detect potential machining errors. The students will also study drilling, solid modeling, pocketing, and circle boring.
- CAM 201 Coding and Materials Processing (0-5) 5 Cr. Hrs.**  
*Prerequisite:* CAM 102 or equivalent.  
 This course prepares the student to understand the procedure to download an existing computer numerical program (CNC) from a CAD drawing to a CNC controller. Through the use of computer simulation students will learn: to evaluate correct machining practices, to use an operator's panel control for editing CNC programs, and to troubleshoot an existing program using either a controller panel or computer. Projects will be assigned to facilitate mastery of advanced programming commands and procedures.
- CAM 205 CAD/CAM—Computer Aided Machining (0-4) 3 Cr. Hrs.**  
*Prerequisite:* CAM 103 or extensive knowledge in 2D Mastercam Design.  
 The student will use CNC Mastercam software. This course will address the following machining variables: machining parameters, constructing wire frame models, generating surface models with tool paths, engraving artworks and solid modeling. Operational parameters will be calculated to determine operating capacity of a cutting tool, spindle horsepower, the affects of different types of work piece material, and rigidity of the part and respective fixture. The student will learn how to generate coding for 3D wire frame and multi-axis composite surfaces using various modeling techniques.



## COMPUTER GRAPHICS TECHNOLOGY

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Professor Stephen Wroble, MA

Associate Professor Colleen Case, MLS

Associate Professor Michael Mehall, MA

Adjunct Faculty

### CGT 109 Design Concepts and Technology (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

In order to succeed in any discipline within the Computer Graphics field students must have a strong sense of design; an understanding of how meaning is communicated through form and color; the nature of human perception; and the strengths and limitations of the digital media we use. This course provides foundation skills for all classes within the CGT curriculum. In this course students will use software at an introductory level in order to develop their understanding of these conceptual issues. Applications are digital and vector-based illustration, page-layout, animation and non-linear based. Projects will be designed to allow students to do both short exercises and more complex larger works.

### CGT 123 Illustration—Illustrator (3-0) 3 Cr. Hrs.

*Prerequisite:* CGT 109 (may be taken concurrently).

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.

### CGT 125 Digital Imaging 1—Photoshop (3-0) 3 Cr. Hrs.

*Prerequisite:* CGT 109 (may be taken concurrently).

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.

### CGT 127 Publishing—InDesign (3-0) 3 Cr. Hrs.

*Prerequisite:* Computer experience highly recommended.

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, typography, 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.

### CGT 135 Web Graphics (3-0) 3 Cr. Hrs.

*Prerequisite:* CGT 125.

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. In addition, skills in design, optimization compression techniques, color theory and an understanding of multiple platform, operating systems and browser limitations are covered.

### CGT 141 Introduction to Interactive Media and Game Design (3-0) 3 Cr. Hrs.

*Corequisite:* CGT 125.

This course is an introduction to the creation of computer games and other interactive media. Students will learn how to make basic 2D animations and use basic scripting techniques to make interactive projects for cd-rom and kiosk based projects. Emphasis will be on solving the special design and production problems encountered when creating non-linear projects, along with animation techniques, basic scripting, memory management, importing/exporting considerations, basic sound and video, project management, and production planning.

### CGT 149 Typography (3-0) 3 Cr. Hrs.

*Corequisite:* CGT 123

This course introduces the graphic design 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.

### CGT 154 Sound Editing for Graphic Artists (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This course provides an introduction to the basic concepts of sound production for computer and video based delivery systems. Also emphasized are the necessary hardware/software, sound recording and editing, file management and transfer, and aesthetic considerations.

### CGT 157 Prepress (2-0) 2 Cr. Hrs.

*Prerequisite:* CGT 123, CGT 125 and CGT 127.

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.

### CGT 161 History of Graphic Design (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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 leads to more effective graphic design in the modern world.

- CGT 162 XHTML—CSS Standards (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Computer experience highly recommended.  
 This course introduces the student to the unique design principles and W3C standards for electronic screen design. Designing for the World Wide Web or for an interactive computer screen requires a new look at design principles. This course compares traditional paper design to electronic screen design. Students will design and code basic Web sites utilizing XHTML and Cascading Stylesheets (CSS); with an emphasis on access and semantic markup.
- CGT 166 Photography (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Computer experience highly recommended.  
 This course is designed to instruct the student on photographic principles that affect exposure, image structure, composition, printing and the interface with digital media. Students 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 pursuing a graphic design career. The student will be required to have a 35mm camera and is responsible for film and processing costs or digital equivalent.
- CGT 168 Storyboarding (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 166.  
 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 pursuing careers in multimedia, interactive and performance arts.
- CGT 206 Scripting for Interactive Media and Game Design (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 141.  
 This is an intermediate course in the creation of computer games and other interactive media projects. Emphasis in this course is on advanced scripting techniques required to produce effective and highly interactive games or projects for CD-ROM or computer based projects. Emphasis will be on scripting techniques to control navigation, animation, sound, video, and memory management.
- CGT 208 Digital Video Production (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 123, CGT 125 and CGT 168.  
 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.
- CGT 211 Flash (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Experience with a vector-art drawing program. CGT 123 may be taken concurrently.  
 This course provides the student with an introductory knowledge of working with Flash. Flash is a vector-based design program for the creation of animation, games, and interactive components for use on the internet. Students will focus on the creation of basic animation and navigation components for use on the internet as well as for stand alone projects.
- CGT 212 Flash Action Scripting (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 211 or equivalent experience with Flash.  
 This course provides an in-depth 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 Web site, computer game, or computer-based training module. Students should have a working knowledge of Flash before beginning this class.
- CGT 215 Motion Graphics—After Effects 1 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 109, CGT 123 and CGT 125.  
 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.
- CGT 226 Digital Imaging 2—Photoshop (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 109, CGT 123 and CGT 125.  
 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.
- CGT 231 Electronic Publishing (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 109, CGT 123, CGT 125 and CGT 127.  
*Corequisite:* CGT 226.  
 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, and 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.
- CGT 236 Web Design (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 135 and CGT 162.  
 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, XHTML, Cascading Style Sheets, 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 other current HTML software authoring/editor will be used. The student will look at on-line design considerations, such as download times, optimizing file size and file formats.

- CGT 237 Dynamic Web Design With ColdFusion (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 236.  
 This course provides advanced dynamic Web design and development utilizing the most recent versions of Macromedia's ColdFusion and Dreamweaver. Topics covered will include scripting in CFML and HTML, Web site planning, testing, security and production. Emphasis will be on managing the flow of data-base information with client-side documents. Also included will be coverage of data-driven pages, forms and data-entry using Dreamweaver data connection tools, writing user-defined functions and creating dynamically data driven Web sites.
- CGT 242 Advanced Interactive Media and Game Design (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 206 or CGT 212.  
 This is an advanced course in the creation of computer games and other interactive media projects. This course emphasizes the production process, the multidisciplinary nature of the media, integration of different components, and special design problems of games and other non-linear projects. The student is instructed in advanced elements of interactive media design, integrating digital sound and video, and advanced scripting techniques. Each student will produce a large scale project during the course.
- CGT 244 History of Animation (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This class will give students a context for understanding the rich and unique history of animation and graphic design. In addition to learning important milestones in these fields, students will develop their eye and their aesthetic appreciation of this kind of art. Students will be exposed to the historical contingencies that lead to different developments as well as to animations and graphic design from all over the world. This course will also stimulate students in their own creative endeavors in their chosen field.
- CGT 246 Motion Graphics 2—After Effects (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 215.  
 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 interrelate 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 multi-media applications.
- CGT 247 3D Animation—Introduction (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 123 and CGT 125.  
 This course is designed to increase the student's familiarity with the 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.
- CGT 250 Practical Application (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Must take one of the following courses either before or with this course: CGT 231, CGT 236, CGT 242, CGT 246, CGT 252 or ART 205.  
 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.
- CGT 252 3D Animation—Animating (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 254.  
 This class adds to the skill sets that students were exposed to in CGT 247 Introduction to 3D Animation and CGT 254 Advanced Models and Textures. In this class students will improve their understanding of the aesthetics and software technology involved in creating effective and convincing animation.
- CGT 253 3D Compositing (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 252.  
 In this class students will learn how to use 3D software and video compositing software together. They will learn the aesthetics of combining computer generated materials with live video. 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.
- CGT 254 3D Animation—Advanced Models and Textures (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 247.  
 This class follows up on the skill sets that students were exposed to in CGT 247 Introduction to 3D Animation. In this class students will learn modeling, texturing, and lighting techniques at a more sophisticated level. These techniques will include polygon, patch, nurbs and subdivision surface modeling, creating custom textures, lighting, and atmospheric effects. They will also learn the techniques of intelligent model building and issues in creating projects for a variety of delivery platforms.
- CGT 256 Portfolio 3D—Reel Development (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CGT 242 or CGT 246.  
 This class prepares the student for finding a job in the field of 3D Animation or Video Production. In this course students will assemble their previous work into a professional presentation. In doing so, the student's 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.
- CGT 257 Portfolio Preparation (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Must take one of the following courses either before or with this course: CGT 231 or CGT 236 or CGT 242 or CGT 246.  
 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 student's 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 fit the student's style and personality will be designed and created for practical application.

**CGT 270 Internship (3-0) 3 Cr. Hrs.**

*Prerequisite:* Consent of department.

This internship is designed for the exceptional Computer Graphic Technology student. This course consists of 10–20 hours per week of work as an intern Graphic Designer, Media Developer, or similar position with an approved business or company. CGT Internships will be administrated by a faculty member and approved by the CGT Department. The instructor and the business partner will jointly evaluate the student.

**CGT 298 Honors Studies (3-0) 3 Cr. Hrs.**

*Prerequisite:* Completed (12) twelve hours of course work. Dean's List status (GPA 3.5) and consent of instructor.

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. This course will not be listed in the Schedule of Classes. To enroll in this course, a candidate must submit a Project Plan to an instructor. The instructor will review the plan with the candidate and may recommend changes. When the project is approved, a course section will be created and the student will be given permission to enroll.

**COMPUTER INFORMATION SYSTEMS**

Associate Dean: Bruce Sweet, MA

Instructors: Professor Doris McPherson, EdD

Professor Patricia Partyka, MEd

Professor William Schlick, CBET, BEE, MCSE

Professor Jerry Wale, MSEE

Associate Professor Timothy Ellis, BBA

Assistant Professor 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.**

*Prerequisite:* None.

This course is designed for students who have had little or no experience with computers. Topics covered in this course 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.

**CIS 115 Introduction to Computer Based Systems (3-0) 3 Cr. Hrs.**

*Prerequisite:* Computer and Keyboarding experience highly recommended.

This is a three-credit-hour survey course of micro, mini, and mainframe computer systems. Class lectures include the following topics: Internet, Web and e-mail basics; hardware; software; file management, virus protection, backup; Internet and LAN technology; Web pages, Web sites and E-commerce; digital media; the computer industry history, products and careers; information system analysis and design; databases; computer programming; large-scale computing. Approximately one-third of the class time is spent as a hands-on course using personal computers to create Web pages using HTML/XHTML and the Microsoft Windows Operating System.

**CIS 120 Software Applications (3-0) 3 Cr. Hrs.**

*Prerequisite:* Computer and Keyboarding experience highly recommended.

This course is designed to provide hands-on experience with a current office software package for the computer. Emphasis is in the area of word processing, spreadsheets, database management and a presentation software program.

**CIS 122 Microsoft Outlook (2-0) 2 Cr. Hrs.**

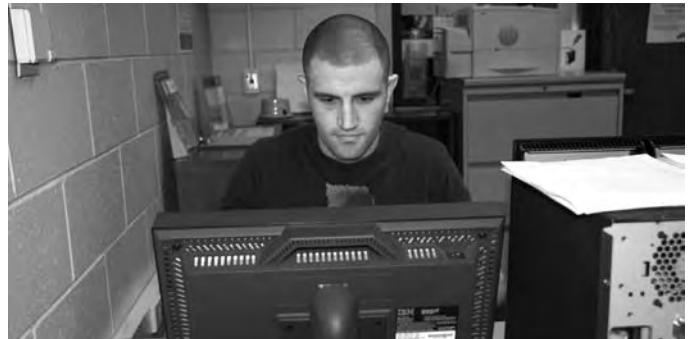
*Prerequisite:* CIS 120 or equivalent.

This course is designed to provide practical, hands-on experience with Microsoft Outlook. Microsoft Outlook 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.

- CIS 123 Introduction to E-Commerce (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course is designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Topics covered in the course 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.
- CIS 125 Principles of Information Security (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This course examines the field of information security to prepare individuals for their future roles as business decision makers. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. In addition, the course also covers both the managerial and the technical aspects of this exciting discipline and addresses knowledge areas of CISSP (Certified Information Systems Security Professional) certification.
- CIS 129 Introduction to Programming Logic (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
This is 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.
- CIS 170 Microsoft Windows (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Computer experience highly recommended.  
This course is designed to explore the features of the latest Windows desktop operating system which include modules such as digital media, electronic messaging, networking, remote assistance, 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 desktop environment, documents and folders, toolbars and taskbar, control panel, file and Web searching tools, Help files, and computer maintenance and performance optimization tools. It is recommended that students have experience using computers and have proficiency in keyboard and mouse usage.
- CIS 171 Introduction to Networking (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Computer experience highly recommended.  
This course introduces students to the key concepts of data communications, telecommunications and networking. The course 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.
- CIS 172 Network Security Fundamentals (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 171 or equivalent experience.  
This course is designed to provide students a fundamental understanding of network security principles and implementation. A variety of hands-on and case project assignments will reinforce the technologies used and principles involved in creating a secure computer network environment.
- CIS 173 Wireless Local Area Networks (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 171 or equivalent experience.  
This course is designed to provide students a fundamental understanding of wireless Local Area Networks. A variety of hands-on assignments will reinforce the technologies used and principles involved in installing, configuring and managing a wireless LAN.
- CIS 176 Visual Basic.NET (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 129 and Windows experience.  
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.
- CIS 178 Technical Microsoft Windows (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Computer experience highly recommended.  
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 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. It is recommended that students have experience using computers and have proficiency in keyboard and mouse usage.
- CIS 180 Spreadsheet Applications—Current Software (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 120.  
This course teaches students how to analyze comprehensive problems and design a 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 thinking through problems and developing logical solutions using a comprehensive host of features in a popular spreadsheet software package.
- CIS 185 Introduction to HTML (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
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 covered 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.
- CIS 211 Introduction to C++ (2-0) 2 Cr. Hrs.**  
*Prerequisite:* CIS 129 or equivalent.  
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.

- CIS 212 Introduction to CGI Using Perl (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 129 or equivalent.  
 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.
- CIS 215 Advanced Software Applications (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 120 or written approval of the CIS department. CIS 180 recommended.  
 This course is designed for students who have a working knowledge of the computer and word processing, spreadsheet, and database packages. Advanced features of the software are developed building on a foundation of a beginning software applications course.
- CIS 221 Advanced C++ (2-0) 2 Cr. Hrs.**  
*Prerequisite:* CIS 211.  
 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.
- CIS 223 Introduction to C# (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 129 or equivalent.  
 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.
- CIS 225 Database Management Systems (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course covers a popular relational database, Microsoft Access, 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.
- CIS 227 Introduction to Structured Query Language (SQL) (1-0) 1 Cr. Hr.**  
*Prerequisite:* CIS 225 or equivalent.  
 This course teaches Structured Query Language on the introductory and intermediate levels. The syntax and application of the language will be covered in a practical, hands-on format. Students will use SQL to: create and populate tables, construct single-table queries, query multiple tables, update data in tables, administer databases, and produce reports. Microsoft Access will be used as the primary vehicle to present SQL commands.
- CIS 233 Active Server Pages (3-0) 3 Cr. Hrs.**  
*Prerequisite:* A basic knowledge of HTML or equivalent programming experience.  
 Students will be instructed how to 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.
- CIS 235 Managing and Troubleshooting PCs (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Windows experience highly recommended.  
 Advanced operating systems features including custom batch files, backup and disk organization will be covered. Computer peripherals and upgrade features will also be emphasized. The student will examine the inside of the computer and practice adding upgrades, configuring systems, using diagnostic maintenance programs and installing software packages.
- CIS 238 JavaScript (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 185 or CGT 162 or a basic knowledge of HTML.  
 JavaScript is a powerful, object-based scripting language that can be embedded directly into HTML pages. JavaScript allows you to create dynamic, interactive Web-based applications that run completely within a Web browser. This course covers JavaScript as a client-side scripting language.
- CIS 239 Advanced C# (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 223 or equivalent.  
 This course is an advanced study in the use of the C# Programming language. The student will investigate advanced topics including data structures, ASP.net, and Web Services. This course is intended for those who wish to pursue an in-depth knowledge of the C# language.
- CIS 250 Systems Development and Design (4-0) 4 Cr. Hrs.**  
*Prerequisite:* Microsoft Office experience highly recommended.  
 The student will be made aware of various tools available to the systems analyst in solving business problems. 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 the 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.
- CIS 251 IT Project Management (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Basic knowledge and/or experience in the field of IT.  
 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.
- CIS 255 Introduction to LINUX (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 170 or equivalent experience.  
 This course is designed for students pursuing careers in computer information systems or who are 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.

- CIS 256 Introduction to XML (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 129 and a course in HTML or JavaScript or equivalent.  
 This course will provide the student with an introduction to XML programming. The student will become familiar with Cascading Style Sheets, Document Type Definitions, Schemas, and Document Object Models.
- CIS 260 Introduction to UNIX (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
 This course is designed for students pursuing careers in computer information systems or who 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 philosophy, basic UNIX commands and terminology, UNIX utilities, and an introduction to shell programming.
- CIS 265 Networking 1 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 235.  
 This course is designed to introduce the student to communications terminology and technology using telecommunications and a local area network. The student will practice installing and maintaining a LAN.
- CIS 267 Home Technology Integration (4-0) 4 Cr. Hrs.**  
*Prerequisite:* Computer experience recommended.  
 This course is designed to introduce the student to networking technologies, audio visual systems, automation methods, and telecommunications techniques that converge in integrated home technology. The student will practice installing and maintaining a Home Networking System.
- CIS 271 Local Area Networks (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 171 or equivalent experience.  
 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.
- CIS 272 Wide Area Networks (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 171 or equivalent experience.  
 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.
- CIS 273 TCP/IP and Network Architectures (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 171 or equivalent experience.  
 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.
- CIS 275 Advanced Visual Basic.NET (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 176.  
 This course is designed for students who already have a working knowledge of Visual Basic.NET. 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 exception handling, advanced windows forms and controls, objects and classes, inheritance, polymorphism, arrays and collections.
- CIS 276 Networking 2 (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 265.  
 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 Server on a local area network will be covered. Additional topics on hardware, clients, domains, user accounts and printers will be covered.
- CIS 277 Network Infrastructure (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 273 or equivalent experience.  
 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.
- CIS 278 Network Environment (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 273 or equivalent experience.  
 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.
- CIS 281 Data Structures and Introduction to Windows Programming (3-0) 3 Cr. Hrs.**  
*Prerequisite:* CIS 211 and CIS 221 or equivalent.  
 This course is designed for students pursuing careers in computer information systems or who are currently working in industry. This is an advanced course in programming using C++. Students will examine the use of abstract data structures in programming. The course is also an introduction to Windows programming.



**CIS 283 Introduction to Internet Technologies (3-0) 3 Cr. Hrs.**

*Prerequisite:* CIS 171 or equivalent experience.

This Internet Technologies course begins with an overview of the Internet, its history, organization and structure. Once the general structure is understood, different ways to access the Internet will be explored, 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.

**CIS 284 Internetworking Devices (3-0) 3 Cr. Hrs.**

*Prerequisite:* CIS 273 or equivalent experience.

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.

**CIS 285 Process and Protocols (3-0) 3 Cr. Hrs.**

*Prerequisite:* CIS 273 or equivalent experience.

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.

**CIS 286 Network Analysis and Design (3-0) 3 Cr. Hrs.**

*Prerequisite:* CIS 273 or equivalent experience.

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.

**CIS 290 Object-Oriented Programming With Java (3-0) 3 Cr. Hrs.**

*Prerequisite:* CIS 129 or equivalent.

This course provides an introduction to object-oriented programming using Java. Students will develop real world application programs and Web-based applets based on object-oriented programming concepts including encapsulation, inheritance, and polymorphism.

**COMPUTER SERVICE**

Associate Dean: Bruce Sweet, MA

Instructors: Professor William Schlick, CBET, BEE, MCSE

Professor Jerry Wale, MSEE

Adjunct Faculty

**COMPS 124 Introduction to Personal Computers and Software (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course is designed to introduce the student to the hardware and software aspects of the personal computer. The student will learn to identify the key components of the computer. 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 computer 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 computer. The student will gain experience using computers and develop proficiency in keyboard and mouse usage.

**COMPS 126 Technical Programming (3-0) 3 Cr. Hrs.**

*Prerequisite:* Computer and keyboarding experience highly recommended.

This course will introduce the student to the steps involved in writing a Windows program using the Visual Basic programming language. The course focuses on user interfaces, program structure, language syntax, and implementation details. The student will also use the computer as a tool in problem solving.

**COMPS 147 Computer and Peripheral Maintenance and Management (2-2) 4 Cr. Hrs.**

*Prerequisite:* COMPS 126 and ELECT 127.

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.

**CORRECTIONAL SCIENCE**

Associate Dean: Robert F. Pearce, MPA

Instructors: Adjunct Faculty

**Note:** COR 110 is required for the Criminal Justice Associate Degree.

**COR 110 Introduction to Corrections (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

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.



## CRIMINAL JUSTICE

Associate Dean: Robert F. Pearce, MPA

Instructors: Professor John Courie, MS  
Adjunct Faculty

### **CJ 102 Organization and Administration of Law Enforcement Agencies (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course will provide the student with an overview and understanding of law enforcement management and supervision to include an historical perspective and appropriate applications. Students will be exposed to managerial processes with regard to communication, decision making and problem solving that enable managers to effectively train and motivate subordinates. This course will identify how law enforcement managers effectively handle discipline, complaints, grievances, conflict and stress. This course will further identify how managers deploy resources, improve productivity and utilize performance appraisals and evaluations. Students will analyze challenges in managing law enforcement agencies in a changing environment.

### **CJ 104 Introduction to Security (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course provides the student with an understanding of the private side of law enforcement. Included in this process are studies in career opportunities, the history of both private and public law enforcement and the interrelationship and liabilities of both sectors.

### **CJ 107 Police Field Operations (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course is a practical study of purposes, methods, types and means of law enforcement patrol, accident prevention and effective traffic control interviewing techniques. Students will learn about crimes in progress, stress survival, and use of force. Training will be received on proper methods of conducting preliminary investigations, unlawful assembly, and riot control.

### **CJ 113 Introduction to Criminal Justice System (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This 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 attorneys, prosecutors and judges 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.

### **CJ 201 Criminal Investigation (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course is a study of criminal investigation, techniques of surveillance, collection, recording and preservation of evidence. Students will study the analysis of evidence and use of science laboratories. This course will be conducted in cooperation with other law enforcement agencies.

### **CJ 209 Basic Criminalistics (2-2) 3 Cr. Hrs.**

*Prerequisite: None.*

This course acquaints students with proper techniques of criminalistics. Students will have an opportunity to perform investigations in simulated crime scene situations using scientific investigative techniques involving collection, presentation, and interpretation of physical evidence.

### **CJ 211 Criminal Law and Procedures (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course is a study of the elements of criminal law, its purposes and function. The course will focus on the laws of arrest, search and seizure, rights and duties of officers and citizens. Students will study the elements necessary to establish crime and criminal intent, sources of criminal law, criminal responsibility and general court procedures.

### **CJ 212 Criminology (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

This course is designed to identify the theories of crime causation, behavioral systems in crime (organized white collar crime), nature and extent of crime. Emphasis will be given to law as social control, history and philosophy of punishment and contemporary correctional techniques.

### **CJ 221 Juvenile Justice (3-0) 3 Cr. Hrs.**

*Prerequisite: None.*

The purpose of this course is to study problems of juvenile delinquency and the theories that explain juvenile delinquency. Attention will be given to the work of youth agencies, legislative involvement and new approaches to the prevention of juvenile crime.

### **CJ 286 Police Academy (13-25) 21 Cr. Hrs.**

*Prerequisite: Consent of department before acceptance to the Police Academy.*

This course is designed to prepare recruits in the proper techniques of investigation, crime scene process, patrol procedures, operations and techniques. Emphasis will be placed on conflict mediation, report writing, detention and prosecution of prisoners. First aid, investigations, evidence collection, disaster control, civil disorders and tactical operations will be covered in the course. (40 hrs. minimum weekly)



## CULINARY ARTS

Executive Director of Development & Governmental Relations: John Walsh, JD

Department Chair: Shawn Loving, CEC

Instructors: Professor Joseph Decker, CMPC

Professor Jeffrey Gabriel, CMC

Professor Kevin Gawronski, CMC

Professor Daniel Hugelier, CMC

Associate Professor Brian Polcyn, CEC

Assistant Professor Marcus Haight, CEC, CEPC

Adjunct Faculty

**Note:** Most courses are offered on a five-week, three per semester rotation.

### CAP 102 Culinary Sanitation (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

The student will understand and apply basic sanitation techniques to the preparation of food products and in addition, will be prepared to pass the required certification examination of the Educational Foundation. Topics covered in the course include 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.

### CAP 103 Introduction to Professional Cooking Skills and Technique (5-0) 5 Cr. Hrs.

*Prerequisite:* CAP 102 or current ServSafe certification.

This course will provide a broad orientation to the aspiring chef so that they will better understand what is required to succeed in the industry. Emphasis for discussion will be on professionalism, review of safety and sanitation, equipment, and identification of food products. Students will be required to purchase an initial set of hand tools for skills development. Students must receive an overall GPA of 2.5 to pass the class, as well as pass the final practical with a minimum of 2.5.

### CAP 104 Culinary Technology and Research (3-0) 3 Cr. Hrs.

*Prerequisite:* CAP 103.

Today's advances in technology offer chefs the opportunity to cook with microwaves, infrared, high speed air envelopes, high-intensity halogen light, heat impingement and computers. New ovens combine these technologies into one product that can cook food in one-tenth the time of conventional methods. Hands-on experience with a selection of new oven technologies available in the industry will be practiced, along with product development exercises and exploration of mechanics of how food cooks. In addition, exposure to scientific research methods, product development and testing protocols, resource elimination, basic project management and directed problem solving will enhance the student's grasp of culinary research, a growing segment of the food and hospitality industry.

### CAP 124 Breakfast and Pantry (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

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 and recipe procedure will be taught. Pantry cookery skills will include basic pantry operation: simple and composite salads, salad dressings, fruit trays, and cold sandwich preparation.

### CAP 125 Pastries 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

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; properly use hand tools and machinery; regulate and use an oven properly; understand health, safety and sanitation of work areas; make pies, puddings, pastries, cakes, and tortes.

### CAP 128 Introduction to Food Techniques (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

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 also be included.

### CAP 142 Butchery (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

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.

### CAP 143 Dining Room Service (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

Upon successful completion of the course, the student will be able 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, understanding the art and science of employee relationships and the value of customer relationships.

### CAP 144 Baking (4-0) 4 Cr. Hrs.

*Prerequisite:* CAP 103.

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, and cost out a recipe. In addition, students will be able to produce the following: 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.

### CAP 190 Externship (15-1) 3 Cr. Hrs.

*Prerequisite:* CAP 103.

This course is designed to give the student, without work experience, a first hand opportunity to gain working experiences in a quality run establishment while rotating through various work stations in a food service work environment. This is an elective course and requires departmental approval for enrollment.

**CAP 215 Charcuterie (4-0) 4 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

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 also taught.

**CAP 227 Restaurant Cooking and Preparation (4-0) 4 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

Students will participate in four workstations: Roast—Grill, Sauté, Entremetier (middle station) and Garde Manger—Pantry. Students will learn classical and modern cooking techniques and recipe development and the importance of consistency and clean work methods.

**CAP 240 Pastries 2 (4-0) 4 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

This course will cover the more intricate methods of producing fine pastries, puddings, mousse, cakes, tortes, ice cream desserts and chocolate work. Instruction covers recipe expansion and presentation.

**CAP 241 Culinary Nutrition (2-0) 2 Cr. Hrs.**

*Prerequisite:* None.

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.

**CAP 242 À la Carte (4-0) 4 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

Upon successful completion of this course, the student will be able to apply modern techniques in the preparation and presentation of food using sauté, and grill techniques. Students will gain an understanding of the entremetier, garde manger and food storage stations. Proper lock-down and clean up procedure will be taught. Preparation and presentation of salads, cold meats, sandwiches as well as plate presentation will also be taught.

**CAP 243 Storeroom Operations (3-0) 3 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

Upon successful completion of this course, the student will have a 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.

**CAP 244 International and American Cuisine (8-0) 8 Cr. Hrs.**

*Prerequisite:* CAP 103 and all core CAP 100 level courses.

Students will learn the culture, history, and terminology of various regional American and international cuisines, while also studying their traditional and contemporary cooking techniques. Students will prepare multi-course dinners, small plate offerings, wine pairing dinners, as well as buffets that are offered to the public, served in the American Harvest Restaurant.

**CAP 247 Banquets and Catering (2-2) 3 Cr. Hrs.**

*Prerequisite:* CAP 103.

Upon successful completion of this course, the student will demonstrate the ability to display knowledge of a variety of catering operations including planning, organizing, marketing and executing receptions, parties and special events. Students must participate in two events. This is an elective course.

**CAP 260 Competitive Ice Carving (2-2) 3 Cr. Hrs.**

*Prerequisite:* Proficiency evidenced in CAP and/or CM courses.

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.

**CAP 265 Advanced Competitive Ice Carving (1-3) 3 Cr. Hrs.**

*Prerequisite:* CAP 260 or consent of department.

This course will present safety procedures related to ice handling, tools and equipment used in ice carving, qualities of carving ice, and discuss proper care and sharpening of tools. Use of templates and production of basic carvings will be accomplished. Advanced carving ability incorporating joining, assembling and multi block will be covered. This is an elective course.

**CAP 267 Chocolatier (4-0) 4 Cr. Hrs.**

*Prerequisite:* CAP 103 and CAP 125 or consent of department.

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 and chocolate truffle making. This is an elective course.

**CAP 295 Salon Competition 1 (2-2) 3 Cr. Hrs.**

*Prerequisite:* Selection to participate is made by the Chef Instructors.

Students will participate in a class which will build and refine their culinary skills. This first course will introduce the students to the requirements necessary to successfully compete in culinary competition. Students selected for this class may form the College Culinary Team. A number of field trips and training sessions, off campus, will be scheduled. This is an elective course.

**CAP 297 Salon Competition 2 (2-3) 4 Cr. Hrs.**

*Prerequisite:* Selection to participate is made by the Chef Instructors. Satisfactory completion of CAP 295.

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 must 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, can represent Schoolcraft College in culinary competition(s).



## CULINARY BAKING AND PASTRY ARTS

Executive Director of Development & Governmental Relations: John Walsh, JD  
 Department Chair: Shawn Loving, CEC  
 Instructors: Professor Joseph Decker, CMPC  
 Professor Jeffrey Gabriel, CMC

### CBPA 103 Introduction to Baking and Pastry Skills and Techniques (2-0) 2 Cr. Hrs.

*Prerequisite:* CAP 102.

This course will provide a broad orientation to aspiring bakers and pastry chefs in order to offer a better understanding of the specialized fields of baking and pastry. Discussions will include professionalism, safety and sanitation, equipment identification, function and maintenance. The fundamental baking processes, handling and function of ingredients will be covered. Students will be required to purchase uniforms, as well as specific tools for skill development.

### CBPA 125 Pastries (5-15) 20 Cr. Hrs.

*Prerequisite:* CBPA 103.

Upon successful completion of this course, students will have acquired professional skills in the art of pastry including recipe expansion and costing, use of hand tools and equipment, safety, sanitation and organization skills. Products introduced to the aspiring students include pies and tarts; French pastry; individual pastries; classical and contemporary tortes; warm, cold and frozen desserts; contemporary plated desserts; miniature pastries; chocolates; cake decoration; and decorative centerpieces.

### CBPA 144 Baking (3.75-11.25) 15 Cr. Hrs.

*Prerequisite:* CBPA 103.

Upon successful completion of this course, students will have acquired professional skills in the art of baking. This course will cover basic elements including: costing out recipes, expanding and reducing recipe sizes, proper usage of bakery equipment, using straight dough methods to produce French Baguettes, soft and hard rolls, pan breads and many hearth breads, as well as production of various cookies, quick breads, muffins and biscuits. Advanced techniques will be taught including: fermentation processes and how they contribute to flavor; mixing methods, the functionality of ingredients, the study of various flours, as well as chemical reactions that take place while baking. The production of artisan breads, laminated doughs, savory baked goods, specialty baked goods, breakfast pastries, high ratio cakes and decorative centerpieces will be important aspects of this course.



## CULINARY MANAGEMENT

Executive Director of Development & Governmental Relations: John Walsh, JD  
 Department Chair: Shawn Loving, CEC  
 Instructors: Adjunct Faculty

### CM 107 Culinary Management—Food and Culture (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is a cross cultural, interdisciplinary investigation in 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.

### CM 109 Hospitality Law (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides students with an overview of the general concepts of law as it relates to the 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.

### CM 203 Restaurant Concepts and Design (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course will explore new concepts for the entrepreneur in the restaurant industry. New trends and restaurant décor, along with facility layout and design will be emphasized.

### CM 210 Wine and Spirits (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course will provide 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 will be given to table, sparkling and dessert wines. The student will gain understanding of purchasing and storing wines, retail merchandising, bar operation and beverage management. Students will develop an understanding of wine and spirit laws. This is an elective course.



## DESIGN

Associate Dean: Bruce Sweet, MA

Instructors: Professor Catherine Ferman, MS, PE  
Adjunct Faculty

### DSGN 180 Machine Elements and Design (3-2) 4 Cr. Hrs.

*Prerequisite:* CAD 107 or equivalent and MATH 113.

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.

### DSGN 200 Geometric Dimensioning and Tolerancing (2-0) 2 Cr. Hrs.

*Prerequisite:* DRFG 102, equivalent work experience or consent of department.

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.

### DSGN 240 Tool and Die Design (2-4) 4 Cr. Hrs.

*Prerequisite:* CAD 107 or equivalent and MATH 113.

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.

### DSGN 250 Tool, Die, and Fixture Design (2-4) 4 Cr. Hrs.

*Prerequisite:* CAD 107, DSGN 180 and CAD 211 or CAD 221.

Tool, Die and Fixture design is a specialized phase of mechanical or manufacturing engineering. This course will cover the development of jigs and fixtures, work holding devices and press working tools such as cutting dies, piercing dies, forming dies and drawing dies. Emphasis is placed on the types of tools, supporting and locating principles, clamping methods, construction methods, theory of metal cutting and metal forming. 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 design customs jigs, fixtures, dies and die types. ANSI/ASME Standards are followed for the creation of solid models, multi views, drawings, tolerances and dimensioning practices.

### DSGN 260 Jig and Fixture Design (2-4) 4 Cr. Hrs.

*Prerequisite:* CAD 107 or equivalent and MATH 113.

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.

### DSGN 280 Capstone Project (3-2) 4 Cr. Hrs.

*Prerequisite:* MET 102, MET 114, MFG 105, CAD 107 and DSGN 180 or consent of instructor.

This course utilizes a multidiscipline capstone project to integrate the concepts of design, manufacturing and material science. Working as a team, a design problem will be presented requiring solutions which involve the management of the design process using the systematic engineering design process. The steps include project planning, research, modeling, analysis, prototype building, process mapping and material selection. The results of the project will be reported in written and oral format and presented to a panel for evaluation. Faculty directed study will be provided.

## DRAFTING

Associate Dean: Bruce Sweet, MA

Instructors: Professor Catherine Ferman, MS, PE  
Associate Professor Lisa Zaccone, MS, PE  
Adjunct Faculty

### DRFG 102 Machine Trades Print Reading (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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.

### DRFG 106 Fundamentals of Drafting (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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.

### DRFG 114 Descriptive Geometry (2-2) 3 Cr. Hrs.

*Prerequisite:* CAD 103 or consent of department.

Students will explore graphic representation and solution of space problems, basic and advanced orthographic projection, points, lines, planes, solids, auxiliary views, parallelism, perpendicularity, developments and intersections.



## ECONOMICS

Associate Dean: Bruce Sweet, MA

Instructors: Professor Frederick Galperin, EdS  
Professor Cedric Howie, MS  
Professor Prantosh Nag, PhD  
Adjunct Faculty

### ECON 103 Introductory Economics (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is 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. In addition, this course explores 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.

### ECON 201 Principles of Macroeconomics (4-0) 4 Cr. Hrs.

*Prerequisite:* MATH 053 or equivalent.

Macroeconomics refers to that portion of economic analysis which is concerned with behavior of economy-wide issues, e.g., inflation, unemployment, etc. By means of theoretical reasoning and empirical research, economists have identified a number of relationships or principles which are useful in explaining and predicting macroeconomics; their application to an understanding of current economic problems, and their implication for economic policy. The intent of the course is to provide the student with a basic level of economic literacy essential for a well-informed citizenship in the years ahead. In economics, perhaps more than any other comparable discipline, things are not always what they appear to be. Indeed, many economic problems both past and present have resulted from the misunderstanding of fundamental economic relationships.

### ECON 202 Principles of Economics (4-0) 4 Cr. Hrs.

*Prerequisite:* MATH 053 or equivalent.

This course provides students with an introduction to the theory of consumer behavior, production theory, market structure in product and resource/factor markets, and microeconomic policy.

## ELECTRONIC TECHNOLOGY

Associate Dean: Bruce Sweet, MA

Instructors: Professor William Schlick, CBET, BEE, MCSE  
Adjunct Faculty

### ELECT 119 Basic Measurement and Reporting Skills (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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 logbook 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.

### ELECT 125 Electrical, Electronics Experience 1 (0-40) 3 Cr. Hrs.

*Prerequisite:* Consent of department.

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 a basis for grade in the course.

### ELECT 127 DC Circuits and Mathematical Modeling (5-0) 5 Cr. Hrs.

*Prerequisite:* MATH 053 or high school Algebra 1.

*Corequisite:* ELECT 119.

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 Fundamentals and Mathematical Modeling. Laboratory experiments and project(s) 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.

### ELECT 128 AC Circuits and Mathematical Modeling (5-0) 5 Cr. Hrs.

*Prerequisite:* ELECT 127.

This course is designed to explore the theory and application of AC Fundamentals. Sinewave 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 utilized to teach the use of common test equipment and to demonstrate the principals taught in lecture. PCs with Electronic Workbench will be used in laboratory experiments for modeling, simulations, and troubleshooting.



**ELECT 129 Diodes and Transistors (3-0) 3 Cr. Hrs.**

*Prerequisite:* ELECT 128.

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.

**ELECT 134 Introduction to Microcontrollers (3-0) 3 Cr. Hrs.**

*Prerequisite:* COMPS 126.

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. The students will keep the Board of Education at the completion of the course.

**ELECT 135 Fluid Power (4-0) 4 Cr. Hrs.**

*Prerequisite:* MATH 053 or equivalent.

This course emphasizes the understanding of the 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.

**ELECT 206 Operational Amplifiers and Linear Integrated Circuits (4-0) 4 Cr. Hrs.**

*Prerequisite:* ELECT 129.

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.

**ELECT 207 AC/DC Motors (3-0) 3 Cr. Hrs.**

*Prerequisite:* ELECT 127.

*Corequisite:* ELECT 128.

This course is designed to provide the student with a comprehensive understanding of motors used in industry. Principles and theories of magnetic fields and mechanical rotation will be covered. Basic through complex theories of rotor phase angles and effects on torque will be discussed. Magnetic and inductive theories, characteristics of various types of motors, and speed control used in DC and AC type motors will be studied.

**ELECT 226 Digital Logic Circuits (4-0) 4 Cr. Hrs.**

*Prerequisite:* ELECT 129.

This course introduces students to Boolean algebra (emphasizing NAND and NOR) and various medium scale integrated circuits like exclusive or encoders, decoders, multiplexers, adders, counters, and shift registers. Also explored are memory (core, RAM, and ROM) and bidirectional line drivers. The laboratory work coincides with classroom lecture material utilizing integrated circuits almost exclusively.

**ELECT 229 Electronic Troubleshooting (3-0) 3 Cr. Hrs.**

*Prerequisite:* ELECT 206 and ELECT 226.

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.

**ELECT 237 Programmable Logic and Industrial Controls (4-0) 4 Cr. Hrs.**

*Prerequisite:* Windows experience highly recommended.

The student will use Programmable Logic Controller (PLC) and Allen-Bradley RSLogix software to convert typical hardwired electrically controlled circuitry used in industry to a computer-controlled system. Emphasis will be placed on understanding the purpose and operating features of a PLC including input/output addressing and associated commands used in the PLC program. A computer will be used to write and download a program to be tested for logical control. The student will use Linx software and networking to learn communication procedures for downloading a PLC program to the controller as well as the types of cable connections used. PanelView will be reviewed to understand its real time monitoring capability of the software. Various PLC commands will be used including internal relays, ON and OFF timers, UP and DOWN counters, subroutines, program control and math instructions.

**ELECT 239 Programmable Logic System Design (4-0) 4 Cr. Hrs.**

*Prerequisite:* ELECT 237 or equivalent PLC experience.

The student will use Allen-Bradley RSLogix 500 software to be interfaced with RSLinx communication software, and PanelView for control panel applications. Data Highway Plus will be used for network communications with other Programmable Logic Controllers (PLC) components. Emphasis will be placed on incorporating and combining programming commands, timers, counters, subroutines, data manipulation, and mathematics into control process systems. Installing, wiring, and networking PLC systems will be covered. Students will learn how to use troubleshooting features of the PLC software to find and diagnosis hardware, configuration, and programming problems.

**ELECT 241 Electronics Projects (3-0) 3 Cr. Hrs.**

*Prerequisite:* ELECT 229 or equivalent.

Advanced use of electronics and a microcomputer to design, build and operate a real time system will be explored. 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 computer. 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 computer. 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.

**ELECT 250 Individual Student Projects (3-0) 3 Cr. Hrs.**

*Prerequisite:* By midterm of the previous semester the student must submit a written proposal for approval by department.

Students will plan, organize, assemble or fabricate and test the project of their choice or one suggested by the 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.

## EMERGENCY MEDICAL TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA

Instructors: Adjunct Faculty

### EMT 108 **Emergency Medical Technology—Basic (8-4-4) 10.5 Cr. Hrs.**

*Prerequisite:* BIOL 105 recommended.

The Basic Emergency Medical Technician course is an approved course that provides the information and experience necessary to prepare the student to take the National Registry of Emergency Medical Technician 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.

### EMT 114 **Emergency Medical Technology—Specialist (5-3-6) 7 Cr. Hrs.**

*Prerequisite:* EMT 108.

Emergency Medical Technology-Specialist is an approved course that provides the information and experience necessary to prepare the student to take the National Registry of Emergency Medical Technician-Intermediate 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 108). 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.

### EMT 201 **Paramedic Technology 1 (11-3) 12.5 Cr. Hrs.**

*Prerequisite:* EMT 108.

This course provides the information and experience necessary to prepare the student for EMT 202 and to take the National Registry of Emergency Medical Technician-Paramedic licensing examination, following the completion of EMT 203. EMT 201 is designed to give students extensive practical application of the knowledge and skills acquired in EMT 108 and/or EMT 114 in complex medical situations. The course focuses on state-of-the-art medical technologies and medical emergency management.

### EMT 202 **Paramedic Technology 2 (9.5-3-19) 12.5 Cr. Hrs.**

*Prerequisite:* EMT 201.

This course provides the information and experience necessary to prepare the student for EMT 203 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 203. EMT 202 is designed to give students extensive practical application of the knowledge and skills acquired in EMT 108 and EMT 201 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.

### EMT 203 **Internship Experience (6-5-11) 9.5 Cr. Hrs.**

*Prerequisite:* EMT 202.

This 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 203 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.

## ENGINEERING

Associate Dean: Bruce Sweet, MA

Instructors: Professor Catherine Ferman, MS, PE

Associate Professor Lisa Zaccone, MS, PE

Adjunct Faculty

### ENGR 100 **Introduction to Engineering and Technology (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

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.

### ENGR 201 **Statics (3-0) 3 Cr. Hrs.**

*Prerequisite:* PHYS 211.

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.

### ENGR 202 **Mechanics of Materials (3-0) 3 Cr. Hrs.**

*Prerequisite:* ENGR 201.

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.

### ENGR 203 **Dynamics (4-0) 4 Cr. Hrs.**

*Prerequisite:* ENGR 201.

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.

## ENGLISH

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Professor Omar Addi, MA

Professor Sumita Chaudhery, PhD

Professor Steven Dolgin, DA

Professor Mark Harris, MA

Professor Mary Alice Palm-Leopold, MA

Professor Faye Schuett, PhD

Professor Ida Simmons-Short, MA

Associate Professor Steven Berg, PhD

Associate Professor Archana Maheshwari, MA

Instructor Helen Ditouras, MA

Instructor Elzbieta Rybicka, MA

Adjunct Faculty

### ENG 050 Modern English Grammar (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This is the first of a two-part sequence (ENG 050/055) designed to prepare students for composition courses. The course content focuses on major grammatical concepts and writing. A grade of 2.0 or better in ENG 050 is necessary to enter ENG 055.

### ENG 055 Building Writing Skills (3-0) 3 Cr. Hrs.

*Prerequisite:* Satisfactory placement test score or minimum grade of 2.0 in ENG 050 or ESL 052.

This is the second of a two-part sequence (ENG 050/ENG 055 or ESL 052/ENG 055) designed to prepare students for composition courses. The course focuses on the writing process, paragraph development, revision, and essay structure. A grade of 2.0 or better in ENG 055 is necessary to enter ENG 101.

### ENG 100 Communication Skills (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course deals with a variety of written and oral communication skills. Students learn about the application of interpersonal and intrapersonal communication, including but not limited to presentations, interviews, collaborative work, and technological tools as used in personal, social and career communications.

### ENG 101 English Composition 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* Satisfactory high school English background or ENG 055 with a minimum grade of 2.0.

This course teaches students to prepare and write a number of clear, well-developed essays, using exposition and other rhetorical modes. This process assists students in building writing strategies and methodologies for college and professional writing.

### ENG 102 English Composition 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 101 with a minimum grade of 2.0.

This course teaches students to conduct and integrate research and write the research paper. This process assists students in developing research and writing strategies to use in a variety of college and professional contexts.

### ENG 106 Business English (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 100 or ENG 101 with a minimum grade of 2.0 and basic computer skills.

This course examines verbal and nonverbal communication theories and methods relating to business. Students write business documents and apply a variety of methods for collecting and presenting data.

### ENG 107 Introduction to Journalism (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.

This course is an introductory survey in mass media such as newspapers, magazines (consumer and small), radio, TV, advertising, public relations and the World Wide Web. The course will emphasize newspapers and magazines while recognizing news and feature values, discovering audience, reporting, writing, planning content and format.

### ENG 116 Technical Writing (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 100 or ENG 101 with a minimum grade of 2.0.

This course provides practical instruction in speaking, listening and technical writing for business and industry. Students learn to apply the principles of organizational structure, resume writing, job hunting, interviewing and technical reporting.

### ENG 170 Modern Literature By and About Women (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

Reading and discussion of fiction, poetry, drama and prose by women writers of the 20th and 21st centuries. Students use literary analysis to explore women's literature as well as the experiences, roles, and art of modern women and women writers.

### ENG 200 Introduction to Film (4-0) 4 Cr. Hrs.

*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.

This course studies how film accomplishes its purposes, whether as simple entertainment, social commentary or complex art. Students will view and discuss selected films and explore the history, criticism, aesthetics and technique of film.

### ENG 203 Children's Literature (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.

This course surveys literature for children and adolescents in K–12 curriculum. By reading, analyzing and researching various genres of children's literature, students gain a historical perspective and establish standards of critical evaluation.

### ENG 205 Creative Writing (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.

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.

### ENG 206 Creative Writing (3-0) 3 Cr. Hrs.

*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.

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.

- ENG 221 Advanced Composition (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 This course provides advanced composition theory and practice for students to develop writing skills beyond ENG 101 and ENG 102. It emphasizes the writing process, revision strategies, and standard research techniques. It also encourages peer collaboration and evaluation to reflect professional writing.
- ENG 243 Introduction to Literature—Short Fiction (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 Using elements of fiction, this course develops standards for critical evaluation to increase understanding and appreciation of short stories. Students read and analyze short fiction and its forms from early to modern times.
- ENG 244 Introduction to Literature—Poetry (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 This course develops standards for critical evaluation to increase the understanding and appreciation of poetry. Students read and analyze poetry and its forms from early to modern times.
- ENG 245 Introduction to Literature—Drama (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 Students will read and discuss a number of plays, especially those written since 1850. This course is designed to develop standards for critical evaluation and increase understanding and appreciation of drama as a literary form.
- ENG 246 Introduction to Literature—Novel (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 The course examines classic, unique, and emerging examples of novels. Students use elements of fiction to critically evaluate novels, thereby expanding their understanding and appreciation for prose fiction.
- ENG 248 Introduction to Literature—Shakespeare (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 This course develops standards for critical evaluation using elements of drama and poetry. Students read and analyze selected Shakespearean works to understand and appreciate one of Western civilization's greatest playwrights.
- ENG 251 American Literature from Colonial Times to the Civil War (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 Students read and analyze significant literary works that illustrate the changing currents of thought and expression that dominated American life from colonial times to the Civil War.
- ENG 252 American Literature from the Late Nineteenth Century to the Present (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 Students read and analyze significant literary works that illustrate the changing currents of thought and expression that have dominated American life from the Civil War to the present.

- ENG 275 World Literature—Casebook Studies of Universal Themes (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with a 2.0 grade.  
 This course will examine a variety of international literary works pertaining to common, literary themes. Such themes will be explored through poetry, drama, fiction and/or non-fiction. Works not originally written in English will be read in translation.
- ENG 280 The Nature of Language (3-0) 3 Cr. Hrs.**  
*Prerequisite:* ENG 101 with minimum grade of 2.0 or consent of instructor. ENG 102 recommended.  
 This course is 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.

## ENGLISH AS A SECOND LANGUAGE

Associate Dean: Cheryl D. Hawkins, MS  
 Instructors: Adjunct Faculty

- ESL 051 English Language Skills—Communication, Speaking and Listening (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Appropriate placement test score.  
 This course is part of a series of courses designed to introduce non-native speakers of English to the skills they will need to succeed in an academic environment where English is spoken. Students will practice and develop verbal English language skills and will study vocabulary and techniques for building one's vocabulary.
- ESL 052 English Grammar and Basic Writing Skills (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Appropriate placement test score.  
 This course is part of a series of courses designed to introduce non-native speakers of English to the skills they will need to succeed in an academic environment where English is spoken. The content of this course focuses on major grammatical concepts, including parts of speech, sentence functions and sentence patterns.
- ESL 100 English Communication Skills (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Appropriate placement test score or successful completion of ESL 052.  
 This course is part of a series of courses designed to introduce non-native speakers of English to the skills they will need to succeed in an academic environment where English is spoken. The focus of this course is on high level grammar, communication skills including listening and vocal features (such as volume and intonation) and nonverbal communication skills.
- ESL 101 English Writing and Reading Skills (3-0) 3 Cr. Hrs.**  
*Prerequisite:* Appropriate placement test score or successful completion of ESL 052.  
 This course is part of a series of courses designed to introduce non-native speakers of English to the skills they will need to succeed in an academic environment where English is spoken. Students will practice and develop writing and critical thinking skills in preparation for ENG 101. A grade of 2.0 or better is necessary to enter ENG 101.

## ENVIRONMENTAL STUDIES

Assistant Dean: Richard Weinkauff, MS

Instructors: Professor Diane O'Connell, MS  
Adjunct Faculty

### ENVR 107 Soil Mechanics (3-2) 4 Cr. Hrs.

*Prerequisite:* MATH 113.

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.

### ENVR 204 Introductory Surveying (3-0) 3 Cr. Hrs.

*Prerequisite:* MATH 113.

This course is an introduction to field survey techniques and computer applications related to surveying. Comprehensive study of the techniques and procedures used to locate and measure features will be explored. The course will include the use of surveying total station and data collector in the gathering of field data for planimetric and topographic maps.

### ENVR 206 Environmental Law (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides an introduction to both federal and state environmental laws. Topics include common law and toxic torts, federalism, and statutory law. Federal environmental laws include National Environmental Policy Act, Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and Comprehensive Environmental Response, Compensation, and Liability Act. The Michigan Natural Resources and Environmental Protection Act is also discussed.

### ENVR 218 Environmental Hydrology (3-0) 3 Cr. Hrs.

*Prerequisite:* GEOG 130 or GEOG 133 and GEOG 212.

This course is a survey of water resources and includes study of the occurrence, movement, and properties of both surface water and groundwater. Elements of the hydrologic cycle (precipitation, infiltration, evapotranspiration, evaporation, and surface runoff) are described. The impact of land use on hydrologic resources, such as the increase of storm water and degradation of water is discussed. A study of watershed management, a holistic, integrated method of managing all water resources located within a naturally occurring watershed, is included. Data and hydrologic studies for the Rouge River Watershed and its sub-basins provide a model for watershed management. The course also includes hydrologic computer mapping exercises and fieldwork in the Bell Branch of the Rouge River.



### ENVR 230 Energy Resources (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course presents an overview of nonrenewable and renewable energy resources. Energy resources derived from the earth provide the majority of our energy needs. These resources include fossil fuels (petroleum, natural gas, and coal) and radioactive ores used to generate nuclear power. Nonrenewable energy resources are finite and may be used up in the future. Extraction of these geologic materials can result in negative environmental impact if careful management strategies are not employed. Energy needs for our industrial economy may be met using both renewable and alternative energy sources. Renewable and alternative energy sources include hydro power, solar power, geothermal power, biomass, and wind power. Alternative fuels may be used in the transportation sector. Other course topics include energy conservation, air pollution, energy and sustainable development, and energy and global climate change.

### ENVR 231 Environmental Field Experience (1-4) 5 Cr. Hrs.

*Prerequisite:* Successful completion of two years of the Environmental Technology Program.

The environmental field experience is a capstone class that provides students with an opportunity to apply the skills and knowledge learned in the Environmental Studies Program to off-campus work experience in government, private industry, or non-profit organization. Students can also meet the course requirements by completing a service learning project that incorporates an environmental issue. Class discussions include sources of employment in the environmental profession, job applications and interviews, and preparing resumes. Students complete a project related to the field experience.



## FIRE TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA  
 Program Coordinator: John Smilnak, BS  
 Instructors: Adjunct Faculty

**FIRE 112 Fire Fighter 1—Basic Fire Suppression (6-4) 10 Cr. Hrs.**  
*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.

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. This course is for students who are currently employed by a Michigan Fire Marshall recognized fire department, or currently seeking employment, and/or 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 fire fighters.

**FIRE 119 Fire Fighter 2—Advanced Fire Suppression (7-3) 10 Cr. Hrs.**

*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 Fighter 2 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, or currently seeking employment, and/or 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 career fire fighters.

**FIRE 124 Fire Academy (13-7) 20 Cr. Hrs.**

*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.

The Fire Academy combines FIRE 112 and FIRE 119, 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. This course meets the state-mandated requirements for preparing students who intend to become professional Michigan fire fighters to take the state certification exam for entry-level career fire fighters.

**FIRE 128 Fire Fighting—Hydraulics and Water Supply (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

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.

**FIRE 130 Fire Fighting—Tactics and Strategy (3-0) 3 Cr. Hrs.**

*Prerequisite:* FIRE 112 or FIRE 124 is recommended.

This course examines new technology, fire fighting techniques and improved equipment as well as provides a guide for fire fighters and fire officers who need methods for handling specific situations. The course also covers general principles of fire fighting, engine company operations, search and rescue, structure fires, and fire related emergencies.

**FIRE 135 Fire Protection Systems (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

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.



**FIRE 141 Special Topic—Incident Command System (1-0) 1 Cr. Hr.***Prerequisite:* None.

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. The course 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.

**FIRE 142 Special Topic—Terrorism Awareness (1-0) 1 Cr. Hr.***Prerequisite:* None.

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.

**FIRE 200 Fire and Arson Investigation (4-0) 4 Cr. Hrs.***Prerequisite:* FIRE 112 or FIRE 124.

This course is designed to acquaint students with data on fire dynamics, explosions and fire behavior. The course is for students interested in learning fundamentals of collection, preservation and analysis of physical evidence. Also covered as part of the course are new laws and court decisions controlling investigator's access to scene and admission of evidence. This course prepares students for on-scene investigation as well as in-service or promotional exams.

**FIRE 205 Fire Department Organization and Administration (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This course is designed to equip the student with knowledge to effectively tackle challenging management problems and deliver practical solutions for managing today's fire departments. This course provides guidance on leadership skills: motivating and disciplining personnel, accepting cultural diversity and unity. Also covered in this course is managing human resources, the use of computer technology for information management and strategic planning and budgeting.

**FIRE 207 Fire Company Officer (3-0) 3 Cr. Hrs.***Prerequisite:* FIRE 119 or FIRE 124.

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.

**FRENCH**

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Instructor Anita Suess Kaushik, PhD  
Adjunct Faculty**FR 101 Elementary French 1 (4-0) 4 Cr. Hrs.***Prerequisite:* None.

This course is intended for students who have no previous education in French. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in French). An appreciation of the French and Francophone culture will be an integral part of the course.

**FR 102 Elementary French 2 (4-0) 4 Cr. Hrs.***Prerequisite:* One year of high school French or FR 101 with grade of 2.0 or better or consent of instructor.

This course is a continuation of FR 101 and continues to review the basic French grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in French). An appreciation of the French and Francophone culture will be an integral part of the course.

**FR 201 Intermediate French 1 (4-0) 4 Cr. Hrs.***Prerequisite:* Two years of high school French or FR 102 with grade of 2.0 or better or consent of instructor.

This course is a continuation of FR 102 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in French). An appreciation of the French and Francophone culture will be an integral part of the course.

**FR 202 Intermediate French 2 (4-0) 4 Cr. Hrs.***Prerequisite:* Three years of high school French or FR 201 with grade of 2.0 or better or consent of instructor.

This course is a continuation of FR 201 with a broader emphasis on speaking (present-day spoken French), listening comprehension, and reading. Through varied class activities, the main focus will be on oral proficiency and communication (the course will be entirely conducted in French). An appreciation of the French and Francophone culture will be an integral part of the course.



## GEOGRAPHY

Assistant Dean: Richard Weinkauff, MS

Instructors: Professor Diane O'Connell, MS  
Adjunct Faculty

### **GEOG 105 Earth Science for Elementary Teachers (3-2) 4 Cr. Hrs.**

*Prerequisite:* None.

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. Course includes lecture, peer teaching, selecting textbooks, demonstrations, and lesson plan development.

### **GEOG 130 Physical Geography (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

This course utilizes a systems approach to analyze the earth's dynamic systems: energy, atmosphere, water resources, weather and climate, tectonic processes, landforms, soil, vegetation, and ecosystems. Introductory geographic concepts, including absolute and relative location, spatial analysis and geographic approach, are covered. Fundamentals of map reading, remote sensing, and geographic information systems are included.

### **GEOG 133 World Regional Geography (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

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, Sub-Saharan 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.

### **GEOG 203 Weather and Climate (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course provides an overview of the Earth's atmospheric system. Topics include energy, temperatures, atmospheric moisture, cloud formation, precipitation, atmospheric pressure, weather systems, weather forecasting, severe weather, and global climate patterns. Discussions include global climate change and air pollution.

### **GEOG 212 Environmental Science (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course is an introductory environmental science course with no prerequisites. The course offers an in-depth examination of a variety of local, regional, and global environmental concerns. The course focuses on the effects that human societies have on the physical environment and the global biosphere. Topics include human population distribution, growth rates and population explosion, erosion and contamination of soil resources, degradation of water resources, air pollution, global climate change, waste management, biodiversity and deforestation.

### **GEOG 217 Water Resources (3-0) 3 Cr. Hrs.**

*Prerequisite:* GEOG 130.

This course is a 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 will be held. Course 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.

### **GEOG 225 Introduction to Geographic Information Systems—GIS (4-0) 4 Cr. Hrs.**

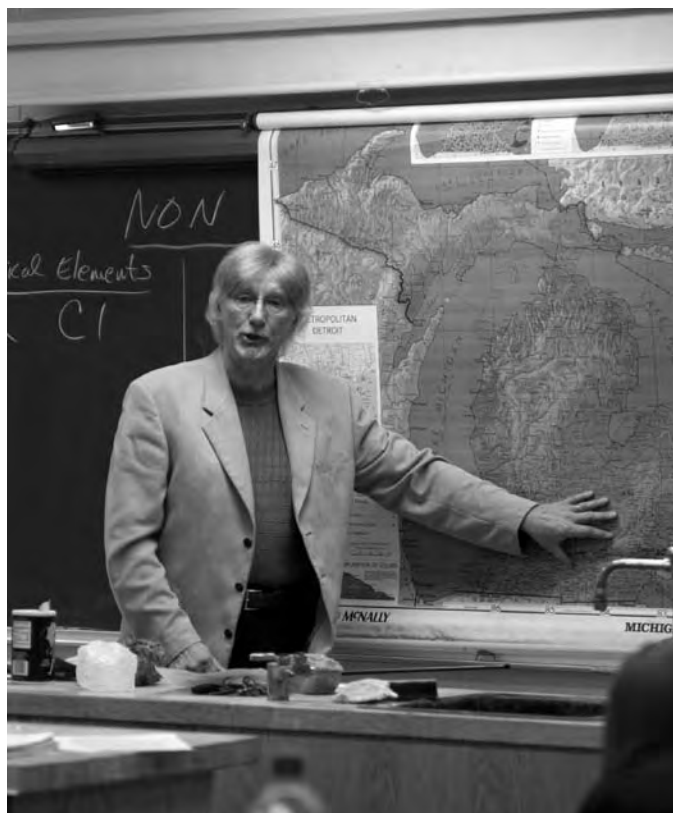
*Prerequisite:* None.

This course provides an introduction to basic Geographic Information Systems (GIS) concepts through in-class discussions and hands-on assignments using ArcGIS. The course includes theory, mapping techniques, data collection and compilation, and data analysis. Topics include implementation of a GIS, current applications, legal issues, and the future of GIS.

### **GEOG 241 Geography Field Trip—Latin America (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

This field study course includes a systematic geographic study of the Latin American realm, which includes the Caribbean, Middle America, and South America. Geographic concepts, such as map reading and spatial analysis, are first introduced. The physical, cultural, political, and social features of the Latin America realm are studied, with a focus on regional concerns or problems. The course will conclude with a field trip to a Latin American country to facilitate a live, experiential encounter with the unique physical and cultural landscape of that country.



## GEOLOGY

Assistant Dean: Richard Weinkauff, MS  
Instructors: Professor James REXIUS, MS

### GEOL 120 **Geology of Michigan (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

Geology of Michigan is a history of the geological evolution of the state. Course emphasis will be 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.

### GEOL 133 **Physical Geology (3-3) 4 Cr. Hrs.**

*Prerequisite:* None.

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.

### GEOL 134 **Historical Geology (3-3) 4 Cr. Hrs.**

*Prerequisite:* GEOL 133.

Historical Geology is the study of the geologic development of the earth as a planet from its creation to the present time. The first half of the course is a study of the methods and techniques that the science of geology uses to unravel the history of the earth. The second half applies these techniques to present the geologic history of the continent of North America as a case study.

### GEOL 140 **Regional Geology (2-0) 2 Cr. Hrs.**

*Prerequisite:* GEOL 133.

### GEOL 142 **(Spring and/or Summer Sessions only)**

A different selected geologic region of interest in the United States or Canada will be studied each spring or summer in detail. A field trip to each area is taken to observe first hand the rocks, fossils, structures and significant depositional and erosional processes at work in that particular region. Areas to be considered include the Canadian shore of Lake Superior, the Southern Appalachians, Northern Arizona, Black Hills, Adirondack Mountains, the Yellowstone area, Costa Rica or others as requested. Check with the department for the next area to be studied. A student may enroll in any regional course or in more than one, in subsequent years.

### GEOL 237 **Mineralogy (3-2) 4 Cr. Hrs.**

*Prerequisite:* GEOL 133.

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. The course also includes the formation of minerals and mineral occurrences and associations. Laboratory periods concentrate on the methods used in the identification of about 100 minerals.

## GERMAN

Associate Dean: Cheryl D. Hawkins, MS  
Instructors: Instructor Anita Suess Kaushik, PhD  
Adjunct Faculty

### GER 101 **Elementary German 1 (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

This course is intended for students who have no previous education in German. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in German). An appreciation of German culture will be an integral part of the course.

### GER 102 **Elementary German 2 (4-0) 4 Cr. Hrs.**

*Prerequisite:* Minimum one year of high school German or GER 101 with grade of 2.0 or better or consent of instructor.

This course is a continuation of GER 101 and continues to review the basic grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in German). An appreciation of German culture will be an integral part of the course.

### GER 201 **Intermediate German 1 (4-0) 4 Cr. Hrs.**

*Prerequisite:* Two years of high school German or GER 102 with grade of 2.0 or better or consent of instructor.

This course is a continuation of GER102 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in German). An appreciation of German culture will be an integral part of the course.

### GER 202 **Intermediate German 2 (4-0) 4 Cr. Hrs.**

*Prerequisite:* Three years of high school German or GER 201 with grade of 2.0 or better or consent of instructor.

This course is a continuation of GER 201. Review and application of essential principles of German structure and more elaborate application of Business German terminology will be covered. Course will continue emphasis on the listening, speaking, and reading of selected business sections. Understanding advanced grammatical structures through writing and speaking in the classroom will be explored. Workbook exercises are required.



## HEALTH INFORMATION TECHNOLOGY

Associate Dean: Robert F. Pearce, MPA

Coordinator/Instructor: Professor Patricia Rubio, MSA

Instructors: Professor Jody Scheller, MS

Adjunct Faculty

### HIT 100 Introduction to Medical Terminology (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This course is a basic overview of medical terminology. The students will be introduced to medical terminology used in healthcare. The topics in the course provide activities to allow the student to spell, define and pronounce medical terminology.

### HIT 104 Medical Terminology (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course introduces the student to the fundamentals of the language of medicine. Definitions, pronunciations, spelling and abbreviations of anatomic, symptomatic, diagnostic and operative terms pertaining to each anatomical system of the body will be reviewed. Terms pertaining to pharmacology, clinical laboratory, radiology and pathology will also be explored.

### HIT 109 Principles of Health Information Management (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides the student an introduction to the health information management profession. Educational and certification requirements are examined along with potential employment opportunities in the health information profession. The health information management department, its functions and the relationship to other departments is explored. Health record content, documentation requirements and the accrediting and licensing agencies that govern health information will be reviewed. Hands-on laboratory activities will help the student to gain proficiency in basic health information functions.

### HIT 110 Human Diseases (4-0) 4 Cr. Hrs.

*Prerequisite:* BIOL 105 or BIOL 236 or BIOL 237 and BIOL 238 and HIT 104.

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.

### HIT 111 ICD-9-CM Classification (2-2) 3 Cr. Hrs.

*Prerequisite:* HIT 104, HIT 109, HIT 110 and BIOL 236 or consent of department.

This course is an introduction to basic coding theory and computer laboratory practice applying ICD-9-CM to hospital medical/health records. 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.

### HIT 112 Basic Laboratory and Diagnostic Tests (2-0) 2 Cr. Hrs.

*Prerequisite:* HIT 104 or consent of department.

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.

### HIT 114 Pharmacology for Health Professionals (2-0) 2 Cr. Hrs.

*Prerequisite:* HIT 104.

This course is designed as an introduction to the principles of pharmacology, with a comprehensive review of drug action, routes of administration, and indications for use of generic drugs, and trade name drugs. The course will provide practice in pronunciation, spelling, and utilization of drug references. Class activities will assist the student in identifying drugs used to treat various body systems.

### HIT 152 Computer Applications in Healthcare (2-0) 2 Cr. Hrs.

*Prerequisite:* HIT 109, HIT 154 and HIT 156.

This course is an introduction to the theory and practical methodology of healthcare information systems utilized in a health information management (medical record) department. The course will introduce the student to information systems used in healthcare organizations. The student will develop an understanding of the role of the health information technician in information systems planning and development. The student will be introduced to emerging technologies in healthcare information systems.

### HIT 154 Health Record Practicum (0-4) 3 Cr. Hrs.

*Prerequisite:* HIT 104 and HIT 109.

*Corequisite:* HIT 156.

This course allows the health information student hands-on experience using a chart management system that includes chart tracking, chart deficiency, coding and abstracting, master patient of health information management activities utilizing health/patient records, software applications and manual systems are simulated.

### HIT 156 Clinical Affiliation 1 (0-4) 2 Cr. Hrs.

*Prerequisite:* HIT 104, HIT 109, BIOL 236 and consent of department.

*Corequisite:* HIT 154.

This course 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.

### HIT 210 Healthcare Statistics for Health Information Management (2-2) 3 Cr. Hrs.

*Prerequisite:* HIT 104, HIT 111 and HIT 154.

This course introduces students to terminology, definitions and computational methodology of the basic and most frequently used health statistics. Topics examined include healthcare data collection, preparation, analysis and interpretation; cancer program requirements; vital statistics reporting.

### HIT 213 Health Information Technology Seminar (1-0) 1 Cr. Hr.

*Prerequisite:* None.

*Corequisite:* HIT 258.

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.

**HIT 216 Healthcare Delivery Systems (2-0) 2 Cr. Hrs.**

*Prerequisite:* HIT 104, HIT 111 and HIT 154.

This course provides for a comprehensive review of the healthcare industry. Trends and changes related to healthcare facilities such as acute care hospitals, specialty hospitals, long term care facilities, managed care organizations, ambulatory care, behavioral care, hospice and home healthcare are investigated. The course will also deal with the impact and use of computers in the delivery and documentation of healthcare and the role of the health information professional within the healthcare delivery system.

**HIT 217 Quality Management in Healthcare (2-0) 2 Cr. Hrs.**

*Prerequisite:* None.

*Corequisite:* HIT 256.

This course is designed for the health information technology student to review methods by which a healthcare organization measures, assesses and improves the quality of healthcare services. Topics explored include traditional quality assessment, performance improvement methodologies, utilization/resource management, risk management, infection control, credentialing and the role of oversight agencies.

**HIT 219 Organization and Management (1-2) 2 Cr. Hrs.**

*Prerequisite:* None.

*Corequisite:* HIT 258.

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.

**HIT 220 Legal Aspects of Health Information (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course provides the health information technology student with an understanding of the American legal system and the legal requirements concerning the compilation and maintenance of health information. Additional topics include how health information is used and when it can be disclosed, state and federal regulations, statutes, including the privacy and security rules resulting from the Health Insurance Portability and Accountability Act (HIPAA).

**HIT 221 Basic Ambulatory Coding (2-1) 3 Cr. Hrs.**

*Prerequisite:* HIT 104, HIT 109, HIT 110 and BIOL 236.

This course is an introduction to basic coding theory and computer laboratory practice applying CPT to ambulatory medical/health records. 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.

**HIT 227 Intermediate ICD-9-CM Coding (2-1) 3 Cr. Hrs.**

*Prerequisite:* HIT 110, HIT 111 and BIOL 236.

This course is designed to prepare a student to code in the hospital setting using ICD-9-CM. The course will emphasize reporting requirements for codes and rules that apply to 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 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. This course is the theory and practice of coding medical records in the hospital setting using ICD-9-CM. The student will use the encoding software in the laboratory to apply coding to charts.

**HIT 229 Intermediate Ambulatory Coding (2-1) 3 Cr. Hrs.**

*Prerequisite:* HIT 110, HIT 111, HIT 221 and BIOL 236.

This course is the theory and practice of coding medical/health records in the hospital/ambulatory setting using Current Procedural Terminology (CPT) and Healthcare Financing Administration Common Procedure Coding System (HCPCS). The student will use encoding software in the laboratory to apply coding to medical/health records. 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.

**HIT 230 ICD-9-CM Coding Practicum (1-1) 2 Cr. Hrs.**

*Prerequisite:* HIT 227 and HIT 229.

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 computerized encoding systems for diagnosis and procedure coding. The student will research references in solving coding problems.

**HIT 231 Ambulatory Coding Practicum (1-1) 2 Cr. Hrs.**

*Prerequisite:* HIT 227 and HIT 229.

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.



**HIT 240 Healthcare Reimbursement Methodologies (2-0) 2 Cr. Hrs.**

**Prerequisite:** HIT 109, HIT 111, HIT 154, HIT 156 and HIT 221.  
The course is designed to provide the student knowledge of the diverse reimbursement methodologies utilized by governmental and private insurance entities in the payment for healthcare delivery services. The course will present Third-Party Payer and Compliance/Auditing Issues, Correct Coding Policy and government prospective payment systems. The terminology and principles for managed care, revenue cycle management and other healthcare plans will be covered.

**HIT 256 Clinical Affiliation 2 (0-8) 2 Cr. Hrs.**

**Prerequisite:** HIT 110, HIT 111, HIT 154 and HIT 156.  
**Corequisite:** HIT 217.

This course provides practical experience for the student in a Health Information Management/Services Department under the supervision of qualified health information professionals. The student will have an opportunity to observe and interact with health information management professionals in a variety of healthcare facilities at off-campus sites. The student will observe, perform and report on the functions necessary to maintain a health information service.

**HIT 258 Clinical Affiliation 3 (0-8) 2 Cr. Hrs.**

**Prerequisite:** HIT 210, HIT 216, HIT 217, HIT 256 and consent of department.

This course provides professional practice assignments for the student in a Health Information Management/Services Department under the supervision of qualified Health Information Management professionals. The student will have the opportunity to observe and interact with Health Information Management professionals 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 organizations.

**HISTORY**

Associate Dean: Cheryl D. Hawkins, MS  
Instructors: Professor Robert Briggs, MAT  
Professor Kent Kirkpatrick, MA  
Associate Professor Steven Berg, PhD  
Associate Professor Alexander Thomson, PhD  
Instructor Enoch Baker, MA  
Adjunct Faculty

**HIST 134 Ancient World (4-0) 4 Cr. Hrs.**

**Prerequisite:** None.

This course is 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; and decline of classical civilizations, with emphasis on the fall of Rome and the rise of medieval Europe, Byzantium and Islam.

**HIST 137 Early Modern World (4-0) 4 Cr. Hrs.**

**Prerequisite:** None.

This course is 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; and climax of European expansion in the age of imperialism, to the late 19th century.

**HIST 138 Contemporary World (3-0) 3 Cr. Hrs.**

**Prerequisite:** None.

This course is 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 counter-revolution; 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; and the contemporary world order in historical context.

**HIST 141 History of Michigan and the Great Lakes (3-0) 3 Cr. Hrs.**

**Prerequisite:** None.

This course is 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; and emphasis on relating the history of the state to that of both the area and the nation.

**HIST 151 Early America—U.S. History (3-0) 3 Cr. Hrs.**

**Prerequisite:** None.

This course is a survey of the origins of American civilization: native American societies in pre-Columbian 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.; and Federalist and Jeffersonian America, to the early 19th century.



**HIST 152 19th Century America—U.S. History (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course is 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; and emergence of modern, urban, industrial America, to the beginning of the 20th century.

**HIST 153 Contemporary America—U.S. History (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course is 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 U.S. as a superpower; affluence, consensus and confrontation in the 1950s–1960s; malaise, drift and fragmentation in the 1970s–1980s; and the U.S. in the world of the late 20th century.

**HIST 230 U.S. Business History—1865 to Present (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course will provide students with 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. Course is recommended for students majoring in business, economics and history.

**HOMELAND SECURITY**

Associate Dean: Robert F. Pearce, MPA

Instructors: Adjunct Faculty

**HS 101 Introduction to Homeland Security (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course is an introduction to the concept of homeland security. The course will define and explain homeland security. The U.S. Department of Homeland Security will be thoroughly analyzed and its mission will be investigated. This course will also address chemical, biological, radiological, nuclear, and explosive devices and the use of these weapons of mass destruction. The importance and basic elements of a planned response, methods used to prevent the importation of weapons of mass destruction into the U.S., and what is being and what can be done to prevent another large-scale terrorist incident in the United States will be covered.

**HS 102 Understanding Terrorism (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course will introduce students to the phenomena of contemporary terrorism and extremism. Students will see special emphasis on extremism as the foundation for terrorist behavior, types of terrorism, and how governments and law enforcement agencies respond to terrorism. The first step is to understand the mindset, the groups, the aims, and the tools terrorists use.

**HS 201 Organizational and Facility Security (3-0) 3 Cr. Hrs.***Prerequisite: None.*

The focus of this course will be on traditional methods of physical security hardware, risk assessments, and business continuity. The course will also explore and assess developing security technology and its application to reduce internal and external threats to business.

**HS 202 Introduction to Emergency Management (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course will provide an overview of emergency management, as a career field, discipline, and approach to deal with all-hazards emergency/disaster response. This course will examine major disasters in history, concepts, theory, and terminology associated with emergency management.

**HS 203 Introduction to Intelligence Systems (3-0) 3 Cr. Hrs.***Prerequisite: None.*

This course will provide a study of the U.S. government's intelligence community as well as an overview of intelligence processes. This study will include a historical look at intelligence and some of its milestones. Discussed will be key terms, concepts and perspectives. Students will be exposed to the relationship of intelligence with law enforcement and homeland security and how some intelligence processes may be applied to emergency management and pre-incident planning.



## HUMAN DEVELOPMENT SERVICES

Director: Donna Nordman, MA

Instructors: Adjunct faculty

### HDS 101 Human Potential Seminar (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This class is suitable for students who wish to work in people-oriented positions. The course provides a structured small group educational experience that is designed to teach individuals to increase self-confidence, make decisions, develop self-motivation, and improve listening skills. Students will learn strategies to enhance their own development and how to apply those skills in working with others.

### HDS 110 Career Decision Making (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This course assists students 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 identify tentative career options, decision-making strategies, obstacles and planning skills.

## HUMANITIES

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Associate Professor James Nissen, DMA

Assistant Professor Holly Stevens, MA

Adjunct Faculty

### HUM 106 Introduction to Art and Music (1-0) 1 Cr. Hr.

*Prerequisite:* None.

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. No prior technical knowledge is needed.

### HUM 150 World Masterpieces (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### HUM 190 Individual Humanism—An Honors Colloquium (3-0) 3 Cr. Hrs.

*Prerequisite:* Acceptance to the Schoolcraft Scholars honors program.

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.

### HUM 201 Art and Music in Western Civilization: Field Study—England (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is a humanistic study of music and art in concentrated form through field study. Course includes art forms and functional styles of historical periods as they relate to universal principles. The course will also 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 to 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, first-hand encounter with English arts and culture.

### HUM 202 Art and Music in Western Civilization: Field Study—France (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is a humanistic study of the arts, culture, and history in concentrated form through field study. Course 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, first-hand encounter with French arts and culture.

### HUM 203 Art and Music in Western Civilization: Field Study—Italy (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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, first-hand encounter with Italian arts and culture.

### HUM 204 Art and Music in Western Civilization: Field Study—Spain (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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, first-hand encounter with Spanish arts and culture.

**HUM 210 The Art of Being Human (3-0) 3 Cr. Hrs.***Prerequisite:* None.

This course is an interdisciplinary introduction to the humanities as an overall approach to living. The course involves the student in the philosophies, religions, and arts as avenues of human inquiry and expression.

**HUM 212 Mass Media and Popular Culture (3-0) 3 Cr. Hrs.***Prerequisite:* ENG 101. ENG 102 recommended.

This course is 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.

**HUM 215 Humanities Through the Arts (3-0) 3 Cr. Hrs.***Prerequisite:* None.

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.

**HUM 231 The Humanities in Western Culture—Antiquity Through the Renaissance (3-0) 3 Cr. Hrs.***Prerequisite:* HUM 106 or HUM 150 or consent of instructor.

This course is 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. The course is also a study in Western thought and its resultant social and political institutions. The first of a two-semester sequence, this course will cover Ancient River-Valley, Greek, and Roman civilizations, the Middle Ages, and the Renaissance.

**HUM 232 The Humanities in Western Culture—Baroque to the Present (3-0) 3 Cr. Hrs.***Prerequisite:* HUM 106 or HUM 150 or consent of instructor.

This course is 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 and civilization; at values and qualities inherent in Western art, architecture, music, literature and philosophy. The course is also a study in Western thought and its resultant social and political institutions. The second of a two-semester sequence, this course will cover the Baroque, Classical and Romantic periods, as well as the major historical, philosophical, and artistic “isms” of the modern and post-modern Western world.

**ITALIAN**

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Instructor Anita Suess Kaushik, PhD  
Adjunct Faculty**ITAL 101 Elementary Italian 1 (4-0) 4 Cr. Hrs.***Prerequisite:* None.

This course is intended for students who have no previous education in Italian. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Italian). An appreciation of the Italian culture will be an integral part of the course.

**ITAL 102 Elementary Italian 2 (4-0) 4 Cr. Hrs.***Prerequisite:* One year of high school Italian; or ITAL 101 with grade 2.0 or better; or consent of instructor.

This course is a continuation of ITAL 101 and continues to review the basic Italian grammar patterns and to build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Italian). An appreciation of the Italian culture will be an integral part of the course.



## LASER TECHNOLOGY

Associate Dean: Bruce Sweet, MA  
Instructors: Professor James Kramer, MS  
Adjunct Faculty

### LASR 103 Laser Concepts (4-0) 4 Cr. Hrs.

*Prerequisite:* High school Algebra I.

This basic course, designed for laser technicians, covers laser operation and the technical principles and equations needed to understand them and modify their output. The course also deals with optical system construction, including lenses, mirrors, prisms, optical flats, etalons, beam expanders, collimators, optical tables, optical supports, and photographic components. Associated laboratory experiments will allow the technician to get “hands-on” experience with the set-up, operation, and analysis of laser/optic systems.

### LASR 104 Laser Optics and Components (5-0) 5 Cr. Hrs.

*Prerequisite:* High school Algebra 2.

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 covered include ray tracing, imaging with lenses, mirrors prisms, windows optical flats, etalons, beam expander, collimators, optical tables, optical supports, optical systems, and photographic components and supplies. Associated laboratory stresses hands-on experience with set-up, operation and analysis of typical optical systems.

### LASR 125 Laser Safety Concepts (3-0) 3 Cr. Hrs.

*Prerequisite:* MATH 053 or equivalent and BMET 116.

This course has been designed as a basic introduction to medical applications in laser fundamentals and safety. Students will study the three properties of laser light: monochromatic, directionality, and coherency. Biomedical concerns of laser hazards involving the eye, skin, toxicity, electrical, and fire will be covered. Types of site and skin damages that can occur when exposed to laser wavelength will be explored. Laser system hazards classifications and safety standards will be reviewed in addressing potential hazards, necessary safety restrictions, and specified laser classifications based on American National Standards Institute (ANSI) Z136.3 Standard along with relevant Federal Center for Devices and Radiological Health (CDRH), Occupational Safety and Health Administration (OSHA) as well as relevant State of Michigan requirements.

### LASR 232 Laser Systems and Applications 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* LASR 103.

A comprehensive examination of ion lasers, molecular lasers and solid-state laser, with particular attention given to argon ion CO<sub>2</sub> gaseous and ND: YAG laser systems. Course considers typical power sources for all lasers and flash lamps and power supplies for pulsed laser systems. Course treats applications of the ion and CO<sub>2</sub> 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.

## MANUFACTURING

Associate Dean: Bruce Sweet, MA  
Instructors: Adjunct Faculty

### MFG 102 Basic Machining Processes (2-4) 3 Cr. Hrs.

*Prerequisite:* None.

This course will cover fundamental manufacturing processes. The student will be exposed to manual machine operator skills. Particular course emphasis will be on machines, tools and measurements to produce an end product. This is a hands-on class with two-thirds of the time in the manufacturing lab.

### MFG 103 Manufacturing Operations (2-4) 3 Cr. Hrs.

*Prerequisite:* MFG 102.

Students will be introduced to the operation of the CNC Mill and CNC Lathe through the use of the basic fundamental of G-codes and M-codes. Machine and tool set up will also be covered. As part of the class, students will make several small projects on the CNC machines. These machines are used in today's industrial manufacturing plants.

### MFG 105 Manufacturing Processes (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course will serve as an introduction to a variety of manufacturing processes, such as casting, forming, plastics, machining, and joining. It is meant to be an overview and will concentrate on the uniqueness of each process as it applies to materials and production capabilities. In addition, the student will have a brief exposure to the properties of materials as they relate to particular manufacturing processes and the concepts of measurement, inspection, and tolerances.

### MFG 180 Industrial Entrepreneurship (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

This course is designed to familiarize the technology student with the basic principles of business in order to make them knowledgeable employees or to prepare them for the eventuality of becoming a business owner. The course is intended to provide a comprehensive overview and culminates in the development of a real business plan. The course is not intended to be a substitute for a thorough education in a conventional business curriculum.

### MFG 203 Advanced Manufacturing Operations (2-4) 3 Cr. Hrs.

*Prerequisite:* MFG 103.

This course will cover CNC machining as well as the advanced functions of the controller. All machine-based operational aspects of the CNC machine used in industrial manufacturing plants will be covered. This course will provide a more advanced machining experience.



**MFG 241 Quantitative Metrology (1-2) 3 Cr. Hrs.**

*Prerequisite:* MET 102 and MATH 113 may be taken concurrently or consent of department.

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 covered in the course 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.

**MFG 243 Manufacturing Systems Analysis (3-0) 3 Cr. Hrs.**

*Prerequisite:* MFG 102.

Students will explore the 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 will be covered.

**MASSAGE THERAPY**

Associate Dean: Robert F. Pearce, MPA

Coordinator: Kathleen M. Paholsky, NCTMB

Instructors: Adjunct Faculty

**MAS 101 Theory and Fundamentals of Massage Therapy (2-0) 2 Cr. Hrs.**

*Prerequisite:* None.

*Corequisite:* MAS 102 and MAS 103.

This course deals with the history, professional standards, ethics, and scope of practice for massage therapy. The student is introduced to professional methods of communication and setting boundaries. The concepts of indication and contraindications are presented in relationship to pathology. Stress responses and stress management are discussed with the focus on health maintenance.

**MAS 102 Basic Massage Applications (4-4) 6 Cr. Hrs.**

*Prerequisite:* None.

*Corequisite:* MAS 101 and MAS 103.

This class provides a solid base for the preparation and performance of massage in a wellness setting on healthy individuals. The tools of the trade, from tables and supplies through massage manipulations and techniques, are presented and practiced, with an emphasis on safe and effective applications and body mechanics.

**MAS 103 Fundamentals of Anatomy and Physiology (4-0) 4 Cr. Hrs.**

*Prerequisite:* None.

*Corequisite:* MAS 101 and MAS 102.

This course provides the foundation for the study of anatomy and physiology as it relates to massage therapists. Western science concepts and their correlations to Eastern philosophies are discussed and compared. General subject matter includes the organization of body structure, the mechanisms of health and disease, pathology, pain, stress management and adaptation. The course introduces medical terminology, especially the language encountered in massage. Study of the components of the skeletal and muscular systems, and an introduction to the nervous system begins in this course. Reflex mechanisms, feedback loops, and their relationship to massage are also presented.

**MAS 104 Intermediate Massage Applications (2-6) 5 Cr. Hrs.**

*Prerequisite:* MAS 101, MAS 102 and MAS 103.

*Corequisite:* MAS 109 and MAS 110.

This course covers both complementary bodywork systems and applications of massage for individuals with special needs. The course also presents business considerations for the practice of massage therapy as an employee or independent contractor. Wellness education as it relates to self-help and client activities will be studied. Applications of massage therapy in healthcare facilities and hospice/comfort care will be explored. Complementary bodywork systems include: muscle energy applications, hydrotherapy, reflexology, connective tissue and myofascial release approaches, Eastern/Asian bodywork, polarity therapy, and introduction to spa therapies. Special needs include the following populations: athletes, elderly, infants and children, prenatal applications, clients with physical disabilities, applications for chronic, serious or terminal illness.

- MAS 106 Palpatory and Assessment Skills (1-5) 3.5 Cr. Hrs.**  
*Prerequisite:* MAS 101, MAS 102, MAS 103, MAS 104, MAS 109 and MAS 110.  
*Corequisite:* MAS 107 and MAS 108.  
 This course will provide the massage student with an extensive opportunity to explore the various avenues of assessment for relaxation and therapeutic massage. Students will become more proficient in postural evaluation, tissue assessment, interpretation, and analysis during massage sessions. The creation of a database of intake and assessment information, and its use in interpretation and analysis to determine treatment methods and plans will be covered. Specific applications of massage and bodywork methods applicable to the treatment plans will be reviewed. A discussion of ergonomics—our relationship to the physical surroundings that affect body structure and function - the impact on massage, and self-care activities for clients to maintain health will be included.
- MAS 107 Organ Systems Anatomy and Physiology (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MAS 101, MAS 102, MAS 103, MAS 104, MAS 109 and MAS 110.  
*Corequisite:* MAS 106 and MAS 108.  
 This course addresses those organ systems emphasized in standard anatomy courses. Attention is given to methods of clinical reasoning and justification for identifying indications and contraindications for massage. Students will apply massage and bodywork to meet the needs of clients with more involved health conditions. As part of the course, the students will prepare a detailed case study and present it to the class. Evaluating criteria and analyzing information will be used as part of a peer review of the case studies presented.
- MAS 108 Massage Therapy Externship (0-50) 3 Cr. Hrs.**  
*Prerequisite:* MAS 101, MAS 102, MAS 103, MAS 104, MAS 109 and MAS 110.  
*Corequisite:* MAS 106 and MAS 107.  
 This is the cooperative assignment for a Massage Therapy student who has completed the prerequisites for this course. Students will meet 50 hours during the semester for at least three hours per week in a setting appropriate for massage therapy. The College and the therapy facility will jointly evaluate the student for the extern commitment. Community and College Outreach activities and presentations, and a student portfolio are included in the course requirements.
- MAS 109 Systems of Support and Movement (4-2) 5 Cr. Hrs.**  
*Prerequisite:* MAS 101, MAS 102 and MAS 103.  
*Corequisite:* MAS 104 and MAS 110.  
 The skeletal, muscular, and peripheral nervous systems are explored in detail in this course. They are the systems primarily addressed by massage therapists, and the focus will be on identifying structures, normal functions, characteristics, and common disease processes. A study of pharmacologic agents will be related to physiologic effects that require modification in massage sessions.
- MAS 110 Massage Therapy Student Clinic (0-4) 2 Cr. Hrs.**  
*Prerequisite:* MAS 101, MAS 102 and MAS 103.  
*Corequisite:* MAS 104 and MAS 109.  
 Students will experience a total of 60 hours of supervised practice using the skills they have learned in class. To prepare them for a professional massage work environment, all students will perform practical applications of massage, front desk activities, clinic supervision and management at the Radcliff campus clinic site. Some additional off-site opportunities may be available.

## MATHEMATICS

Assistant Dean: Richard Weinkauf, MS  
 Instructors: Professor Linda Balfour, MA  
 Professor Lois Bearden, MA  
 Professor Edward Kavanaugh, MA  
 Professor Sandra Kerr, MA  
 Professor Randy Schwartz, MA  
 Associate Professor Janet Arsznov, MA  
 Associate Professor Audrone Mingela, MA  
 Assistant Professor Katherine Anderson, MA  
 Instructor Andrea Lazarski, MA  
 Instructor Brad Stetson, MS  
 Adjunct Faculty

### CALCULATOR REQUIREMENTS:

MATH 113: A scientific calculator is required. If continuing in mathematics, a TI-83 Plus or TI-84 Plus is recommended.

MATH 119, 128 through 151: TI-83 Plus or TI-84 Plus is required.

MATH 122, 230 and 240: TI-83 Plus or TI-84 Plus is recommended.

MATH 252: Calculator is required. Consult with your instructor.

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.

- MATH 045 Basic Mathematics (4-0) 4 Cr. Hrs.**  
*Prerequisite:* None.  
 The topics covered in this course include fundamental operations with whole numbers, fractions, decimals, percentages and proportions. In addition, several topics from geometry are included.
- MATH 047 Prealgebra (3-0) 3 Cr. Hrs.**  
*Prerequisite:* MATH 045 or equivalent with grade of 2.0 or better.  
 This course is intended for the student who is competent in arithmetic. Topics covered in the course include an introduction to variables, integers, and algebraic expressions; simplifying algebraic expressions involving integers, fractions, and decimals; solving algebraic equations involving integers, fractions, decimals, and percents; ratio and proportions; applications using basic concepts from geometry; and introduction to graphing via point-plotting.
- MATH 053 Beginning Algebra (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 047 or equivalent with grade of 2.0 or better.  
 This course will explore the real number system, fundamental operations with real numbers, graphing, linear equations, factoring polynomials, rational expressions, exponents, quadratic equations, applications and introduction to the function concept.
- MATH 055 Plane Geometry (3-0) 3 Cr. Hrs.**  
*Prerequisite:* MATH 053 or equivalent with grade of 2.0 or better.  
 This course includes the basic elements of geometry including deductive reasoning and formal proofs, and elementary construction with straight edge and compass.
- MATH 101 Business Mathematics (3-0) 3 Cr. Hrs.**  
*Prerequisite:* MATH 045 with a minimum grade of 2.0 or equivalent.  
 This course offers a review of fundamentals of arithmetic along with coverage of percentage, simple and compound interest, taxes, insurance, bonds, and their applications to business practice.

- MATH 105 Mathematics for Elementary Teachers 1 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 053 or equivalent with grade of 2.5 or better.  
 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.
- MATH 106 Mathematics for Elementary Teachers 2 (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 105 or equivalent with grade of 2.0 or better.  
 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.
- MATH 111 Applications—Utility of Math (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 045 or equivalent with grade of 2.0 or better.  
 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 covered in the course include geometry, managing money, interest, installment buying, credit cards, loans, probability, statistics and graphing.
- MATH 113 Intermediate Algebra for College Students (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 053 or equivalent with grade of 2.0 or better.  
 Placement test is available in the Assessment Center.  
 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 are the topics covered in this course.
- MATH 119 Trigonometry (3-0) 3 Cr. Hrs.**  
*Prerequisite:* MATH 055 or equivalent with grade of 2.0 or better and MATH 113 or equivalent with grade of 2.0 or better.  
*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 are the topics included in this course.
- MATH 122 Elementary Statistics (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 113 or equivalent with grade of 2.0 or better.  
 Placement test is available in the Assessment Center.  
*Note:* The Mathematics Department recommends that business and social science majors take MATH 122 following MATH 135.  
 This course includes an 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, and use of nonparametric tests.
- MATH 128 Precalculus Without Trigonometry (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 113 or equivalent with grade of 2.0 or better.  
 NOTE: The combination of MATH 119 and MATH 128 is NOT comparable to MATH 129. MATH 128 is a prerequisite for MATH 145 Business Calculus but is NOT a prerequisite for MATH 150 Calculus I.  
*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 are the topics included in this course.
- MATH 129 Precalculus With Trigonometry (5-0) 5 Cr. Hrs.**  
*Prerequisite:* MATH 113 or equivalent with a grade of 2.0 or better and MATH 119 or equivalent with a grade of 2.0 or better.  
*Note:* MATH 129 is recommended for engineering, science and math majors.  
 Topics covered in this course include 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, and conic sections. The prevailing theme is applications and graphical solutions.
- MATH 135 Finite Mathematics (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 128 or equivalent with grade of 2.0 or better.  
*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, and mathematics of finance are the topics included in this course.
- MATH 145 Calculus for Business and Social Science (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 128 or equivalent with grade of 2.0 or better.  
 The main topics of this course are differentiation of algebraic, exponential and logarithmic functions; curve sketching, optimization, constrained optimization, integration; introduction to functions of several variables, and applications.
- MATH 150 Calculus With Analytic Geometry 1 (5-0) 5 Cr. Hrs.**  
*Prerequisite:* MATH 129 or equivalent with grade of 2.0 or better.  
 This course is oriented to engineering, science and mathematics majors. Limits and continuity, derivatives and integrals of algebraic and some trigonometric functions, curve sketching with the aid of the graphing calculator, and applications are the topics covered in this course.
- MATH 151 Calculus With Analytic Geometry 2 (5-0) 5 Cr. Hrs.**  
*Prerequisite:* MATH 150 or equivalent with grade of 2.0 or better.  
*Note:* MATH 151 may be taken concurrently with MATH 230.  
 This course includes the study of derivatives and integrals of transcendental functions, techniques of integration, indeterminate forms, improper integrals, infinite series, numerical methods, conics, polar coordinates, and applications.
- MATH 230 Linear Algebra (4-0) 4 Cr. Hrs.**  
*Prerequisite:* MATH 150 or equivalent with grade of 2.0 or better.  
 Topics covered in this course include systems of linear equations, matrices, determinants, Euclidean vector spaces, general vector spaces, inner product spaces, eigenvalues and eigenvectors, diagonalization, linear transformations, and applications.
- MATH 240 Calculus With Analytic Geometry 3 (5-0) 5 Cr. Hrs.**  
*Prerequisite:* MATH 151 or equivalent with grade of 2.0 or better.  
 Vectors in the plane, vectors in three-space, solid analytic geometry, partial derivatives, line integrals, multiple integrals and applications are the topics covered in this course.
- MATH 252 Differential Equations (5-0) 5 Cr. Hrs.**  
*Prerequisite:* MATH 240 or equivalent with grade of 2.0 or better.  
 Topics covered in this course include first order differential equations, second order linear equations, series solutions of second order linear equations, higher order linear equations, and Laplace transform, systems of first order linear equations, numerical methods and qualitative theory of differential equations.

## MEDICAL ASSISTING

Associate Dean: Robert F. Pearce, MPA

Coordinator/Instructor: Professor Patricia Rubio, MSA

Instructors: Adjunct Faculty

### MA 110 Phlebotomy (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

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 healthcare setting.

### MA 134 Medical Insurance Coding (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

*Corequisite:* HIT 104.

This course introduces the student to insurance coding guidelines developed for use with the International Classification of Diseases, (ICD-9-CM) and Current Procedural Terminology, (CPT-4). 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.

### MA 140 Medical Office Procedures (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course will focus on the basic concepts in the professional practice of medicine and the role and function of the medical assistant. The course introduces personal and professional characteristics and legal and ethical standards for the medical assistant. Professional and personal therapeutic communications, time management and workplace dynamics will be studied. This course addresses administrative skills necessary for the medical assistant.

### MA 155 Medical Insurance Billing (3-0) 3 Cr. Hrs.

*Prerequisite:* MA 134 and HIT 104.

This course introduces the student to the various types of medical insurance including Blue Cross/Blue Shield, Medicare, Medicaid, Workers' Compensation and other third-party payers. The student will perform the tasks necessary to process claim forms for each type of medical insurance. Manual and computerized billing methodologies are included.

### MA 174 Medical Laboratory Techniques (4-0) 4 Cr. Hrs.

*Prerequisite:* BIOL 105, HIT 104, MA 140 and MA 110.

This course will provide an opportunity for the student to practice techniques to perform 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.

### MA 180 Medical Office Clinical Procedures (3-3) 4 Cr. Hrs.

*Prerequisite:* BIOL 105, HIT 104 and MA 140.

This course is designed to introduce the student to examination techniques, injections, minor surgery, medications and pharmacology, sterilization procedures, and autoclave.

### MA 195 Office Practicum (1-15) 3 Cr. Hrs.

*Prerequisite:* Successful completion of all academic and medical assisting courses.

The student will participate in a non-paid externship under the direction of a physician and the office manager or supervisor. The externship is structured to provide experience in performing administrative and clinical procedures in a physician office, clinic or ambulatory healthcare setting. The student will interact with other healthcare professionals performing and observing skills of a medical assistant. It is an opportunity that will allow a student to apply theory to practice.

## MEDICAL TRANSCRIPTION

Associate Dean: Robert F. Pearce, MPA

Coordinator/Instructor: Professor Patricia Rubio, MSA

Instructors: Professor Jody Scheller, MS

Adjunct Faculty

### MT 106 Principles of Medical Transcription (2-0) 2 Cr. Hrs.

*Prerequisite:* Keyboarding skill of 50 words per minute recommended.

This course provides an introduction to the role of the medical transcriptionist in the healthcare setting. The student will acquire knowledge of the types of forms and content utilized and required in medical transcription. The content of the course will also include the legalities and standards that apply to medical transcription.

### MT 108 Physician Office Transcription (2-0) 2 Cr. Hrs.

*Prerequisite:* HIT 104 and BIOL 105.

This course is designed to introduce the student to transcription practices utilized in the physician/medical office practice/setting. The importance of accurate transcription will be an essential aspect for this course. Report format and general transcription guidelines will be explored. The student will gain experience by transcribing office, clinic, and hospital dictation from many medical specialties.

### MT 157 Medical Transcription Seminar (1-0) 1 Cr. Hr.

*Prerequisite:* HIT 104, MT 106, MT 108 and BIOL 105.

This course will provide an overview of the law as it is applied to healthcare professionals and patients. Students will also explore the 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.

### MT 158 Hospital Medical Transcription 1 (3-4) 5 Cr. Hrs.

*Prerequisite:* HIT 104, MT 106, MT 108 and BIOL 105.

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 utilize the English language and communication skills during transcription practice.

### MT 159 Hospital Medical Transcription 2 (3-4) 5 Cr. Hrs.

*Prerequisite:* MT 157.

This course will describe and illustrate various reports that the medical transcriptionist will be expected to transcribe. The student will use production word processing 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.

## METALLURGY AND MATERIALS SCIENCE

Associate Dean: Bruce Sweet, MA

Instructors: Assistant Kenneth Pickett, MSIT  
Adjunct Faculty

### MET 102 Introduction to Materials Science (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides students with a basic introduction to Materials Science using the principles of science to study the nature of metallic and non-metallic materials used in most industries. Topics covered in the course include atomic structure, elements, states of matter, bonding, crystallization, mechanical, chemical, and physical properties of metallic, polymeric, ceramic and composite materials.

### MET 114 Engineering Materials (3-0) 3 Cr. Hrs.

*Prerequisite:* MET 102.

This course in materials applications covers ferrous and non-ferrous alloys, powdered metals, ceramics and glass, rubber and polymers. Each material is examined with respect to their advantages and disadvantages, methods of fabrication and joining, and specific industrial applications, both current and future.

### MET 120 Hazardous Materials Management (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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 covered in the course 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.

### MET 152 Structure and Properties Laboratory (2-2) 3 Cr. Hrs.

*Prerequisite:* MET 102 or may be taken concurrently.

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 covered in the course include optical systems, sectioning and polishing, mounting techniques, etching, specialized measurement technology and photo-microscopy.

### MET 160 Composite Materials (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

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 covered in the course include the nature of polymeric materials, reinforcements, coatings and adhesives. Industrial forming techniques and applications are also examined.

### MET 211 Physical Metallurgy Structures (3-1) 3 Cr. Hrs.

*Prerequisite:* MET 102 and MET 152.

An interpretative study incorporating phase equilibria, diffusion, nucleation and growth, solid state transformation, strengthening mechanisms; effects of alloying, deformation, precipitation, recrystallization and grain growth on microstructure. Microstructural interpretation of ferrous and non-ferrous metal is emphasized.

### MET 215 Mechanical Properties of Metals (3-1) 3 Cr. Hrs.

*Prerequisite:* MET 114.

Students will explore basic elastic and plastic behavior, deformation, dislocations; brittle, ductile and transitional fractures; fatigue, tensile, hardness, impact, and stress testing. Course will include 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.

### MET 217 Computer Applications in Materials Science (2-2) 3 Cr. Hrs.

*Prerequisite:* MET 114 or consent of department and computer experience highly recommended.

An experience-oriented course in data acquisition, specifically designed for students interested in materials laboratory computer applications. Topics covered in the course include an introduction to materials laboratory computer systems, data acquisition, test system integration, hardware-software options, electronic fundamentals, international databases, image processing, graphics, computerized processing and control, and the fundamentals of basic programming in materials science.

### MET 248 Electron Microscopy and Image Analysis (2-2) 3 Cr. Hrs.

*Prerequisite:* MET 152, MET 211 and MET 217 or consent of department.

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 covered in the course include microscopy systems and components, applications in fractography and quantifiable measurements used in process and surface failure analysis, materials characterization, and product development studies. The course is recommended for students specifically interested in specialized laboratory practices.

### MET 271 Corrosion and Corrosion Analysis (2-2) 4 Cr. Hrs.

*Prerequisite:* MET 102, MET 114 or consent of department.

Corrosive processes, including electrochemical reactions in metals and the chemical degradation of polymeric materials are emphasized. Topics covered in the course include basic electrochemical reactions, nature of corrosive environments, types of corrosion, laboratory corrosion testing, data analysis, interaction with mechanical behavior and fabricated dissimilar materials.

### MET 280 Special Problems in Materials Science (3-2) 4 Cr. Hrs.

*Prerequisite:* MET 211 or MET 215 or consent of instructor.

Students having adequate backgrounds in this discipline and/or catalog specified prerequisites are encouraged to select a topic associated with metallic or non-metallic 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.

## MUSIC

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Professor Donald Morelock, MM

Associate Professor James Nissen, DMA

Associate Professor Barton Polot, PhD

Adjunct Faculty

### **MUSIC 104 Basic Materials in Music Theory (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

A step by step approach to the fundamentals of music which includes notation, scales, intervals and triads is the format for this course.

### **MUSIC 105 Music Appreciation (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

An introduction to music, designed especially to increase understanding and enjoyment of music through intelligent listening. No technical knowledge required but outside listening and attendance at live performances are required.

### **MUSIC 107 Music for Elementary Teachers (3-2) 4 Cr. Hrs.**

*Prerequisite:* None.

This course will provide functional knowledge and skills to handle music requirements in the elementary grades. The course is recommended for elementary education majors and will require off-campus classroom visitations.

### **MUSIC 109 The Architecture of Music (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

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.

### **MUSIC 114 Voice Class 1 Elements—Beginners (2-0) 2 Cr. Hrs.**

*Prerequisite:* None.

This is 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.

### **MUSIC 116 Voice Class 2 Cultivation—Intermediate (2-0) 2 Cr. Hrs.**

*Prerequisite:* Consent of instructor.

This is 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.

### **MUSIC 117 Choir 1 (2-1) 2 Cr. Hrs.**

*Prerequisite:* Audition.

Students will explore the principles of choral singing and musicianship. Music of all styles and periods will be included. Choir is an elective for all students, regardless of major field. Additional Choir credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 118, 217, and 218.

### **MUSIC 118 Choir 2 (2-1) 2 Cr. Hrs.**

*Prerequisite:* Audition.

Students will explore the principles of choral singing and musicianship. Music of all styles and periods will be included. Choir is an elective for all students, regardless of major field. Additional Choir credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 217 and 218.

### **MUSIC 121 Class Piano 1 (2-0) 2 Cr. Hrs.**

*Prerequisite:* None.

Group piano instruction designed for students with little or no formal piano training will be the format of this course. Instruction is given on both electronic and acoustic instruments.

### **MUSIC 122 Class Piano 2 (2-0) 2 Cr. Hrs.**

*Prerequisite:* MUSIC 121 or equivalent.

This course is a continuation of MUSIC 121. Group piano instruction designed for students with little or no formal piano training will be the format of this course. Instruction is given on both electronic and acoustic instruments.

### **MUSIC 123 Keyboard Skills for Recording Engineers (1-0) 1 Cr. Hr.**

*Prerequisite:* MUSIC 121.

Students will apply knowledge gained in MUSIC 121 to use with electronic keyboard instruments used in the modern recording studio. Emphasis is on the operation of modern electronic keyboard instruments, MIDI, and developing the fundamental musical skills used in contemporary music production. These skills will be applied to individual projects in the laboratory.

### **MUSIC 124 Chamber Singers 1 (1-1) 1 Cr. Hr.**

*Prerequisite:* Audition.

A select ensemble that performs madrigals and other chamber music for events on and off campus. The course is open to all students regardless of major. Additional Chamber Singers credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 127, 224, and 227.

### **MUSIC 127 Chamber Singers 2 (1-1) 1 Cr. Hr.**

*Prerequisite:* Audition.

A select ensemble that performs madrigals and other chamber music for events on and off campus. This course is open to all students regardless of major. Additional Chamber Singers credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 224 and 227.

### **MUSIC 131 Applied Music—Piano 1 (1-1) 2 Cr. Hrs.**

*Prerequisite:* None.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

### **MUSIC 132 Applied Music—Piano 2 (1-1) 2 Cr. Hrs.**

*Prerequisite:* MUSIC 131.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

### **MUSIC 133 Applied Music—Voice 1 (1-1) 2 Cr. Hrs.**

*Prerequisite:* None.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 134 Applied Music—Voice 2 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 133.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 135 Applied Music—Instrumental 1 (1-1) 2 Cr. Hrs.***Prerequisite:* None.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 136 Applied Music—Instrumental 2 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 135.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 137 Sight Singing and Ear Training 1 (2-0) 2 Cr. Hrs.***Prerequisite:* A basic knowledge of scales, key signatures, intervals, and triads.

Sight singing – melodies outlining the intervals of I and V chords of first and second inversion and non-harmonic tones will be the format of this course and will include simple rhythmic, melodic, and harmonic dictations.

**MUSIC 138 Sight Singing and Ear Training 2 (2-0) 2 Cr. Hrs.***Prerequisite:* MUSIC 137.

Sight singing – melodies outlining intervals of all triads and dominant seventh chords will be the format for this course. Harmonic, melodic, rhythmic dictation – altered non-harmonic tones, secondary dominants, modulation to closely related keys, borrowed altered harmonies will be explored.

**MUSIC 140 Jazz Lab Band—Improvisation 1 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities.

**MUSIC 141 Wind Ensemble 1 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities. Additional Wind Ensemble credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 241, 245, and 246.

**MUSIC 142 Jazz Band 1 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as elective credit in humanities. Additional Jazz Band credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 242, 248, and 249.

**MUSIC 143 Practice Teaching and Practicum in Piano Teaching 1 (1-1) 2 Cr. Hrs.***Prerequisite:* Consent of Director of Piano Department.

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.

**MUSIC 144 Practice Teaching and Practicum in Piano Teaching 2 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 143.

Piano teachers will learn to create and present effective lesson plans that include repertoire, theory concepts, rhythm, tone, touch, and hand position through the second semester of piano study.

**MUSIC 149 Popular Music Culture in America (3-0) 3 Cr. Hrs.***Prerequisite:* None.

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.

**MUSIC 153 Music Theory 1 (3-0) 3 Cr. Hrs.***Prerequisite:* A basic knowledge of scales, key signatures, intervals, and triads.

Harmonic progression; chords of 1st and 2nd inversion will be the format of this course. Phrase structure and cadences will be introduced. Technique of harmonization and non-harmonic tones will be explored.



**MUSIC 154 Music Theory 2 (3-0) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 153.

Students will be introduced to 7th chords, altered non-harmonic tones, secondary dominants, modulation to closely related keys, borrowed and altered chords; original composition.

**MUSIC 164 Music History 1 (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course will be a detailed survey of literature, history, and musical materials of the Baroque and Classical eras.

**MUSIC 165 Music History 2 (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

This course is a detailed survey of history and literature of music of the Romantic and 20th Century eras.

**MUSIC 168 Synthesizer Ensemble 1 (2-1) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 121 or consent of instructor.

This group performs original music and transcribed literature of many genres on electronic musical instruments. Regular rehearsals and performances are scheduled. Additional Synthesizer credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 169, 268, and 269.

**MUSIC 169 Synthesizer Ensemble 2 (2-1) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 121 or consent of instructor.

This group performs original music and transcribed literature of many genres on electronic musical instruments. Regular rehearsals and performances are scheduled. Additional Synthesizer credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 268 and 269.

**MUSIC 171 Music Technology 1 (3-0) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 104 and MUSIC 121 or equivalent.

This course is an introduction to the fundamentals of music-making using MIDI/computer hardware and software. The 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 desktop computer.

**MUSIC 172 Music Technology 2 (3-0) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 171.

This course will deal with advanced functions of Digital Audio workstation (SAW) Software with the assistance of MIDI hardware and a desktop computer.

**MUSIC 173 Basic Studio Techniques 1 (3-0) 3 Cr. Hrs.**

*Prerequisite:* None.

Fundamentals of the recording arts, including basic audio and acoustical theory, recording consoles, tape recorders, microphone design and technique, speakers, and signal processing will be introduced in this course.

**MUSIC 174 Basic Studio Techniques 2 (3-0) 3 Cr. Hrs.**

*Prerequisite:* MUSIC 173.

Multi-track 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.

**MUSIC 175 Ear Training for Recording Engineers (2-0) 2 Cr. Hrs.**

*Prerequisite:* MUSIC 173 or consent of department.

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 multi-track mixing is emphasized and developed through hands-on assignments using a variety of professional mixing systems.

**MUSIC 201 Keyboard Skills for Piano Teachers 1 (2-0) 2 Cr. Hrs.**

*Prerequisite:* Consent of Director of Piano Department.

This course is designed to give piano teachers the necessary keyboard skills for teaching beginning through early intermediate level students. The course 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.

**MUSIC 202 Keyboard Skills for Piano Teachers 2 (2-0) 2 Cr. Hrs.**

*Prerequisite:* MUSIC 201.

This course is designed to give piano teachers the necessary keyboard skills for teaching intermediate through late intermediate level students. The course 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.

**MUSIC 214 Voice Class 3 Performance—Advanced (2-0) 2 Cr. Hrs.**

*Prerequisite:* Consent of instructor.

This is 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.

**MUSIC 216 Voice Class 4 Performance—Advanced (2-0) 2 Cr. Hrs.**

*Prerequisite:* Consent of Instructor.

This is 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.

**MUSIC 217 Choir 3 (2-1) 2 Cr. Hrs.**

*Prerequisite:* Audition.

Students will explore the principles of choral singing and musicianship. Music of all styles and periods will be included. Choir is an elective for all students, regardless of major field. Additional Choir credits may be earned in a future semester by enrolling in MUSIC 218.

**MUSIC 218 Choir 4 (2-1) 2 Cr. Hrs.**

*Prerequisite:* Audition.

Students will explore the principles of choral singing and musicianship. Music of all styles and periods will be included. Choir is an elective for all students, regardless of major field.

**MUSIC 224 Chamber Singers 3 (1-1) 1 Cr. Hr.**

*Prerequisite:* Audition.

A select ensemble that performs madrigals and other chamber music for events on- and off-campus. Open to all students regardless of major. Additional Chamber Singers credits may be earned in future semesters by enrolling in MUSIC 227.

**MUSIC 227 Chamber Singers 4 (1-1) 1 Cr. Hr.**

*Prerequisite:* Audition.

A select ensemble that performs madrigals and other chamber music for events on and off campus. This course is open to all students regardless of major.

**MUSIC 228 Sight Singing and Ear Training 3 (0-1) 1 Cr. Hr.***Prerequisite:* MUSIC 138.*Corequisite:* MUSIC 250.

Sight singing - melodies in all clefs outlining intervals of all triads, ninths, elevenths, thirteenth, melodic chromaticism will be the format of this course. Harmonic, melodic, rhythmic dictation-chromatic mediant and modulation to foreign keys will be explored.

**MUSIC 231 Applied Music—Piano 3 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 132.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 232 Applied Music—Piano 4 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 231.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 233 Applied Music—Voice 3 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 134.

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. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 234 Applied Music—Voice 4 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 233.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 235 Applied Music—Instrumental 3 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 136.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 236 Applied Music—Instrumental 4 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 235.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 240 Jazz Lab Band—Improvisation 2 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities.

**MUSIC 241 Wind Ensemble 2 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities. Additional Wind Ensemble credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 245 and 246.

**MUSIC 242 Jazz Band 2 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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 in this band. An audition at the beginning of each semester is required. This course may be used as an elective credit in humanities. Additional Jazz Band credits may be earned in future semesters by enrolling in the following course sequence (one course per semester) MUSIC 248 and 249.

**MUSIC 243 Practice Teaching and Practicum in Piano Teaching 3 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 144.

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.

**MUSIC 244 Practice Teaching and Practicum in Piano Teaching 4 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 243.

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.



**MUSIC 245 Wind Ensemble 3 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities. Additional Wind Ensemble credits may be earned in a future semester by enrolling in MUSIC 246.

**MUSIC 246 Wind Ensemble 4 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities.

**MUSIC 247 Piano Teaching Techniques and Materials 1 (3-0) 3 Cr. Hrs.***Prerequisite:* Consent of Director of Piano Department.

This course is designed for teachers enrolled in the Piano Teaching Program.

**MUSIC 248 Jazz Band 3 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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 in this band. An audition at the beginning of each semester is required. This course may be used as elective credit in humanities. Additional Jazz Band credits may be earned in future semesters by enrolling in MUSIC 249.

**MUSIC 249 Jazz Band 4 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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 in this band. An audition at the beginning of each semester is required. This course may be used as elective credit in humanities.

**MUSIC 250 Music Theory 3 (3-0) 3 Cr. Hrs.***Prerequisite:* MUSIC 154.

Chromatic mediant and modulation to foreign keys will be the format of this course. Ninth, 11th, and 13th chords will be explored. In addition, analysis, original compositions in basic homophonic forms and traditional harmony will be covered.

**MUSIC 257 Piano Teaching Techniques and Materials 2 (3-0) 3 Cr. Hrs.***Prerequisite:* Consent of Director of Piano Department.

This course is designed for teachers enrolled in the Piano Teaching Program.

**MUSIC 258 Jazz Lab Band—Improvisation 3 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities.

**MUSIC 259 Jazz Lab Band—Improvisation 4 (2-1) 2 Cr. Hrs.***Prerequisite:* None.

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. This course may be used as an elective credit in humanities.

**MUSIC 268 Synthesizer Ensemble 3 (2-1) 3 Cr. Hrs.***Prerequisite:* MUSIC 121 or consent of instructor.

This group performs original music and transcribed literature of many genres on electronic musical instruments. Regular rehearsals and performances are scheduled. Additional Synthesizer credits may be earned in future semesters by enrolling in MUSIC 269.

**MUSIC 269 Synthesizer Ensemble 4 (2-1) 3 Cr. Hrs.***Prerequisite:* MUSIC 121 or consent of instructor.

This group performs original music and transcribed literature of many genres on electronic musical instruments. Regular rehearsals and performances are scheduled.

**MUSIC 273 Advanced Studio Techniques 1 (3-0) 3 Cr. Hrs.***Prerequisite:* MUSIC 174 and MUSIC 175.

This course is 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.

**MUSIC 274 Advanced Studio Techniques 2 (3-0) 3 Cr. Hrs.***Prerequisite:* None.*Corequisite:* MUSIC 273.

This course is a continuation of MUSIC 274 and recording in the digital domain. Areas of focus will include data storage, analog to digital conversion, editing, time code, and synchronization.

**MUSIC 282 Applied Music—Piano 5 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 232.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 283 Applied Music—Piano 6 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 282.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 284 Applied Music—Piano 7 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 283.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 285 Applied Music—Piano 8 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 284.

Private instruction in piano is the format for this course. Six hours minimum weekly practice, one private lesson and one studio class each week are required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors.

**MUSIC 286 Applied Music—Voice 5 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 234.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 287 Applied Music—Voice 6 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 286.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 288 Applied Music—Voice 7 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 287.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 289 Applied Music—Voice 8 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 288.

Private instruction in voice will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 290 Applied Music—Instrumental 5 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 236.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 291 Applied Music—Instrumental 6 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 290.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 292 Applied Music—Instrumental 7 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 291.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 293 Applied Music—Instrumental 8 (1-1) 2 Cr. Hrs.***Prerequisite:* MUSIC 292.

Private instruction in all instruments of the band and orchestra, including classical guitar will be the format of this course. Six hours minimum weekly practice, one private lesson each week plus weekly symposium is required. Performance examinations will be held at the end of each semester. This course is for music and non-music majors and will provide performance opportunities at weekly symposium.

**MUSIC 298 Special Music Projects for Honors Studies—Performance/Composition/Research (2-0) 2 Cr. Hrs.**

*Prerequisite:* Dean's list status (GPA 3.5), MUSIC 154 and two semesters of Applied Voice or Instrumental Music. Student eligibility will be determined during interviews with the instructor.

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.

**MUSIC 299 Special Music Projects for Honors Studies—Performance/Composition/Research (2-0) 2 Cr. Hrs.**

*Prerequisite:* Dean's list status (GPA 3.5), MUSIC 154 and two semesters of Applied Voice or Instrumental Music. Student eligibility will be determined during interviews with the instructor.

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.

## NURSING

Assistant Dean: Richard Weinkauff, MS

Instructors: Professor Sharon Pompey, MSN

Professor Elizabeth Quell, MSN

Professor Deborah Vendittelli, MSN

Associate Professor Tamara Campbell, MSN

Associate Professor Marlynn Marroso, MSN

Associate Professor Nancy Palmer, MSN

Associate Professor Cindy Sheppard, MSN

Assistant Holly Austin, MSN

Adjunct Faculty

### NURS 116 Fundamentals of Nursing 1 (2-3) 3 Cr. Hrs.

*Prerequisite:* BIOL 050 or high school Biology; CHEM 051 or high school Chemistry; high school Algebra or MATH 053 and consent of department; BIOL 236 or BIOL 237 and BIOL 238 with minimum grade of 3.0; BIOL 115 recommended.

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.

### NURS 117 Fundamentals of Nursing 2 (1-6) 3 Cr. Hrs.

*Prerequisite:* NURS 116 with a grade of 2.0 or better.

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, gerontological concepts, and ethical-legal considerations to provide nursing care to adult clients in an extended care facility/community setting.

### NURS 118 Pharmacology 1 (1-0) 1 Cr. Hr.

*Prerequisite:* BIOL 050 or high school Biology; CHEM 051 or high school Chemistry; high school Algebra or MATH 053 and consent of department; BIOL 236 or BIOL 237 and BIOL 238 with minimum grade of 3.0; acceptance to the ADN program for the forthcoming or current academic year.

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, dosages, example drugs and patient teaching for specified drug classifications. The nursing process will be utilized as related to drug therapy.

### NURS 119 Pharmacology 2 (1-0) 1 Cr. Hr.

*Prerequisite:* NURS 118 with grade of 2.0 or better.

This course is a continuation of NURS 118, Pharmacology 1. 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, dosages, example drugs and patient teaching for specified drug classifications. The nursing process will be utilized as related to drug therapy.

### NURS 120 Health Assessment and Adult Medical—Surgical Nursing 1 (2-6) 4 Cr. Hrs.

*Prerequisite:* NURS 117 with grade of 2.0 or better; NURS 118 with grade of 2.0 or better.

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.

### NURS 121 Adult Medical—Surgical Nursing 2 (2-9) 5 Cr. Hrs.

*Prerequisite:* NURS 120 with grade of 2.0 or better.

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.

### NURS 122 Psychiatric Mental Health Nursing (2-6) 4 Cr. Hrs.

*Prerequisite:* For students pursuing the ADN program: NURS 121 with a grade of 2.0 or better; PSYCH 201 and either, PSYCH 209 or PSYCH 229 with a grade of 2.0 or better. For students pursuing the LPN to ADN program option: BIOL 050 or high school Biology; CHEM 051 or high school Chemistry; MATH 053 or high school Algebra; BIOL 236 or BIOL 237 and BIOL 238 with a minimum grade of 3.0; PSYCH 201 and PSYCH 209 or PSYCH 229.

This course applies critical thinking skills, nursing process and psychosocial principles and interventions for mental health clients in acute and community settings.

### NURS 130 LPN TO RN Transition Course (3-0) 3 Cr. Hrs.

*Prerequisite:* NURS 122 with grade of 2.0 or better.

This course is for Licensed Practical Nurses (LPNs) who are articulating to Registered Nurse (RN) status. The course 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.

### NURS 211 Nursing Care of Women and Childbearing Families (2-9) 5 Cr. Hrs.

*Prerequisite:* For students pursuing the ADN program: NURS 119 and NURS 122 with a grade of 2.0; BIOL 243 with a minimum grade of 3.0. For students pursuing the LPN to ADN option: NURS 130 with a minimum grade of 2.0 and consent of department; BIOL 243 with a minimum grade of 3.0 and consent of department.

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.

**NURS 212 Nursing Care of Children and Families (2-9) 5 Cr. Hrs.**  
*Prerequisite:* For students pursuing the ADN program: NURS 119 and NURS 122 with a minimum grade of 2.0; BIOL 243 with a minimum grade of 3.0 For students pursuing the LPN to ADN option: NURS 130 with a minimum grade of 2.0 and consent of department; BIOL 243 with a minimum grade of 3.0.

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.

**NURS 213 Adult Medical—Surgical Nursing 3 (2-9) 5 Cr. Hrs.**  
*Prerequisite:* For students pursuing the ADN program: NURS 119 and NURS 122 with a minimum grade of 2.0; BIOL 243 with a minimum grade of 3.0. For students pursuing the LPN to ADN program option: NURS 130 with a minimum grade of 2.0; BIOL 243 with a minimum grade of 3.0 and consent of department.

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.

**NURS 214 Leadership and Nursing Management of Complex Clients (2-9) 5 Cr. Hrs.**  
*Prerequisite:* NURS 211, NURS 212, and NURS 213 with grade of 2.0 or better.

This course includes advanced medical-surgical nursing content and basic principles of leadership and management. Current legal-ethical issues are also 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 healthcare team while providing complex care to groups of clients.

## NURSING ASSISTANT TRAINING PROGRAM

Assistant Dean: Richard Weinkauf, MS  
 Instructors: Adjunct Faculty

**NATP 110 Nursing Assistant Preparation (3-7) 10 Cr. Hrs.**  
*Prerequisite:* None.

This course is designed to prepare an individual in the role of the nursing assistant. Students will explore communication and interpersonal skills, infection control, safety/emergency procedures, promotion of resident's independence/rights, basic nursing skills, personal and restorative care skills, care of mental health and social services needs, care of cognitively impaired residents and documentation. Long term care facilities will be utilized for clinical experience.

## NURSING—PRACTICAL

Assistant Dean: Richard Weinkauf, MS  
 Instructors: Associate Professor Tamara Campbell, MSN  
 Associate Professor 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 111 Fundamentals of Practical Nursing (5-12) 9 Cr. Hrs.**  
*Prerequisite:* BIOL 105 with a grade of 3.0 or better and consent of department.

This course includes beginning theory and supervised practice in the fundamental skills necessary to meet the needs of the chronically ill and elderly patient. The student will learn the application of the nursing process with emphasis on assessment and implementation skills necessary to give quality patient care. The study of normal nutrition and math necessary for administration of medications is included.

**PN 112 Nursing Dynamics (4-0) 4 Cr. Hrs.**  
*Prerequisite:* BIOL 105 with a grade of 3.0 or better and consent of department.

This introductory course in Practical Nursing provides an overview of the profession of practical nursing from a historical perspective to current regulations, practices and responsibilities. Emphasis is placed on professional interactions and the various psychosocial topics included.

**PN 124 Nursing Adult Patients (7-15) 12 Cr. Hrs.**  
*Prerequisite:* PN 111, PN 112, and AHE 101 must all be passed with a grade of 2.0 or better.

This course is an introduction to the care of adult patients having medical and surgical disorders. The student will focus on the application of critical thinking and the nursing process in providing patient care. The student will also apply knowledge of nursing skills, pathophysiology, nutrition, pharmacology, diagnostic tests, communication, and behavioral principles in the care of selected adults.

**PN 125 Mental Health Nursing (3-0) 3 Cr. Hrs.**  
*Prerequisite:* PN 111, PN 112, and AHE 101 must all be passed with a grade of 2.0 or better.

The mental health system is overviewed from a brief historical perspective to current trends and practices. Common behavioral and psychiatric disorders are covered utilizing a nursing process approach. Emphasis is placed on the role of the practical nurse as a member of the psychiatric healthcare team.

**PN 126 Maternal and Child Nursing (2.5-7.5) 5 Cr. Hrs.**  
*Prerequisite:* PN 124 with grade of 2.0 or better and PN 125 with grade of 2.0 or better.

In the maternity-newborn portion of this class, the theory and clinical emphasis is on normal pregnancy, labor, delivery and postpartum. Care and assessment of the newborn is included. The pediatric portion covers normal growth and development from infant to adolescence. Emphasis is placed on care of the well and hospitalized child.

**PN 137 Advanced Concepts in Practical Nursing (1.5-4.5) 3 Cr. Hrs.**  
*Prerequisite:* PN 126 with grade of 2.0 or better.

This capstone course covers advanced medical-surgical topics as well as issues related to licensure and employment. In clinical practice, emphasis is placed on functioning with greater independence in providing care to groups of patients. Students gain experience as an active member of the nursing team while working with staff personnel.

## OFFICE INFORMATION SYSTEMS

Associate Dean: Bruce Sweet, MA

Instructor: Professor Patricia Partyka, MEd  
Adjunct Faculty

### OIS 100 Keyboarding 1 (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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. Today's technology-driven environment makes keyboarding one of the most widely used skills as we utilize computers for work, school and in our personal lives.

### OIS 102 Keyboarding 2 (2-0) 2 Cr. Hrs.

*Prerequisite:* OIS 100 or equivalent.

This course continues the development of accuracy and speed in keyboarding. Students will enhance their keyboarding skills and incorporate them into the formatting of various business documents, reports and tables.

### OIS 105 Office Communication—Editing Skills (3-0) 3 Cr. Hrs.

*Prerequisite:* A skill level of ENG 050 or higher on the placement test. OIS 102 strongly recommended.

The ability to communicate clearly and accurately has been identified by employers as their number one priority. This course is designed to review and incorporate the principles of grammar, punctuation, vocabulary, and spelling into the writing of or proofreading and editing of business documents.

### OIS 165 Microsoft Word for Windows (3-0) 3 Cr. Hrs.

*Prerequisite:* OIS 105 or equivalent.

This course is designed to provide practical hands-on experience using Microsoft Word for Windows. Students will create, format, and edit business documents. In addition, students will work with tables, charts, graphs, diagrams, templates and wizards, AutoText, Web pages and hyperlinks. While manipulating text, students will learn to add visual appeal to documents as well as how to use writing tools and special features.

### OIS 185 Business Presentation 1—Fundamental Concepts (3-0) 3 Cr. Hrs.

*Prerequisite:* OIS 165 or equivalent.

This course will introduce students to the fundamental concepts of business presentations using Microsoft's PowerPoint software. PowerPoint presentations are one of the most widely used communication tools in today's workplace. Students will create basic business presentations, charts, graphs and flyers. Students will learn to link and embed objects and files as well as work with drawing tools, icons, various fonts and color to create a powerful presentation.

### OIS 195 Time and Project Management (1-0) 1 Cr. Hr.

*Prerequisite:* None.

In today's busy world, time management is an essential skill needed both professionally and personally. This course will assist students in gaining control of their office activities by showing them how to set and prioritize goals and events around individual values using a Day Planner.

### OIS 255 Office Procedures (2-0) 2 Cr. Hrs.

*Prerequisite:* OIS 100 or equivalent.

This course is designed to enhance the students' knowledge regarding basic office skills. Students will learn office functions such as reprographics, records management, telephone techniques and etiquette, mailing and shipping services, meeting and conference planning, travel arrangements, as well as the importance of written communication, and public relations.

### OIS 260 Office Administration (3-0) 3 Cr. Hrs.

*Prerequisite:* OIS 255 recommended.

Today's Administrative Office Manager must be an effective communicator, who possesses strong skills in problem solving, time management, multi-tasking and human relations. This course concentrates on the principles of administrative office management, the importance of managing administrative services and operations, and the skills and attitudes needed to be successful in today's office.

### OIS 265 Advanced Microsoft Word for Windows (3-0) 3 Cr. Hrs.

*Prerequisite:* OIS 165.

This course is a continuation of OIS 165 and will focus on the advanced functions of Microsoft Word for Windows. Students will create and modify styles, macros, footnotes and endnotes. In addition, students will work with sorting and selecting text, merging and managing documents, preparing forms, applying special features, adding visual effects and using WordArt.

## PHILOSOPHY

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Instructor Mark Huston, PhD  
Adjunct Faculty

### PHIL 243 An Introduction to Philosophy (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### PHIL 247 Logic (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course is designed to assist the student in distinguishing 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 arguments on contemporary issues in the public forum.

### PHIL 277 Ethical Problems (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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 to explore alternate solutions to present day moral problems.

## PHYSICAL EDUCATION, HEALTH AND RECREATION

Assistant Dean: Richard Weinkauf, MS

Instructors: Adjunct Faculty

- PE 104 Physical Fitness and Conditioning (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course stresses vigorous body conditioning through progressive exercises, stretching, weight machine and free weight use. Cardiovascular fitness will be emphasized.
- PE 105 Beginning Resistance Training (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
Instruction will stress the development of strong muscle growth and bone health, as well as improvement of cardiovascular function through the use of resistance bands, X-er tubes, stability balls, and free weights.
- PE 106 Beginning Swimming (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course is 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 will be introduced.
- PE 115 Aerobic Dance Fitness (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
Instruction will stress the development of an individual's aerobic capacity and cardiovascular endurance through aerobic dance and dance exercise.
- PE 116 Intermediate Swimming (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
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, side stroke, breast stroke, and diving and water safety skills. Some stroke variations and synchronized swimming techniques may be covered.
- PE 121 First Aid and Personal Safety (2-0) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course uses lecture-demonstration approach on the prevention of accidents and care of victims with emergency-skill training in all procedures. Cardiopulmonary resuscitation (CPR) for infant, child and adult, plus Automated External Defibrillator (A.E.D.) use will be presented. Certification cards will be awarded to those completing the requirements. Note: Nursing students will need CPR for the Professional Rescuer for the Nursing Program.
- PE 131 Golf (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
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.
- PE 132 Beginning Tennis (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course provides students with a basic history of tennis, techniques, fundamental skills, strategy, rules and the opportunity to participate in a competitive situation.
- PE 141 Basketball (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course covers the sports' history, basic techniques, fundamental skills, strategy, rules, and the opportunity to participate in a competitive situation.
- PE 157 Paddleball/Racquetball (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course provides instruction in rules, safety practices, etiquette, strategy and skills of paddleball and racquetball. Tournament play in singles, doubles and cut-throat is included.
- PE 166 Self Defense (1-1) 2 Cr. Hrs.**  
*Prerequisite:* A physical examination is recommended.  
This course combines various methods of self-defense with an emphasis on Judo. Related techniques of Jujitsu and Karate will be covered.
- PE 194 Weight Training (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
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.
- PE 202 Lifestyle Fitness—Wellness (1-1) 2 Cr. Hrs.**  
*Prerequisite:* None.  
This course will introduce the student, through lecture and exercise, to the various methods and benefits of physical and emotional fitness/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.
- PE 240 Physical Education for Elementary Teachers (3-0) 3 Cr. Hrs.**  
*Prerequisite:* None.  
Students will receive instruction in the 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.



## PHYSICS

Assistant Dean: Richard Weinkauff, MS

Instructor: Assistant Professor Paul Holody, PhD

Instructor Christopher Wood, MS

Adjunct Faculty

### PHYS 051 Basic Physics (4-1) 4 Cr. Hrs.

*Prerequisite:* MATH 053 or one year of high school Algebra.

This course is designed for students who have had no previous course in physics or need a review of the subject to prepare for college physics. Basic concepts in mechanics, sound, heat, electricity, light and modern physics are explored through lecture demonstrations, interactive activities and laboratory work.

### PHYS 104 Introduction to Astronomy (3-2) 4 Cr. Hrs.

*Prerequisite:* MATH 053 or one year of high school Algebra.

This course is designed to introduce the subject of astronomy to students in any curriculum, but not for science majors. A historical perspective is used to discuss current scientific thinking on topics ranging from the motion of the night sky and the solar system to stars, galaxies and cosmology.

### PHYS 123 Applied Physics (4-2) 5 Cr. Hrs.

*Prerequisite:* MATH 113.

This course in applied physics is designed for technical, business and applied health programs. Using trigonometry, the traditional topics of kinematics, dynamics, 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. (This course may be used in place of PHYS 051.)

### PHYS 181 General Physics 1 (4-2) 4 Cr. Hrs.

*Prerequisite:* PHYS 051 or one year of high school Physics or PHYS 123 and MATH 119.

This first semester course in general physics is designed for pre-professional students. Using algebra and trigonometry, the traditional topics of mechanics, fluids, energy, heat, and sound are explored through lecture demonstrations, interactive activities and laboratory work. This course is not for engineering students or physics majors.

### PHYS 182 General Physics 2 (4-2) 4 Cr. Hrs.

*Prerequisite:* PHYS 181.

This second semester course is a continuation of PHYS 181. Using algebra and trigonometry, the more advanced topics of electricity, magnetism, light and modern physics are explored through lecture demonstrations, interactive activities and laboratory work. This course is not for engineering students or physics majors.

### PHYS 211 Physics for Scientists and Engineers 1 (5-2) 5 Cr. Hrs.

*Prerequisite:* PHYS 051 or high school Physics and MATH 150.

This first semester, calculus-based course is designed for engineering students and science majors. Traditional topics of kinematics, dynamics, energy, fluids, heat, and sound are investigated through lecture demonstrations, simulations and laboratory work.

### PHYS 212 Physics for Scientists and Engineers 2 (5-2) 5 Cr. Hrs.

*Prerequisite:* PHYS 211 with grade of 2.0 or better.

This second semester, calculus-based course is a continuation of PHYS 211. Advanced topics such as electricity, magnetism, light, and modern physics are investigated through lecture demonstration, simulations and laboratory work. This course is designed for engineering students and science majors.

## POLITICAL SCIENCE

Associate Dean: Cheryl D. Hawkins, MS

Instructors: Professor Kent Kirkpatrick, MA

Associate Professor Alexander Thomson, PhD

Instructor Enoch Baker, MA

### POLS 105 Survey of American Government (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is an introductory study of the American political system. Emphasis is placed on historical and contemporary political theories and ideologies as well as on political institutions, parties and interest groups. Students will engage in analysis of decision-makers, power and controversial issues.

### POLS 109 State and Local Government (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is an introductory study of America's state and local governments. Emphasis is placed on the nature of state constitutions, the structure and operation of state executive/legislative/judicial branches, the organization and functioning of local governments. State/federal and state/local relations will also be covered in this course. Students will engage in analysis of decision-makers, power and controversial issues.

### POLS 205 Political Parties (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course examines the organization and functions of American political parties. Emphasis is placed on the nature of political campaigns, party conventions, the organization and functioning of political parties, and citizen participation in politics. A historical review of parties and their ideological developments is also included.

### POLS 207 Comparative Government (3-0) 3 Cr. Hrs.

*Prerequisite:* POLS 105 recommended.

This course is a comparative study of political communities. The course examines the development and spread of varied political ideologies (communism, fascism, and liberalism) and their impact on crafting different approaches to governmental organization. A global approach to this topic will involve examining individual countries and regions from around the world.

### POLS 209 International Relations (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides an examination of the social, economic, and political forces that define international relations. Using the major theoretical approaches of the discipline, students will examine the major issues, actors, and governmental structures that shape the political landscape of the world.



## PSYCHOLOGY

Associate Dean: Cheryl D. Hawkins, MS  
 Instructors: Associate Professor Colleen Pilgrim, PhD  
 Instructor Deborah Regner, MS  
 Adjunct Faculty

### PSYCH 153 Human Relations (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### PSYCH 201 General Psychology (4-0) 4 Cr. Hrs.

*Prerequisite:* Recommended successful completion of courses in biology and social science at the 100 level.

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 system, perception, learning, intelligence, motivation and emotion, and social relationships will be explored.

### PSYCH 205 Psychology of Adjustment (3-0) 3 Cr. Hrs.

*Prerequisite:* Twenty-six hours of transferable credit or consent of department.

Factors and processes involved in the adjustment of the individual to personal and social environment are the main focus of this course. Essentials for the development of an effective and mentally healthy individual are emphasized. Foundations for adjustment, personal lifestyle adjustment, interpersonal relationships, adjustment throughout life and coping with maladjustment are major areas of study.

### PSYCH 207 Social Psychology (4-0) 4 Cr. Hrs.

*Prerequisite:* PSYCH 201.

Regarded as a core area in psychology, social psychology examines the influence of social factors on human behavior. Particular topics include aggression, prejudice, group processes, attitude formation, the law, prosocial behavior, interpersonal attraction, and social cognition.

### PSYCH 209 Child Psychology (3-0) 3 Cr. Hrs.

*Prerequisite:* PSYCH 201.

This course examines the general characteristics of development, development of social behavior, feelings, emotions, language, growth of understanding and interests, with emphasis on personality and problems of adjustment.

### PSYCH 219 Adult Development (3-0) 3 Cr. Hrs.

*Prerequisite:* Twenty-six hours of transferable credit or consent of department. Successful completion of PSYCH 201 is highly recommended.

This course studies adult development and aging. It focuses on the developmental changes related to biological, psychological, and social processes. Coping strategies and intervention techniques will be examined.

### PSYCH 229 Life-Span Developmental Psychology (4-0) 4 Cr. Hrs.

*Prerequisite:* PSYCH 201.

Human development from conception through death is examined. Biological, cognitive, and psychosocial development topics are explored with an understanding of the theories and research findings across the life-span.

### PSYCH 239 Abnormal Psychology (3-0) 3 Cr. Hrs.

*Prerequisite:* PSYCH 201.

This course examines various psychological disorders from a contemporary perspective, specifically exploring anxiety disorders (phobias, obsessive compulsive disorder and post traumatic stress disorder), personality disorders (borderline, anti-social and dissociate disorders), mood disorders (depression and bi-polar disorder) and schizophrenia. The underlying pathology and treatments of each disorder will be covered.

## QUALITY MANAGEMENT

Associate Dean: Bruce Sweet, MA  
 Instructors: Adjunct Faculty

### QM 106 Introduction to Quality Systems (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is an 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.

### QM 107 Quality Planning and Team Building (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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, Six Sigma 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.

### QM 108 Quality Statistical Methods (3-0) 3 Cr. Hrs.

*Prerequisite:* MATH 113.

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, P, C & U and their application. Topics also include process identification and capability (Cpk) analysis.

### QM 112 Six Sigma Methods in Quality Management (3-0) 3 Cr. Hrs.

*Prerequisite:* QM 108 or consent of department.

Managing and facilitating effective quality systems requires a systematic approach to employee commitment. Topics covered in this course 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 Six Sigma.

## SOCIOLOGY

Associate Dean: Cheryl D. Hawkins, MS

Instructor: Associate Professor Josselyn Moore, MA

Instructor Karen Schaumann, MA

Adjunct Faculty

### SOC 101 Introduction to Social Work (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

Introduction to Social Work is an introductory course to the social work field designed to provide students with an overview of the profession. Content will include an analysis of the profession, its scope, methods, values and the organization of services. Attention will be paid to presenting information on policy and practice in a variety of social work settings with particular target populations. The course orients students to the roles of the generalist social work practitioner within a theoretical framework that consists of systems theory, the ecological perspective and a problem solving model. Attention will be paid to the kinds of needs and problems that bring clients to the attention of social workers. The term “client” is defined as an individual, family, group, neighborhood, organization, or large social system. The course stresses self-assessment in determining suitability for a career in Social Work.

### SOC 201 Principles of Sociology (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course provides a survey of the major theoretical perspectives, concepts and methods of sociology. Topics covered include social organization, culture, socialization, stratification systems, social institutions and social change.

### SOC 205 Social Problems (3-0) 3 Cr. Hrs.

*Prerequisite:* SOC 201.

Consideration of current social problems, such as family stability, racism, sexism, poverty, crime, urbanization and ecological problems using sociological theory and recent empirical studies will be introduced. Analysis of sociocultural factors underlying these problems and possible solutions will be explored.

### SOC 209 Marriage and Family (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course offers a study of the impact that social changes have had on gender roles, sexual relationships, marriage and family life. Topics covered in the course include diversity in family patterns, gender roles, sexual behavior, mate selection, problems of marital adjustment, family stability and crisis, divorce and parenting.

### SOC 210 Cultural Diversity (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course is 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.

### SOC 220 Urban Sociology (3-0) 3 Cr. Hrs.

*Prerequisite:* SOC 201 or ANTH 112 recommended.

This course provides a survey of the origin and development of cities and the processes of urbanization which includes 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.

### SOC 290 The Individual and Community—An Honors Capstone Course (3-0) 3 Cr. Hrs.

*Prerequisite:* HUM 190.

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.

## SPANISH

Associate Dean: Cheryl D. Hawkins, MS

Instructor: Associate Professor Andrea Nofz, MA

Adjunct Faculty

### SPAN 101 Elementary Spanish 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* None.

This course is intended for students who have no previous education in Spanish. The course will cover basic grammar patterns, and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Spanish). An appreciation of Hispanic culture will be an integral part of the course.

### SPAN 102 Elementary Spanish 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* SPAN 101 with grade of 2.0 or better or one year of high school Spanish or consent of instructor.

This course is a continuation of SPAN 101 and continues to review the basic Spanish grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Spanish). An appreciation of Hispanic culture will be an integral part of the course.

### SPAN 201 Intermediate Spanish 1 (4-0) 4 Cr. Hrs.

*Prerequisite:* SPAN 102 with grade of 2.0 or better or two years of high school Spanish or consent of instructor.

This course is a continuation of SPAN 102 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Spanish). An appreciation of Hispanic culture will be an integral part of the course.

### SPAN 202 Intermediate Spanish 2 (4-0) 4 Cr. Hrs.

*Prerequisite:* SPAN 201 with grade of 2.0 or better or three years of high school Spanish or consent of instructor.

This course is a continuation of SPAN 201 and continues to cover grammar patterns and build competence in all four skill areas: speaking, listening, reading, and writing. Through varied class activities, emphasis will be placed on oral proficiency and communication (the course will be largely conducted in Spanish). An appreciation of Hispanic culture will be an integral part of the course.

## THEATRE

Associate Dean: Cheryl D. Hawkins, MS  
Instructor: Professor James R. Hartman, EdM

### THEA 101 Introduction to Theatre (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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.

### THEA 120 Theatre Activities 1 (1-0) 1 Cr. Hr.

*Prerequisite:* None.

A brief introduction to theatre activities, including, primarily technical and dramatic production with hours spent working on or in the current production.

### THEA 121 Theatre Activities 2 (1-0) 1 Cr. Hr.

*Prerequisite:* THEA 120.

This course is a continuation of THEA 120 and continues to explore all the elements of theatre: actor, director, playwright, scenery, costumes, makeup, lighting, sound, audience, theatre publicity, theatre management, and critic. Students are required to work on a current production.

### THEA 204 Stage Makeup (2-0) 2 Cr. Hrs.

*Prerequisite:* None.

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.

### THEA 207 Stagecraft and Lighting (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

This course investigates stage designs and lighting theories with a practical application by work on the college production. The course also covers the basic knowledge of set construction, lighting and its equipment, costume construction, makeup techniques, and costume maintenance. Students are required to work on a current production.

### THEA 208 Acting 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

A beginning course to prepare the actor for acting. Training in voice and body development that not only is applicable to the stage, but to daily life is covered. Exercise work in concentration, relaxation, awareness, sensitivity, and body alignment is introduced and applied to scene work from modern drama.

### THEA 209 Acting 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* THEA 208 or consent of instructor.

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 will be taught. The course includes presentation of scenes from classical and modern plays.

### THEA 220 Theatre Activities 3 (1-0) 1 Cr. Hr.

*Prerequisite:* THEA 121.

This course is a continuation of THEA 121 and continues to explore all the elements of theatre: actor, director, playwright, scenery, costumes, makeup, lighting, sound, audience, theatre publicity, theatre management, and critic. Students are required to work on current production.

### THEA 221 Theatre Activities 4 (1-0) 1 Cr. Hr.

*Prerequisite:* THEA 220.

This course is a continuation of THEA 220 and will continue to explore all the elements of theatre: actor, director, playwright, scenery, costumes, makeup, lighting, sound, audience, theatre publicity, theatre management, and critic. Students are required to work on current production.

### THEA 231 History of Theatre 1 (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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 will be explored.

### THEA 232 History of Theatre 2 (3-0) 3 Cr. Hrs.

*Prerequisite:* None.

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 will be explored.

### THEA 241 Oral Interpretation of Literature (3-0) 3 Cr. Hrs.

*Prerequisite:* THEA 208 and COMA 103.

This course is designed to give students an understanding of Oral Interpretation of Literature through a two-fold 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.



## WELDING TECHNOLOGY

Associate Dean: Bruce Sweet, MA

Instructor: Assistant Professor Rodney Johnson, CWE, CAWI, CHMM  
Adjunct Faculty

### WELD 110 Introduction to Welding—Fabrication Basics (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

This class serves as an introduction for individuals that have no welding or fabrication experience in various welding and fabrication processes. Covered in the course will be the set up and safe operation of gas welding and brazing, shielded metallic arc welding, gas metallic arc welding, gas tungsten arc welding, resistance welding, gas cutting and plasma cutting equipment as well as the safe set up and operation of equipment found in a welding fabrication facility. This class produces a good foundation for WELD 113 and is recommended for students interested in art and related metallic sculpture.

### WELD 111 Project Mathematics (2-2) 4 Cr. Hrs.

*Prerequisite:* None.

A mathematics course covering basic skills needed to increase the quantitative literacy of skilled welders in engineering and industrial practice. Welding related problems are designed to increase understanding of basic mathematics as they relate to linear, angular, four sided, triangular and circular measurements. Topics covered in the course also include volumetric measurement of conventional shapes as well as irregular shaped objects, weight calculation and calculations used in bending metals.

### WELD 113 Shielded Metallic Arc Welding (S.M.A.W.) (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

Theory and fundamentals of oxy/fuel cutting, welding, soldering, brazing, chemical bonding, resistance and shielded metallic arc welding, joining and fabricating, and welding metallurgy will be explored. Emphasis will be on basic welding skills and welding metallurgy, and the establishment of sound work habits. The course is designed to provide a foundation for more advanced courses.

### WELD 115 Gas Metallic Arc Welding (G.M.A.W./M.I.G.) (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

Theory and fundamentals of gas metallic arc welding, commonly referred to as M.I.G. welding, will be explored. This method of fusion of metals is widely used and is the fastest growing segment of the metal working industry. Emphasis will be on basic skill development and the establishment of sound work habits. The course is designed to provide entry level employability and a solid foundation for more advanced courses.

### WELD 118 Adhesive Joining Technology (1-3) 4 Cr. Hrs.

*Prerequisite:* WELD 113, MET 114 or consent of department.

Adhesive joining technology concentrates on the design and assembly of metallic, nonmetallic materials including ceramics. Two major categories, structural and non-structural adhesive bonding as well as adhesives selection, joint design, methods of surface preparation and joint evaluation will be compared to general mechanical joining techniques.

### WELD 119 Gas Tungsten Inert Arc Welding (G.T.A.W./T.I.G.) (2-2) 3 Cr. Hrs.

*Prerequisite:* None.

Theory and fundamentals of gas tungsten arc welding (G.T.A.W.) will be explored. 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. The course is designed to provide entry level employability and solid foundation for more advanced courses.

### WELD 120 Advanced Processes—Stick Electrode and M.I.G. Welding (2-2) 3 Cr. Hrs.

*Prerequisite:* WELD 115 or consent of department.

The student will gain additional knowledge and experience in both 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, pipe welding on heavy sections. Material will be formed and fabricated using power and hand operated tools and equipment. Student will design, cost estimate, procure materials and fabricate a student project.

### WELD 130 Advanced Processes—Gas Tungsten (2-2) 3 Cr. Hrs.

*Prerequisite:* WELD 119 or consent of department.

This 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.

### WELD 205 Welder's Print Reading (1-1) 2 Cr. Hrs.

*Prerequisite:* WELD 120.

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.

### WELD 206 Welding Inspection and Qualification (1-1) 2 Cr. Hrs.

*Prerequisite:* WELD 205.

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.

### WELD 223 Fabrication (2-4) 4 Cr. Hrs.

*Prerequisite:* WELD 120 and WELD 130 or consent of department.

Fabrication of student/instructor selected projects will be the format for this course. Emphasis will be on 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.

### WELD 262 Welding Metallurgy (1-2) 3 Cr. Hrs.

*Prerequisite:* None.

Welding metallurgy includes the influence of alloy composition, filler materials, fluxes and thermal interactions on the structure and properties of metals. Topics covered in the course will include the chemical, mechanical, and physical properties of metals, mechanical behavior, microstructure and post-weld heat treating.

## PREPARATION FOR WELDING CERTIFICATION EXAMINATION(S)

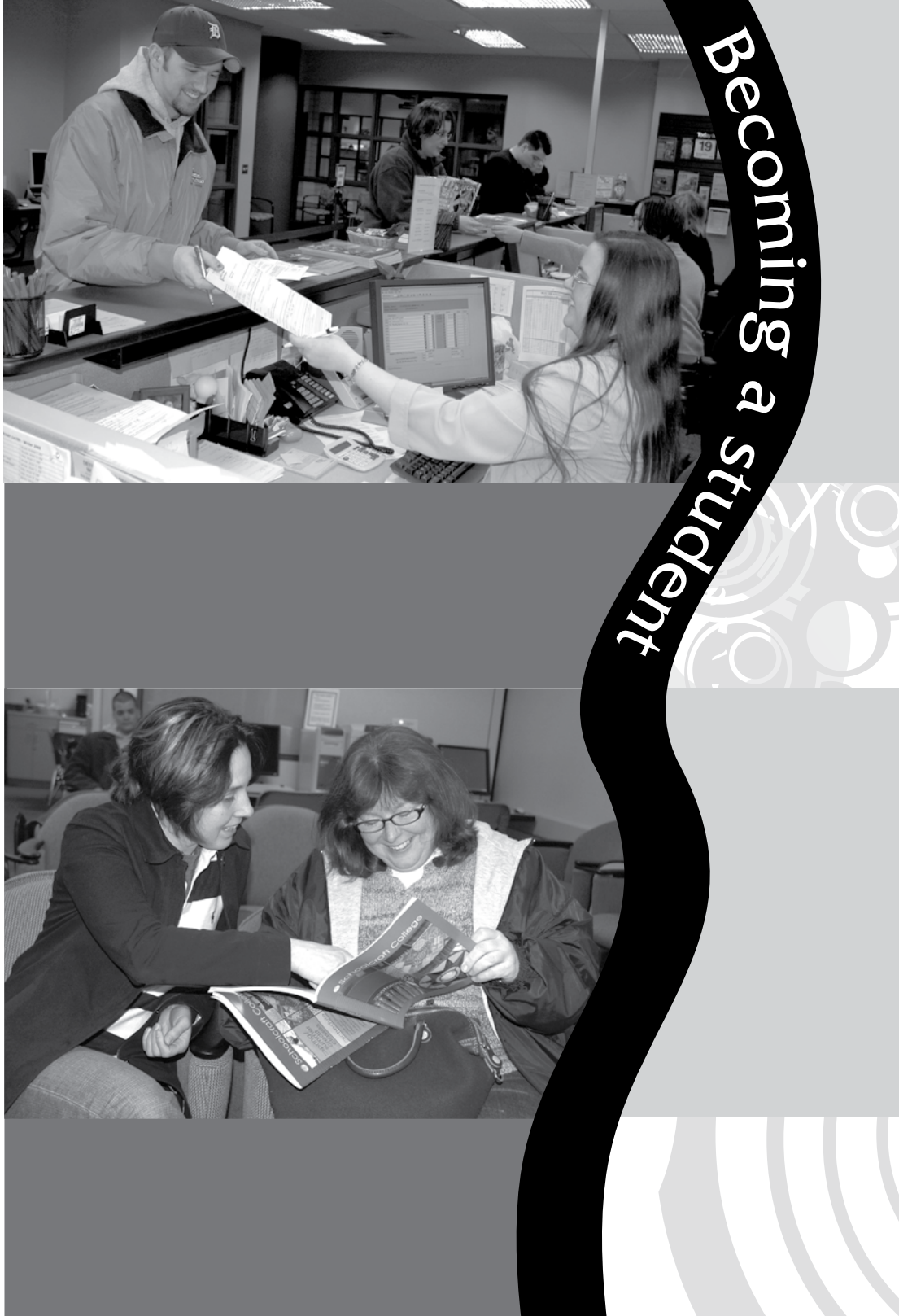
There is a greater need today than ever before for “Certified Welders” who demonstrate their competence by passing performance examinations of their work. Although Schoolcraft College is not in the business of qualifying or certifying welders, we can duplicate these tests, provide instruction in the 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 (S.M.A.W.) (2-2) 3 Cr. Hrs.  
*Prerequisite:* WELD 113 or extensive welding experience.
- WELD 211** Preparation for Welder Certification in Gas Metallic Arc Welding (G.M.A.W./M.I.G.) (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 214** Preparation for Welder Certification in Pipe Welding (2-2) 3 Cr. Hrs.  
*Prerequisite:* WELD 130 or consent of department.





# Schoolcraft College



Becoming a student

SUPPORT

# Admissions

Admissions and Enrollment Center  
McDowell Center Room 240  
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 eligible 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 younger than 18 years old will be considered for admission based on assessment testing, recommendations from their high school principal, and interviews with the Director of Counseling and Career 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/principal or home-school official. See High School Dual Enrollment and Special High School Enrollment sections for more information.

Exceptions to the criteria above can be made by the Dean of Student Services. 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 or restricted enrollment program.

## Admissions Process

Students seeking admission are requested to submit the following to the Admissions and Enrollment Center:

- Completed Schoolcraft College Application for Admission, available in print or on the Web.
- High school transcript(s).
- Official college transcript(s), if applicable. Official college transcripts must be mailed directly from the transfer institution's Registrar's Office. Hand carried or "issued to student" copies will not be accepted or considered official.

Transcripts are valuable assessment and course placement tools. Credits for courses taken at other colleges and prerequisite waivers can be evaluated for transfer if students provide high school and official college transcripts.

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

## Placement Testing

Schoolcraft College's goal is to place students in courses that will maximize their academic success. All students who plan to enroll in credit courses participate in placement testing for English, math and reading to assess their appropriate course level. To satisfy the placement testing requirement, applicants should submit ACT/SAT scores that are not more than three years old to the Admissions and Enrollment Center. Students who have not taken the ACT/SAT test may take alternative placement tests given by the College. Students with previous degrees and guest student status are exempt from placement testing. Students taking the placement test should plan to bring photo identification.

## 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. Foundation courses also may be taken by students who wish to review and strengthen their skills. Descriptions of the following foundation courses are listed in the catalog:

BIOLOGY 050	CHEMISTRY 051
COLLEGIATE SKILLS 050	MATH 045
COLLEGIATE SKILLS 053	MATH 047
COLLEGIATE SKILLS 055	MATH 053
ENGLISH 050	MATH 055
ENGLISH 055	PHYSICS 051
ENGLISH AS A SECOND LANGUAGE 051	
ENGLISH AS A SECOND LANGUAGE 052	



## High School Enrollment Options

Schoolcraft College offers high school students the opportunity to attend college while still in high school. The 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 the tenth grade may apply for dual enrollment at Schoolcraft College under the Postsecondary Enrollment Options Act of the State School Aid Act. Dual enrollment applications are valid one semester at a time and only during fall and winter semesters or spring sessions. 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 ninth grade, or home schooled students who have completed the equivalent of ninth 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. Special enrollment applications are valid one semester at a time and may be used during any semester or session. 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/principal or home-school official. In addition, a College counseling appointment is required. Students are responsible for all tuition and fees.

## Readmission of Former Students

If it has been longer than two years since the student last attended the College, he or she is asked to complete a free Application for Admission and Readmission form before registration. Former students, in good academic standing, should make an appointment to see an academic counselor/advisor. During this appointment, students can revise their educational plans and discuss current course offerings. Former students who were academically dismissed from the College must petition the Dean of 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/advisor, 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 indicate their desire to be a guest student. The application is valid only in the semester/session for which it is authorized. Applications for spring session will also be considered valid for summer session. Guest students pay all tuition and fees, as applicable, and are not eligible for financial aid funds. If guest students submit a regular application for admission and do not indicate their guest-student status, they may be required to follow the same registration processes as new students. Guest students should consult with their home institution to ensure transferability of courses. Guest students should also request an official transcript be sent to their home institution at the conclusion of their Schoolcraft courses.

## Guest Students from Schoolcraft College

Students in good standing (minimum 2.0 grade-point average) currently attending Schoolcraft College may request a Michigan Uniform Guest Application from the Student Records Office to attend another college. The Schoolcraft College Registrar must approve courses taken at another college. Students should consult the online course equivalency guide to ensure transferability of courses.



## International Students Including 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, F1, including Canadians who commute to Schoolcraft 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; 70 on the Michigan English Language Assessment Battery (MELAB), or 50 on the Michigan Test of English Language Proficiency (MTELP) is currently considered proof of English proficiency. Schoolcraft College offers the MTELP test via the Testing Center.

International students should contact the Admissions and Enrollment Center at 734-462-4426, the Counseling Center at 734-462-4429, or visit the Schoolcraft Web site, [www.schoolcraft.edu](http://www.schoolcraft.edu) to obtain an international student packet and Application for Admission.

F-1 visa students must maintain full-time enrollment to fulfill United States Citizenship and Immigration Services (USCIS) requirements. All new students must follow College assessment testing and counseling requirements and attend an International Student Orientation. In addition, proof of health coverage is required. Students are admitted for fall and winter semesters and spring and summer sessions. Also, non-credit classes are available through the English Language Institute, although they do not apply to full-time enrollment requirements.

Obtaining and maintaining your visa status is the student's responsibility. Schoolcraft College is authorized to issue visa documents (an I-20) 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 full-time study. For example, a visitor status (B-2, B-1, F2, WT or WB) does not allow full-time study. Also, someone with visitor status (or a dependent of an F1) 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 USCIS, usually a two- to three-month process. Please consult with our International Coordinator in the Counseling Center at the earliest opportunity to determine what steps you must 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, meet our faculty and see our facilities. Campus tours are offered at both the Livonia campus and the Radcliff Center in Garden City. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to schedule your visit to the Livonia campus. Contact the Radcliff Center directly at 734-462-4786 to schedule a visit.

Culinary tours highlight how to apply to the Culinary Arts and Culinary Baking and Pastry Arts programs. They also include a tour of the culinary kitchens. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to schedule your visit.



# Financial Aid

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

A college education is one of the most important investments you 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 with educational expenses and in 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 Web sites:

<a href="http://schoolcraft.edu/aid">schoolcraft.edu/aid</a>	Financial Aid page at Schoolcraft College
<a href="http://ed.gov">ed.gov</a>	U.S. Department of Education (Student Guide, FAFSA)
<a href="http://brokescholar.com">brokescholar.com</a>	Scholarship Search
<a href="http://fastweb.com">fastweb.com</a>	Scholarship Search
<a href="http://schoolsoup.com">schoolsoup.com</a>	Scholarship Search
<a href="http://wiredscholar.com">wiredscholar.com</a>	Scholarship Search
<a href="http://students.gov">students.gov</a>	Gateway to the Federal Government
<a href="http://nasfaa.org">nasfaa.org</a>	National Association of Student Financial Aid Administrators
<a href="http://finaid.org">finaid.org</a>	Financial Aid Information Page (includes scholarship searches)
<a href="http://mapping-your-future.org">mapping-your-future.org</a>	A guide to careers, schools, and financial aid
<a href="http://nelnet.net">nelnet.net</a>	Student loan information, including entrance and exit counseling
<a href="http://michigan.gov/mistudentaid">michigan.gov/mistudentaid</a>	Michigan Department of Treasury Student Financial Aid
<a href="http://collegeispossible.org">collegeispossible.org</a>	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 may range from less than half-time to full-time enrollment each semester. Awards are based on students' ability to meet eligibility criteria, make satisfactory academic progress toward their degree 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 (OFA), or the Radcliff Center's main office. The Scholarship Book contains current scholarship offerings, criteria and deadline dates for each scholarship. In addition to those listed in the book, the following scholarship opportunities are available.

### Michigan Competitive Scholarships

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. The Michigan Department of Treasury determines eligibility and award amount.

### Michigan Merit Award

This state scholarship provides a \$2,500 award, \$1,250 awarded in each of two consecutive years, to those students who graduated in 2006 or earlier, and who met Michigan Education Assessment Program (MEAP) High School Testing standards and other criteria as determined by the Michigan Merit Award Board. Those students who meet the criteria for the middle school MEAP exams, as determined by the State of Michigan, may be eligible for additional funds of up to \$500.

### Michigan Promise Scholarship

This state scholarship program replaces the Michigan Merit Award, beginning with the class of 2007. This scholarship is available to all graduating high school seniors who complete the Michigan Merit Exam (MME), and provides up to \$4,000 for educational expenses. Students who achieve appropriate scores on the MME are eligible to receive \$1,000 per year for their first two years of post-secondary enrollment. After the completion of an associate's degree, or the equivalent of half of a bachelor's degree, students are eligible for the final \$2,000 of the award. Students who complete the MME prior to graduating from high school, but do not achieve appropriate scores on the exam, may still earn the full \$4,000 after completing an associate's degree, or the equivalent of half of a bachelor's degree.

### Schoolcraft College Athletic Scholarships

Contact the Athletic Department at 734-462-4400, ext. 5324 for information.

### Schoolcraft College Institutional Scholarships

The OFA 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 notification will be sent to eligible students.

### Schoolcraft College Trustee Scholarship

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, a seventh-semester high school transcript reflecting a minimum cumulative 3.0 grade-point average and their ACT scores with a minimum composite score of 18. Students must register for at least 12 credit hours each semester, and the scholarship may be renewable for the second year of study if credit hour and grade-point average requirements are met by the end of the spring term.

### 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

These scholarships are available to students who have earned at least 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 federal grant program is for students who have not earned a bachelor's degree, are enrolled in an undergraduate program, and demonstrate exceptional financial need. Each academic year the federal government determines award eligibility and amount. The current range is \$400–\$4,310. Enrollment requirements range from less than half-time to full-time depending on individual eligibility.

#### Academic Competitiveness Grant (ACG)

This new federal grant program has been implemented for first- and second-year students. This grant is for students who have completed a rigorous high school program of study after January 1, 2006, if a first-year student, and after January 1, 2005, if a second-year student (GED students are not eligible). First-year students are eligible for \$750 (\$325 per semester); second-year students are eligible for \$1300 (\$650 per semester). A student may receive only one first-year grant and one second-year grant.

#### Federal Supplemental Educational Opportunity Grant (FSEOG)

This federal grant program is for students who have not earned a bachelor's degree, are enrolled in an undergraduate program, and 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 the previous 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 in three to eleven credit hours per semester, are considered independent students according to federal guidelines, and have been out of high school for at least two years. Students who have earned their GED do not have to wait two years after exiting high school to qualify for the grant. The award is determined by the College and is based on funds available each year.

### Native American Tuition Waiver

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

### Tuition Incentive Program (TIP)

This state grant program provides funding for tuition and mandatory fees to students who graduate high school or earn their GED by the age of 20. The Michigan Department of Treasury, through Family Independence Agency Medicaid records, certifies eligibility for each recipient. Students must register for the program prior to graduating from high school or earning their GED. TIP pays for a maximum of 24 credits each academic year. Allowable costs are limited to resident tuition, registration fees and instructional equipment fees. 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 (WRC), 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.

### College Work Study 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 by federal work-study funds. Student employment under these programs is limited to 20 hours a week. To be eligible, students must demonstrate financial need, be Pell Grant eligible and register for at least six credit hours per semester.

### 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), and complete the financial aid process, before a loan request can be considered. Loan request forms are available online. Schoolcraft College recommends students request loan amounts they realistically will 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 OFA 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. Loans will 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 with loans must participate in exit counseling upon leaving Schoolcraft or 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. Interest on subsidized loans is paid by the federal government during periods of enrollment, deferment and during the six-month grace period preceding repayment. Unsubsidized Stafford Loans have the same terms as a Subsidized Stafford, except the loan is not based on demonstrated need, and borrowers are responsible for interest during periods of enrollment and the six month grace period preceding repayment. Interest rates on both these loans are fixed for those loans first disbursed on or after July 1, 2006.

### 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 fixed at 8.5 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 must first 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](http://www.michigan.gov/mistudentaid) or by calling 1-888-643-7521.

## 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, Title 38 and Chapter 1606, Title 10) are entitled to all privileges and are responsible for complying with 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 the 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 their 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 2008–09 academic year, apply on or after January 1, 2008 for summer and fall 2008, and winter and spring 2009.

### Applying for Financial Aid

1. Complete and submit the Schoolcraft College Application for Admission. The application is available online or from the Admissions and Enrollment Center. 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](http://www.fafsa.ed.gov). If you are unable to access the Internet, you may pick up a paper application from the Office of Financial Aid (OFA).
  - Indicate Schoolcraft College's code (002315) on your FAFSA. This permits the OFA 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 Department of Education. If Schoolcraft College is not listed, you may add our school code (002315) online or submit the SAR to the Department of Education with our school code added to it.
  - 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 OFA.
  - Respond immediately to all requested information.

5. Eligibility for financial aid assistance cannot be determined until all requested documentation is on file. Students are notified in writing or by e-mail of their eligibility status. Files are reviewed based on the date of completion. Files are complete when the student has submitted all requested information. See the following priority dates.

#### Priority Processing Dates

Semester	Submit FAFSA by	Financial aid file complete by
SUMMER 2008	March 1, 2008	May 1, 2008
FALL 2008	May 1, 2008	July 1, 2008
WINTER 2009	September 1, 2008	November 1, 2008
SPRING 2009	January 1, 2009	March 1, 2009

Applying for financial aid early gives students the best chance of having an award determination in time for the start of classes. Those applying after the priority dates may not have their eligibility determined in time for the start of classes.

6. Award notification will be sent out electronically to all students who provide the college or the Department of Education with an e-mail address. Additionally, all financial aid students may view their award letter through WebAdvisor.
7. Inform the OFA 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.
8. Keep your demographic information current with the College and the Federal Processor.

## Financial Aid General Information

### Rights and Responsibilities

Financial aid guidelines, rules, requirements and consumer disclosures are on the College Web site at [www.schoolcraft.edu/aid](http://www.schoolcraft.edu/aid), in the College catalog, on WebAdvisor and on page two of the Award Letter. Materials sent to students from the OFA and its service providers may include information regarding requirements. All award and eligibility requirements are subject to change without notice. Financial aid applicants and recipients are expected to review these requirements and follow the policies and procedures established by the OFA, the College and the financial aid programs.

### 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.

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 OFA 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 in order to determine financial aid. These reflect modest book, travel, room, board and miscellaneous allowance, 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	\$2,142	\$3,002
Books and supplies	\$1,103	\$1,103
Transportation	\$1,555	\$1,555
Miscellaneous	\$1,130	\$1,130
Room and board	\$5,317	\$5,317
<b>Total</b>	<b>\$11,247</b>	<b>\$12,107</b>

Figures are based on 2007–08 academic year costs and subject to adjustment due to changes in law and College Board of Trustees 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. Students must complete the award process at each institution attended.

## Transfer Scholarships

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 Career and Transfer 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 over awards 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 OFA 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. To establish attendance in an Open Entry/Open Exit (OE/OE) class, students must complete the orientation. To establish attendance in online courses, students must submit at least one academic assignment or take at least one academic test. The OFA 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. Nonattendance usually results in the student owing money to the College.

## Withdrawals and Refunds

The College's tuition and fee refund policy is that tuition and fees are 100 percent refundable through the end of the schedule adjustment period for each semester. The \$35 registration fee is non-refundable. See the Credit Class Schedule each semester for specific refund dates. Students initiate a refund by completing the Refund Request form available in the Admissions and Enrollment Center. Students who drop classes and receive a 100 percent refund may have their financial aid adjusted and may owe money to the College.

See the Credit Class Schedule each semester for specific withdrawal dates. Students initiate a withdrawal by completing the appropriate form available in the Admissions and Enrollment Center. 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 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' earned 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.

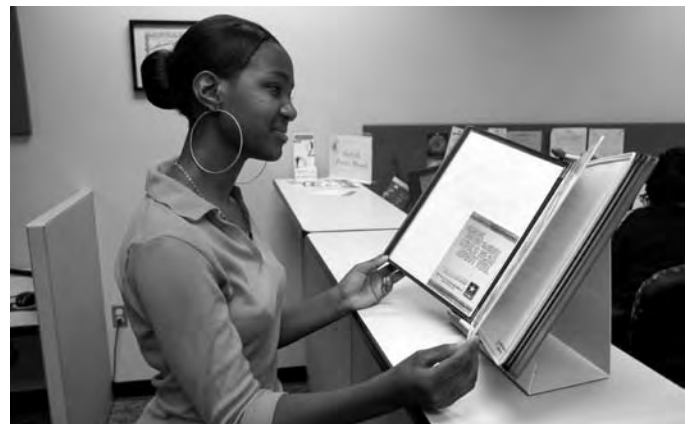
Contact the OFA for current Return to Title IV Funds schedules and examples.

## 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 Internal Revenue Service (IRS) or your tax preparer.

**Tax Credits:** The 1997 Taxpayer Relief Act created two tax credit programs for college students. The IRS 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 established the nondeductible Coverdell Education Savings Account (also known as Education IRA). Consult the IRS 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.



## Schoolcraft College Financial Aid 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 includes reviewing semesters for 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:

- Successfully complete at least 67 percent of all Schoolcraft College credit hours attempted or be a first-time student at Schoolcraft College.
- Have a cumulative Schoolcraft College grade-point average of at least 2.0.
- 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 have attempted fewer than 12 credit hours and do not meet the eligibility requirements will be granted a probationary period of financial aid to move toward acceptable grade-point average or completion rates. Students who have attempted 12 or more credit hours and do not meet the eligibility requirements will be denied financial aid. In order to be considered for a probationary period of financial aid, students must submit a letter of appeal, including appropriate documentation, to the OFA (see below). Students who fail to make satisfactory academic progress after the probationary period will have their financial aid withdrawn until they meet the standard or submit an acceptable appeal. Loans are generally 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, who have attempted more than 90 credit hours, may submit appeals. They must submit a Degree Worksheet with a Course Selection Plan signed by a counselor, and must write a letter explaining their request to the OFA.

**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. **If your situation does not fall under this category, you must follow the reinstatement process listed below.**

### 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 OFA, 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 OFA, enough credit hours to meet the grade-point average and completion rate requirements. The student will be reinstated without probation.
- The student meets the grade-point average 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, W, NC and I (W = Withdrawal, NC = No Credit – repeated course, I = Incomplete). 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. Audit and Credit by Exam

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

### 8. Repeat Courses

Students may repeat failed courses or courses in which the student does not attain the minimum grade required for their program. However, excessively repeating courses is discouraged and could affect financial aid eligibility.



# Schoolcraft College



Succeeding as a student



SUPPORT

## Testing Center—Testing Services

McDowell Center Room 220  
734-462-4806

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

### Testing/Placement Testing

Successful course selection begins with an accurate assessment of each student's ability in reading, writing and mathematics. The Testing Center offers free walk-in placement testing. No appointment is necessary.

### Make-Up and Distance Learning Tests

When a test is missed because of illness or extenuating circumstances, instructors who permit students to make up exams may arrange for a make-up test to be taken at the Testing Center. Students taking Distance Learning courses also may take their exams on a drop-in basis at the Testing 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 Testing Center to students and members of the community. To earn college credit for prior learning, individuals must achieve the minimum scaled score recommended by the American Council on Education. Pre-registration is required. Contact the Testing 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 through internet-based testing on computers or on pencil and paper forms. To earn credit, individuals must achieve the minimum scaled score recommended by the American Council on Education. DSST exams are offered by the Testing Center and require pre-registration. Contact the Testing 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; candidates must be at least 18 years old. GED testing is scheduled on designated dates each month. Pre-registration is required. Contact the Testing Center for information and a registration brochure.



### Test Proctoring Site

For a fee, the Testing Center is available by appointment as a community proctoring site for exams from other colleges and educational programs. Virtual Learning Collaborative students may have their tests proctored in the Testing Center by making prior arrangements. Contact the Testing Center to schedule test proctoring.

### Business and Industry Assessment Services

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

### ACT WorkKeys Examination Program

ACT WorkKeys Examinations are available for Michigan Paraprofessionals who need to meet the No Child Left Behind Paraprofessional Certification Requirements.

## 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. Counselors are available by appointment. Academic Advisors are available on a walk-in basis. Plan early for best results. The Counseling Center can help you with:

#### Academic Choices

- Selecting a major or program of study.
- Creating an educational plan.
- Understanding certificate and degree requirements.
- Developing a strategy for selecting courses.
- Preparing to graduate.
- Making plans to transfer.

#### Personal Life Choices

- Managing the stress of school, work and personal commitments.
- Using time-management skills to create an effective balance.

#### Career Opportunities

- Identifying and clarifying career goals.
- Connecting to resources for in-depth career counseling.
- Enrolling in a career decision-making course—HDS 110.

#### Transfer Planning

- Connecting with representatives of four-year colleges and universities.
- Obtaining transfer guides.
- Using articulation agreements between Schoolcraft College and four-year colleges and universities.
- Providing guidance in selecting a transfer institution.

#### New Student Orientations

Student orientation programs are designed to provide essential information and help ease the transition to college for new students. The Counseling Center provides orientation sessions including an online format. All entering students must complete an orientation session before registering for classes. Students can call the Counseling Center to arrange a convenient time for orientation or click on [www.schoolcraft.edu](http://www.schoolcraft.edu).

## Registration

McDowell Center Room 240  
734-462-4426

### The Registration Process

Registration at Schoolcraft College takes place three times a year, usually starting in July for the fall semester, in November for the winter semester, and in April for the spring/summer sessions. The credit class schedules contain appropriate registration information. Students may register online at [www.schoolcraft.edu](http://www.schoolcraft.edu) using WebAdvisor or by touchtone phone at 734-462-4800. Students also may register in person. For detailed information regarding registration dates, times and deadlines, consult the current Credit Class Schedule, in print or online at [www.schoolcraft.edu](http://www.schoolcraft.edu) before the start of each semester's registration period. The Schedule also is available in the Admissions and Enrollment Center, Counseling and at the Radcliff Center.

New students are eligible to register after they have taken assessment tests and met with a counselor/advisor.

Students are expected to register during the official registration periods. Students wishing to register beyond the official registration period must receive written approval from their counselor and the Registrar. Students may not register past the midpoint for any course. It is College policy that students with financial obligations to Schoolcraft College will not be allowed to register until the obligations have been paid or cleared.

Students cannot attend classes for which they are not registered. Students are expected to complete the courses in which they are registered. Follow the processes outlined below for information related to adding, dropping or withdrawing from courses.

### Schedule Adjustments

Students may perform schedule adjustments during the published schedule adjustment timeframe. Please review the current Credit Class Schedule to see the last official date for schedule adjustments.

### Added Courses

Students may add courses until the first class meeting of the section. Students wishing to enter a section that has started must obtain written permission from the instructor. The permission slip should be brought to the Admissions and Enrollment Center within two days or it will not be valid. Open Entry/Open Exit courses have flexible beginning and ending dates. Students may not add an Open Entry/Open Exit course beyond the published registration date for Open Entry/Open Exit classes. See the Open Entry/Open Exit section in this catalog for more information.



### Dropping Classes vs. Withdrawing From Classes

There is a distinct difference between dropping and withdrawing from classes.

- Dropping a class means the student no longer wishes to attend the class and wishes to receive a refund, excluding the registration fee. Dropped courses do not appear on the official College transcript, and no grade is issued for dropped courses. To receive a refund, a drop must be completed before or on the last date to drop (last date of schedule adjustment) as published in the current credit schedule. Follow the procedures listed below to officially drop a class.
- Withdrawing from a class means the student no longer wishes to attend the class but will not receive a refund. Students can officially withdraw from classes after schedule adjustment through the last date for a W grade as published in the current credit schedule. Withdrawing from a class will result in a W grade on the official College transcript. W grades are not considered when calculating the grade-point average, but may impact a student's Satisfactory Academic Progress as it relates to Financial Aid.

### Procedure for Dropping Class(es)

Students wishing to drop a class must complete the appropriate form in the Admissions and Enrollment Center or online via WebAdvisor or via telephone registration, during the published timeframes. Drops also can be completed by sending a letter or fax to the Admissions and Enrollment Center. The letter or faxed request should include the student's name, ID number, signature, the course name and number, and section number. The date the form or fax is received, or the postmark on the envelope, is the student's official drop date for the class.

### Procedure for Withdrawing From Class(es)

Official class withdrawals are allowed through the last date for a W grade as published in the current credit schedule. Withdrawal deadlines vary depending on the length of the course.

To officially withdraw, students must complete the appropriate form at the Admissions and Enrollment Center. Withdrawals also may be requested by letter or fax. The letter or faxed request should include the student's name, ID number, signature, and the course name, number and section number. The date the form or fax is received, or the postmark on the envelope, is the student's official withdrawal date. Withdrawals cannot be processed via WebAdvisor or telephone registration.

### Non-Attendance

It is important that students do not simply stop attending classes. If students do not officially drop or withdraw, and do not attend class, the instructor will assign an appropriate final grade (4.0 through 0.0) in relation to total course requirements achieved.

Students that register for a class and do not attend will receive a grade of 'NS'. Students attending the first week of class only who do not officially drop or withdraw will also receive a NS grade. Students in Open Entry/Open Exit classes who complete only orientation and no other assignments or tests will receive an NS grade.

The NS grade signifies non-attendance, and will not be used in calculating the grade point average. No show (NS) grades may affect a student's Satisfactory Academic Progress as it relates to Financial Aid.

Transfer students should investigate the implications of a NS grade with the receiving institution. It is up to the receiving transfer institution to determine how the NS grade will be handled.

## Tuition and Fees

Tuition and fees must be paid in full the day the student registers. Specific dates are listed in the Credit Class Schedule and on WebAdvisor each semester. Cash, check, Visa, Discover and MasterCard are accepted forms of payment. Tuition may be covered partially or in full by an approved financial aid award. A tuition payment plan is available on WebAdvisor. This plan allows students to pay tuition and fees in installments. Payments are made via credit card (MasterCard, American Express and Discover) or via electronic withdrawal from a savings or checking account. There is a separate enrollment fee for the tuition payment plan.

### Resident and Nonresident Status

Residency status determines a student's tuition rate.

- 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 are charged tuition based on the address on record in the Admissions and Enrollment Center. 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, or at any time the student is in attendance at the College.
- 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) who are admitted to the College are charged International tuition rates, regardless of length of residency within the district or state. F-1 visa holders are not eligible for a residency rate review.
- Visa holders (non-F1) may be eligible for a residency status review. Information on residency status reviews for visa holders is available by contacting the Admissions and Enrollment Center. Residency rate review requests must be received prior to the last day of schedule adjustment (see current credit schedule for dates) for the semester for which you are requesting a review. Residency Rate Reviews will not be granted for previously attended semesters.
- 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 Admissions and Enrollment Center. Students may be asked to provide one or more of the following items as proof of resident status:
  - Valid driver's license or State ID card with a current address.
  - Official communications from public utilities.
  - Property tax receipt or lease agreement.
  - Other proof the College finds acceptable.

### Registration Fee

This fee is a non-refundable fee charged once each semester regardless of how many credit hours are taken by a student.

### Instructional Equipment Fee

This is a \$4.00 per credit hour fee used to defray the increasing cost of maintaining, upgrading and replacing the electronic equipment and personal computers on campus.

### Course Fees

Course fees consist of a lab fee, an excess credit hour fee or both. Lab fees cover the cost of special materials or equipment. Excess contact hour fees are charged when a class meets more hours during a week than the credit hours assigned to the class. The cost is \$50 per excess contact hour with a maximum of four excess credit hours per class. Course fees are listed in the Credit Class Schedule each semester and are in addition to tuition and other fees.

Students are required to purchase their own textbooks, supplies, personal attire (such as lab coats or clinic shoes, as required by courses), special equipment and tools. Most of these items may be purchased at the College Bookstore.

### 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. The purchase order or authorization must be received by Student Accounts prior to registration. Authorizations are required each semester. Contact Student Accounts, 734-462-4586, 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 and Fees table in the current semester Credit Class Schedule. For Continuing Education and Professional Development classes, a reduced course fee is specified for each course and is listed in schedules and brochures.

Before registering, senior adults should visit the Admissions and Enrollment Center on the Livonia campus, or the Radcliff Center Main Office to complete the senior adult identification card. To qualify for a tuition discount, proof of senior status is required. The College accepts a birth certificate, driver's license or the Michigan State Identification Card available from the Secretary of State.

### Tuition Refund Policy

Refund dates for credit class tuition and fees appear in the current semester Credit Class Schedule. Before the beginning of each term and until the end of schedule adjustment, students receive a 100 percent refund. Please refer to the current Credit Class Schedule for information on the refund process.

The \$35 registration fee is nonrefundable. Refunds to students who drop credit classes within the official drop timeframe are made in accordance with the current Credit Class Schedule.

Typically there are no exceptions to the refund procedure. However, students requesting an exception to the refund policy due to extenuating circumstances such as military service or serious illness with doctor's documentation, may file a Request for Exception in the Admissions and Enrollment Center. The Exception Committee will review all requests and provide the student with a decision in writing. Typical turn-around time for the Committee is three to four weeks; however, it may take longer to receive a decision.

## Student Records

McDowell Center Room 255  
734-462-4677

The Student Records 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, standardized test scores, health data and counselor advising comments. See Student Privacy Rights.

Other office services include enrollment verification, student loan deferment processing, transfer course evaluation, outgoing guest application processing, certifying students' eligibility for graduation, and the commencement ceremony.

### Transcript Request

Schoolcraft College requires the student's signature in order to provide a transcript. There are two kinds of transcripts: official and student copies. Official transcripts are usually sent to other colleges, universities or employers. There is no charge for transcripts, but transcripts will be released only after all financial obligations to the College have been fulfilled. The College reserves the right to limit the number of transcripts sent to or on behalf of a student.

Students may request a transcript by completing the appropriate form in the Admissions and Enrollment Center, or by sending a fax request to 734-462-4506. When making a request to have a transcript sent, students must provide their name, Schoolcraft College ID number or Social Security Number, signature, date of birth, and a complete address to which the transcript should be sent.

To forward official transcripts to designated colleges, recognized institutions or employers, students must submit a signed request or complete a request form in the Admissions and Enrollment Center, or by sending a fax request to 734-462-4506. 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 stamped "student copy."

## Grade Reports

Grade reports are available through WebAdvisor after the end of the semester or session. Printed grade reports are available by request only. Requests for printed grade reports must be made before the end of the semester for which printed grades are expected. Students may use the kiosk machines around campus or WebAdvisor to submit requests for printed grade reports. Grade reports for students who have financial and other obligations to the College are not available until all obligations are fulfilled.

### 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 NS, 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.

### Issuance of an Incomplete Grade

An instructor may award an I grade to students who, because of extenuating circumstances, were unable to complete the course work within the regular College semester or 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. If an I grade reaches expiration, and the Records Office has not received a change in grade form, indicating another earned grade, the I grade will be automatically changed to a 0.0 grade.

### Eligibility for Athletics

Students who participate in varsity athletics must have a grade-point average in keeping with the requirements established by Schoolcraft College, the Michigan Community College Athletic Association and the National Junior College Athletic Association. Student-athletes who meet only NJCAA standards but not the Schoolcraft College standard will not be eligible to compete or to receive grant-in-aid funding.



# Student Academic Support Services

## Learning Support Services

Learning Support Services, which includes the Testing Center, Learning Assistance Center (LAC), University Bound, Bradner Library, and Collegiate Skills courses provides learning opportunities and services to help students be as successful as possible in educational, occupational and personal endeavors. Emphasis is placed on the student becoming an active learner. Learning Support Services is committed to helping students succeed.

## Learning Assistance Center

Bradner Library Room 119  
734-462-4436

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

### Free Tutoring

The College provides free peer tutoring through the LAC for many courses. Online tutoring is available; [www.schoolcraft.edu/tutor/tos.asp](http://www.schoolcraft.edu/tutor/tos.asp). Drop-in tutor program 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 can 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 terms. 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.

### Mentoring Program

The Peer Mentoring program provides assistance to selected at-risk students. Peer mentoring is the process of students working together to help each other succeed. Accomplished student role models guide incoming Schoolcraft College students on the path toward meeting their needs and goals.

### University Bound

Schoolcraft College, in collaboration with Wayne State University, offers students the University Bound program, a King-Chavez-Parks initiative. University Bound helps students prepare to transfer to a four-year university during their years at Schoolcraft College. This free program is specifically targeted at students whose goal is a bachelor's degree. Participating students are invited to attend workshops and seminars, create an electronic portfolio, visit WSU's campus, meet employers and develop mentor relationships with students and faculty. Participations awards are also available for students who meet specific goals.

### Freshman Focus

The Freshman Focus component of the program targets incoming freshman whose intent is to transfer to a university. The goal is to provide services to a selected group of first year students in an effort to help them transition to a college setting

and successfully complete their academic coursework. Assistance with supplies, participation awards, and peer mentors are some of the program services.

### 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, 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](mailto: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 045, 047, 053, 113, 119, 128 and 129. Videos may be checked out for two days.

### Study Skills Enhancement

Students who want to improve their textbook reading, note taking, memory retention, time management or test-taking skills can 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 compact disks, testing accommodations, interpreters, note takers, tutoring, faculty liaison and modifications of computer and classroom facilities. Also available is a two-credit course, 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 for Non-native Speakers

A lack of English language proficiency does not prevent admission to Schoolcraft College; however, most college courses require basic proficiency in English. If English is not your first language, Schoolcraft College offers two different pathways, based on your needs and your goals, to help you improve your English skills. If you plan to pursue a college education here in the United States, or you are on a student visa and need to earn credits toward a college program, you should enroll in our Credit ESL Courses. See page 112 for credit course descriptions and page 149 for International Student Guidelines. If your English skills are not strong enough for you to succeed in college-level classes, or if you would simply like to become more confident as you interact with American English speakers at work, home or school, the LAC non-credit ESL Classes, offered through our English Language Institute are the best choice for you. The LAC also offers an International Student Relations Club open to all non-native English students.

### Test Preparation

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

### Academic Skills Workshops for College Students

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

### Back to the Basics

The LAC offers “Back to the Basics” classes for those needing to build their foundational skills in reading, math, grammar, writing and test taking. These classes will help students who have been away from school for a long time, or have never attended college, to enhance the basic skills vital to college success.

## Women’s Resource Center

McDowell Center Room 225  
734-462-4443

Hours: Monday 9 a.m.–7:30 p.m. and Tuesday–Friday 9 a.m.–4:30 p.m.  
Summer Hours (June and July): Monday–Friday 9 a.m.–4:30 p.m.  
Appointments are not required.

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

At the McDowell Center location, volunteer peer counselors are available for both walk-in and telephone clients. The peer counselors are specially trained to listen to and assist clients who wish to:

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

The WRC offers many free pamphlets, brochures and articles.

## Special WRC Programs and Services

### WRC Scholarships

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

### Special Populations Program

The Special Populations program, administered by the WRC, provides tuition assistance, support services and/or programs for single parents, displaced homemakers, those with limited English proficiency, those who are academically or economically disadvantaged, individuals with disabilities and non-traditional job seekers.

### Divorce Support Group—Meets Year Round

A divorce support group is open to anyone contemplating, in the process of, or having difficulty adjusting to, divorce. The group meets in the WRC on the second and fourth Tuesday of each month. The first meeting of the month is a group discussion with a facilitator. The second meeting of the month features a speaker. A quarterly schedule of speakers is available.

### Money Matters in Divorce—October through May

The first Monday of each month, a certified divorce financial planner is available free of charge. The CDFP is available from 5–7 p.m. on a first-come, first-served basis.

### Ask an Attorney—October through May

On the second and third Monday of each month, a lawyer is available for free consultations on family law. The attorney is available from 5–7 p.m. on a first-come, first-served basis.

### Luncheon Series

The WRC sponsors six luncheons each year featuring speakers on a variety of topics. Schedules of dates and speakers are available in July and January.

## From Chocolate Chips to Micro Chips to Blue Chips (CHIPS): A Program for Women in Transition

Radcliff Center Room 120  
734-462-4400, ext. 6039

Tuesday and Thursday 8 a.m.–4:30 p.m. by appointment

The full name of the program is: From Chocolate Chips to Micro Chips to Blue Chips, but it is commonly referred to as CHIPS. The program’s goal is to take the participant from working inside the home, to working outside the home, to making sound personal financial decisions.

CHIPS has two parts. Depending upon your needs, you can complete one or both parts.

The first part is a 15-week, 6-credit program that includes:

- HDS 110 Career Decision Making, 2 credits
- OIS 100 Keyboarding, 2 credits
- CIS 105 Computer Orientation, 1 credit
- OIS 195 Time and Project Management, 1 credit
  - Assertiveness training.
  - Identification of job-related skills.
  - Educational counseling.
  - Assistance in applying for school-related financial aid.
  - Interviewing techniques.
  - Support/study group.
  - Job placement guidance.
  - Physical conditioning.
  - Business clothing available from the CHIPS Boutique.

The second part, CHIPS TOO, is a 15-week, 6-credit program that includes:

- OIS 165 Microsoft Word for Windows, 3 credits
- BUS 204 Personal Finance, 3 credits
  - Educational counseling.
  - Assistance in applying for school-related financial aid.
  - Job placement guidance.
  - Business clothing available from the CHIPS Boutique.
  - Support/study groups.

The curriculum in the CHIPS program will allow the student to complete the Office Information Systems, Office Specialist Skills Certificate and/or the Office Administration Associate Degree or the Associate of General Studies Degree. See pages 73–74 for more details.

# Student Academic Resources

## Career and Transfer Center

McDowell Center Room 205  
734-462-4421

The Career and Transfer Center provides services and resources to help students learn about career, employment and transfer options. The services help students incorporate all phases of their educational experience from exploring careers, selecting a major and seeking employment opportunities, to making a smooth transition from Schoolcraft College to a four-year college or university.

Students who need assistance for career planning, employment services or transfer services can visit the Career and Transfer Center located in the McDowell Center. Licensed professional counselors specializing in career counseling and professionally trained personnel are available to assist students in the following areas:

### Career Counseling

- Analyze career options with help from an experienced licensed counselor.
- Evaluate what career interests, skills or personality assessments tell you about yourself.
- Use the computerized career search engines DISCOVER and OPEN OPTIONS.
- Learn to write a targeted resume.

Career Counseling is available to students and the community.

### Transfer Services and Resources

- Browse college materials: catalogs, brochures, and information on admissions and transfer requirements.
- Pick up university applications.
- Discover transfer scholarship opportunities.
- Explore transfer equivalency information.
- Check the schedule to see when your transfer university is sending an admissions representative to Schoolcraft.
- Meet with the Schoolcraft College transfer coordinator.

### Employment Services

- Jobs database updated daily for students and alumni.
- Job listings from local employers for full-time, part-time and temporary positions.
- Job listings for on-campus student employment.
- Publications with resume tips, sample cover letters, interview information, thank-you and acceptance letter examples.
- Job fairs and on-campus recruiting.
- Practice interviewing using the Perfect Interview, an interactive interviewing software program.



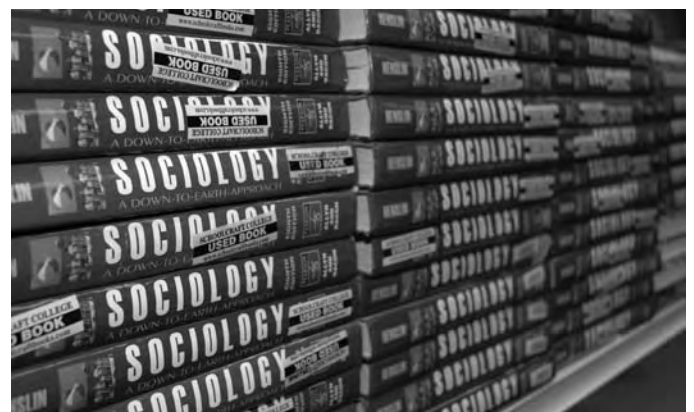
## College Bookstores

Livonia Campus  
734-462-4409

Radcliff Campus  
734-462-4778

Online Bookstore: [www.schoolcraftbooks.com](http://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 Sciences 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](http://www.schoolcraftbooks.com) and can be used for Livonia campus classes and all online classes. Required textbooks must be purchased at the campus where the class is held. All bookstores offer a wide selection of high quality goods, new and used textbooks, discounted academic computer software and Apple® Computers, and other services, with particular attention paid to academic requirements. Many books can be resold through the book buyback process, which helps reduce the cost of textbooks.



## Academic Computer Use

McDowell Center Room 100

Radcliff Center Room 140

Computer Lab Hot Line Numbers:

734-462-4400, ext. 5147 for Livonia Campus

734-462-4400, ext. 6112 for Radcliff Center

Schoolcraft College offers its students access to 46 computer labs with more than 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 currently be enrolled 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.



## 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. In addition to an extensive collection of books and periodicals, the Bradner Library on the Livonia campus and the Radcliff Library in Garden City provide online access from home and on campus to a variety of academic resources including partial and full text periodical databases, newspapers, e-books, almanacs, encyclopedias, the Schoolcraft library catalog and other reference resources. The libraries also provide computers with Internet access for academic research on the World Wide Web, and the Bradner Library provides free wireless Internet access via the Schoolcraft wireless network.

Schoolcraft students, faculty and staff can obtain a library card and 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, U.S. government publications and Internet-based resources. They also offer library tours and introductions to using the Internet by instructor request. Contact either library for more information.

During the fall and winter semesters, the Bradner and Radcliff Library hours are:

	Bradner Library	Radcliff Library
<b>Mon.–Thurs.</b>	8 a.m.–9 p.m.	8:30 a.m.–9 p.m.
<b>Friday</b>	8 a.m.–4 p.m.	9 a.m.–1 p.m.
<b>Saturday</b>	Noon–5 p.m.	9 a.m.–1 p.m.
<b>Sunday</b>	Noon–5 p.m.	Closed

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





# Schoolcraft College



Student academic policies

# Student Academic Policies

## Attendance Procedures

Regular class attendance is necessary for maximum success in college. Faculty members announce any special attendance requirements during the first class meeting of each semester or session. Refer to the Non-Attendance section for more information.

- Students are expected to attend all classes except in the event of illness or an unavoidable emergency.
- Students are responsible for making arrangements to complete all work before attending athletic events, field trips or other College-sponsored events. Written 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 regardless 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 desire credit by applying to the College and by paying the same tuition and applicable fees as regularly enrolled students.

A student's intention to audit the course should be made known at the time of registration. A change in audit/credit after the registration period may be authorized through instructor/student consultation and written notification by the instructor to the Registrar. This change must be done before the last day to withdraw from a class as published in the Credit Class Schedule for that term. Any student auditing a class may participate as a regularly enrolled student except that no final grade or credit is issued to the auditor. The Official Transcript will reflect AUD and 0.0 credits earned to signify the audited course.

## 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 technology, 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 a counselor to elect more than 18 hours. Normally, students eligible for credit hour overloads earned a minimum grade-point average of 3.0 in the previous semester at Schoolcraft College. Students must obtain permission from a counselor or academic advisor 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 credit hour overloads earned a minimum grade-point average of 3.0 in the previous semester at Schoolcraft College. Students must obtain permission from a counselor or academic advisor 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 fall/winter semester.
- Part-time—Fewer than 12 credit hours per fall/winter semester.
- Special/Dual Student—High school student who is enrolled in Schoolcraft at the same time he/she is enrolled in a high school or home school curriculum.
- Advanced Standing—A student who has previously completed at least an associate degree at Schoolcraft or another college or university.

## Credit by Examination

Schoolcraft College students may request credit by examination 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.

The College requires a minimum number of credit hours earned at Schoolcraft before the equivalency credit is posted to the student's record. Students must pay appropriate per-credit-hour fees.

## 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 Admissions and Enrollment Center as early as possible. See page 157 for more information.

## CLEP/DANTES National Credit by Examination Programs

The College Level Examination Program and the DANTES Subject Standardized Tests Program offer students the opportunity to obtain college credits based on satisfactory test score completion. Contact the Testing Center for test registration information. See page 157 for more information.

## Dean’s List—Recognizing Academic Achievement

Each semester we recognize students for high academic achievement by naming them to the Dean’s List. The College sends a letter of recognition to students’ homes and notifies hometown newspapers.

The minimum requirements for fall or winter semester are:

- Full-time students with a semester grade-point average of 3.5 or higher.
- 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.

## 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
W *—Withdrawal	No points
I **—Incomplete	No points
AUDIT ***—No grade or credit awarded	No points
No Show (NS)****	No points
NC—No Credit—repeated course	No points

\* See Withdrawal from Classes. Observe dates in the current credit class schedule.

\*\* See Issuance of an Incomplete Grade.

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

\*\*\*\* See Non-Attendance.

Note: Individual programs may have special grade requirements.



## Grade-Point Average

Students may 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
<b>Total Credits</b>	<b>14</b>		<b>Total Grade Points</b>		<b>36</b>

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

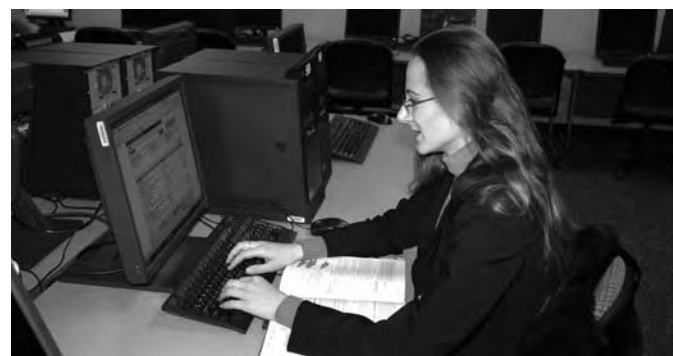
Any student on academic probation who fails to earn a grade-point average of 2.0 or higher after completing a total of 30 credit hours will be academically dismissed from the College. The official record (transcript) and grade report reflect this status. A student may appeal the dismissal to the Dean of 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 benefits must meet the specific academic requirements that determine continuation for these programs.

### Readmission for Academically Dismissed Students

Students must petition the Dean of Instruction, confer with a counselor and meet with the Associate Dean of Learning Support Services for readmission. As a condition of readmission, if petitions are honored, students must follow specific recommendations made by the Associate Dean of Learning Support Services.



## 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 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 by completing an Instructional Complaint form, acquired through the appropriate Associate Dean's Office. This form includes:

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

The Associate Dean will review the complaint, investigate the facts, and send a written decision to the student within ten 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 working days of receipt of the Step II decision. The Dean of Instruction will hear the complaint, investigate the facts and, if needed, convene a hearing of the individuals involved. A written decision will be given within ten working days of submission of the appeal. Certain circumstances may make it impossible to respond within the ten 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. Occasionally a situation arises which requires more immediate action. Examples include deadlines such as graduation dates, external testing dates, and transfers to other institutions or employment opportunities. The student may request, in writing, an Expedited Process, and if the Dean of Instruction and Dean of Student Services concur, the case will proceed immediately to Step IV.

### Step IV

If the matter is still unresolved, the student must notify the Dean of Student Services in writing, no later than five working days after the Step III decision is rendered. The Dean of Student Services will convene and chair a Hearing Committee within ten 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 Dean of Student Services will complete the process with a final written decision to the student no later than ten working days after the hearing. That decision\* is final and concludes the appeal process.

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





# Schoolcraft College



# 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 protects the privacy of educational records, establishes the right of students to inspect and review their educational records and provides guidelines for the correction of inaccurate or misleading data. Each year the College notifies students of these privacy rights and outlines the public information that can be released outside the institution.

No one outside the institution shall have access to nor will the institution disclose any information, other than directory information, from students' educational records without the written consent of the student. Exceptions permitted under FERPA include information released to qualified persons within the institution, officials of other institutions in which students seek to enroll, persons or organizations providing student financial aid, accrediting agencies carrying out their accreditation function, members of the Schoolcraft Community who are individually or collectively acting in the educational interests of students, persons in compliance with a judicial order and in an emergency to protect the health or safety of students or other persons.

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.

Students may not inspect or review the following as outlined by FERPA: Financial information submitted by their parents; confidential letters and recommendations associated with admissions, employment, job placement or honors to which they have waived their rights of inspection and review; or educational records containing information about more than one student, in which case the institution will permit access only to the part of the record which pertains to the inquiring student.

If an individual student feels that his or her official records are inaccurate, misleading or otherwise inappropriate, the student may discuss his/her concerns informally with the person(s) in charge of the records involved. If these persons agree with the student, the appropriate records will be amended. If not, the student will be notified within a reasonable period of time that the records will not be amended, and also will be informed by the Dean of Student Services of the student's right to a formal hearing.

At its discretion, the College is authorized to release directory information including 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. Students may request that this information be withheld by notifying the Student Records Office in writing.



# Student Code of Conduct and Judicial Procedures

## Preamble

Schoolcraft College exists to serve students and the surrounding community. The College is also a community, and students are important members of this community. Every student should know the responsibilities that students assume toward each other, faculty and staff as equal members of this community. 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.

The Student Code of Conduct defines a student's basic rights within the College community, states what actions students may expect from the College to protect those rights, and explains the College's expectations of its student members, including the standards by which student behavior is measured.

## Academic and Personal Behaviors

In consideration of the many rights of and responsibilities to each member of the College community, and in compliance with the requirements of local and state statutes, the Board of Trustees of Schoolcraft College hereby adopts the following regulations and prohibits all persons from engaging or participating in any of the practices or behaviors listed below. The following list is illustrative and not meant to be an exhaustive enumeration of inappropriate behavior.

1. Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other activities, including the College's public service functions or other authorized activities, on College-owned or controlled property.
2. Physical abuse, assault or battery, or unauthorized detention of any person on College-owned or controlled property or at College-sponsored or supervised functions, and/or conduct or expression, verbal or written, which threatens or endangers the health or safety of any such persons.
3. Theft of or damage to property.
4. Unauthorized entry or use of College facilities.
5. Violation of College policies or regulations concerning falsification of records, registration of organizations, or the use of College facilities.
6. Interference with the proper educational functions and the appropriate educational climate of the College by obscene actions or language or disorderly conduct, including aiding or abetting another to breach the peace on College-owned or controlled property or at College-sponsored or supervised functions.
7. Illegal use, possession or distribution of alcoholic beverages, narcotics, or controlled or illicit substances, or public intoxication.
8. Failure to comply with directions of College officials, Public Safety staff, or any other law enforcement officers acting in the performance of their duties.
9. Unauthorized obstruction of the free flow and orderly movement of pedestrian or vehicular traffic and serious or repeated violation of campus traffic rules and regulations.
10. Illegal or unauthorized possession or use of firearms, explosives, other weapons, dangerous chemicals, or improper use of fire extinguishers on College property. NOTE: Exceptions to possession or use of firearms are: a) certified law enforcement officers, b) students enrolled in Schoolcraft College classes requiring firearms training, c) College-owned firearms used for instructional purposes.
11. Violation of federal, state and local laws.
12. Acts of dishonesty, including but not limited to the following:
  - a) Cheating, plagiarism or forms of academic dishonesty.
  - b) Furnishing false information to any College official, faculty member or office.
  - c) Forgery, alteration or misuse of any College document, record or instrument of identification.
13. Unauthorized possession, duplication or use of keys to any College premises or unauthorized entry to or use of College premises.
14. Participation in a campus demonstration which disrupts the normal operations of the College and infringes on the rights of other members of the College community; leading or inciting others to disrupt scheduled and/or normal activities within any campus building or area; intentional obstruction which unreasonably interferes with freedom of movement, either pedestrian or vehicular, on campus.
15. Conduct which is disorderly, lewd or indecent; breach of peace on College premises or at functions sponsored or participated in by the College.
16. Theft or other abuse of computer time, including but not limited to:
  - a) Unauthorized entry into a file, to use, read or change the contents, or for any other purpose.
  - b) Unauthorized transfer of a file.
  - c) Unauthorized use of another individual's identification and password.
  - d) Use of computing facilities to interfere with the work of another student, faculty member, College official or employee.
  - e) Use of the computing facilities to interfere with normal operation of the College computing system.
  - f) Access to or distribution of obscene or pornographic materials.
17. Discrimination, harassment and offensive conduct against any person, student or staff member on the basis of race, creed, color, sex, age, marital status, handicap, disability and/or national origin. See College Policy 1080.
18. Abuse of the Disciplinary System, including but not limited to:
  - a) Failure to obey the summons of the Student Disciplinary Standards Committee or a College official.
  - b) Falsification, distortion or misrepresentation of information before the Student Disciplinary Standards Committee or Appellate.
  - c) Disruption or interference with the orderly conduct of a hearing.
  - d) Institution of a hearing or proceeding knowingly without cause.
  - e) Attempting to discourage an individual's proper participation in, or use of, the Student Disciplinary System.
  - f) Attempting to influence the impartiality of a member of the Student Disciplinary Standards Committee or Appellate before, during, and/or after a proceeding.
  - g) Harassment, verbal or physical, and/or intimidation of a member of the Student Disciplinary Standards Committee or Appellate before, during, and/or after a proceeding.

- h) Failure to comply with the sanction(s) imposed under the Student Code.
- i) Influencing or attempting to influence another person to commit an abuse of the Student Disciplinary System.

### Decisions and Judicial Authority

1. The Dean of Student Services shall:
  - a) Determine the composition of the Student Disciplinary Standards Committee and shall act as the Appellate.
  - b) Develop policies and procedural rules for the conduct of hearings which are consistent with provisions of the Student Code.
  - c) Authorize the suspension of any student when the circumstances warrant immediate action, such as in the case of threatening or assaultive behaviors. The suspension will remain in effect until the Student Disciplinary Standards Committee meets to hear the case.
2. Decisions made by the Student Disciplinary Standards Committee shall be final, pending the normal appeal process.
3. The Student Disciplinary Standards Committee may be designated as arbiter of disputes within the student community in cases which do not involve a violation of the Student Code. All parties must agree to arbitration and be bound by the decision with no right of appeal.

### Judicial Procedures

#### Charges and Hearings

1. Any member of the College community may file charges against any student for misconduct. Charges shall be prepared in writing and directed to the Dean of Student Services. Any charge should be submitted as soon as possible after the event takes place.
2. The Dean of Student Services will designate an administrator to conduct an investigation to determine if the charges have merit and/or if they can be disposed of administratively by mutual consent of the parties involved. Such disposition shall be final, and there shall be no subsequent proceedings. If the charges cannot be disposed of by mutual consent, the designated administrator shall refer the matter to the Student Disciplinary Standards Committee.
3. All charges shall be presented to the accused student in written form. A time shall be set for a hearing, no less than five nor more than fifteen calendar days after the student has been notified. Maximum time limits for scheduling of hearings may be extended at the discretion of the chairperson of the Student Disciplinary Standards Committee.
4. If the accused student does not respond to the written notice of the hearing and does not appear, the hearing shall take place as scheduled. If the Student Disciplinary Standards Committee finds that the accused student violated the Student Code, sanctions may be imposed.

5. Hearings shall be conducted by the Student Disciplinary Standards Committee according to the following guidelines:
  - a) Hearings normally shall be conducted in private. At the request of the accused student and subject to the discretion of the chairperson, a representative of the student press may be admitted, but shall not have the privilege of participating in the hearing.
  - b) Admission of any person to the hearing shall be at the discretion of the chairperson of the Disciplinary Standards Committee.
  - c) In hearings involving more than one accused student, the chairperson, at his or her discretion, may permit the hearings concerning each student to be conducted separately.
  - d) The complainant and the accused have the right to be assisted by any advisor they choose, at their own expense. The advisor may be an attorney. The complainant and/or the accused is responsible for presenting his or her own case. Therefore, advisors are not permitted to speak or to participate directly in any hearing before the Student Disciplinary Standards Committee.
  - e) The complainant, the accused, and the Student Disciplinary Standards Committee shall have the privilege of presenting witnesses subject to the right of cross examination by the Student Disciplinary Standards Committee.
  - f) Pertinent records, exhibits and written statements may be accepted as evidence for consideration by the Student Disciplinary Standards Committee at the discretion of the chairperson.
  - g) All procedural questions are subject to the final decision of the chairperson of the Student Disciplinary Standards Committee.
  - h) After the hearing, the Committee shall determine, by majority vote, whether the student has violated each section of the Student Code which the student is charged with violating.
  - i) The Student Disciplinary Standards Committee's decision shall be made on the basis of whether it is more likely than not that the accused student violated the Student Code.
6. There shall be a single verbatim record, such as a tape recording, of all hearings before the Student Disciplinary Standards Committee. The record shall be the property of the College.
7. Except in the case of a student charged with failing to obey the summons of the Student Disciplinary Committee or College official, no student may be found to have violated the Student Code solely because the student failed to appear before the Committee. In all cases, the evidence in support of the charges shall be presented and considered.

### Sanctions

1. The following sanctions may be imposed upon any student found to have violated the Student Code:
  - a) Warning—A notice in writing to the student that the student is violating or has violated institutional regulations.
  - b) Probation—A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to be violating any institutional regulation(s) during the probationary period.
  - c) Loss of Privileges—Denial of specified privileges for a designated period of time.
  - d) Restitution—Compensation for loss, damage or injury. This may take the form of appropriate service and/or monetary or material replacement.

- e) Discretionary Sanctions—Work assignments, service to the College, or other related discretionary assignments. Such assignments must have the prior approval of the Dean of Student Services.
  - f) College Suspension—Separation of the student from the College for a definite period of time after which the student is eligible to return. Conditions for readmission may be specified.
  - g) Removal from a particular program of study.
  - h) Expulsion—Permanent separation of the student from the College.
2. More than one of the sanctions listed above may be imposed for any single violation.
  3. Discipline records are maintained or expunged at the discretion of the College. Two (2) years after final disposition of the case, students may petition the Dean of Student Services to have their discipline record reviewed.
  4. The following sanctions may be imposed upon groups or organizations:
    - a) Those sanctions listed in Sanctions, 1a–1g.
    - b) Deactivation—Loss of all privileges, including College recognition, for a specified period of time.
  5. In each case in which the Student Disciplinary Standards Committee determines that a student has violated the Student Code, the sanction(s) shall be determined and imposed by the Committee. Following the hearing, the Committee chairperson shall within ten calendar days advise the accused in writing of the Committee's determination and of the sanctions(s) imposed, if any.

#### Appeal

1. The accused, having been found in violation of any portion of the Student Code, may appeal the decision/sanctions imposed by the Student Disciplinary Standards Committee.
2. The appeal must be submitted in writing to the Dean of Student Services within ten calendar days from the date that the accused is notified by the chairperson of the Student Disciplinary Standards Committee regarding the Committee's decision or sanctions.
3. The Dean of Student Services shall review all pertinent data regarding the appeal and will render a written decision within ten calendar days. The Dean of Student Services' decision is final.

#### Violation of Law and College Discipline

1. If a student is charged only with an off-campus violation of federal, state or local laws, but not with any other violation of this Code, disciplinary action may be taken and sanctions imposed for grave misconduct which demonstrates flagrant disregard for the College community. In such cases, no sanction may be imposed unless the student has been found guilty in a court of law or has declined to contest such charges, although not actually admitting guilt.
2. College disciplinary proceedings may be instituted against a student charged with violation of a law which is also a violation of this Student Code, for example, if both violations result from the same factual situation, without regard to the pendency of civil litigation in court or criminal arrest and prosecution. Proceedings under this Student Code may be carried out before, simultaneously with, or following civil or criminal proceedings off campus.

3. When a student is charged by federal, state or local authorities with a violation of law, the College will not request or agree to special consideration for that individual because of his or her status as a student. If the alleged offense is also the subject of a proceeding under the Student Code, however, the College may advise off-campus authorities of the existence of the Student Code and of how such matters will be handled internally within the College community. The College will cooperate fully with law enforcement and other agencies in the enforcement of criminal law on campus and in the conditions imposed by criminal courts for the rehabilitation of student violators. Individual students and faculty members, acting in their personal capacities, remain free to interact with governmental representatives, as they deem appropriate.

## General Information

### Alcoholic Beverages and Illegal Drugs

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.

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.

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. Additional information and resources may be found on the Schoolcraft College Web site.

### 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, dismissed 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 Web site 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.

## 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 Dean of Student Services Office or on the College's Web site.

## 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 and Chief Financial Officer, whose office is in the McDowell Center. Students may request services by contacting the Learning Assistance Center in Bradner Library.

## Lost and Found

All found items should be turned over to the Campus Security Police Department where the items will be recorded and held. For rules on disposition of these articles, see College Policy 1070.12, or call Campus Security Police 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 areas on either end of parking rows in any parking lot. Several parking locations across campus are designated handicapped or staff and faculty parking only. Any vehicle that is parked improperly will be ticketed.

The North 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 Campus Security Police 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 must be set or tickets paid within 21 days.

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 Dean of Student Services Office 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

Smoking is prohibited in all buildings and within six feet of building entrances in compliance with Wayne County Clean Indoor Regulations.

## 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 and Chief Financial Officer.

## Student Disciplinary Standards Committee

A Student Disciplinary Standards Committee handles all serious breaches of discipline. The Committee is appointed by and responsible to the Dean of Student Services 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 Campus Security Police Department located in the Service Building, or at our Web site [www.schoolcraft.edu/cleryact](http://www.schoolcraft.edu/cleryact).

## 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 Dean of Student Services is Schoolcraft's Title IX coordinator. Students who would like further information regarding this act may call 734-462-4400, ext. 5088.

## 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. The speed limit on Campus is 15 mph.



# Schoolcraft College



Student life and community resources



# Student Life

## 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 Admissions and Enrollment Center at no charge. Valid identification must be presented to obtain a card. There is a charge to replace a lost ID card.

## Food Service

**Henry's in the VisTaTech Center, Waterman Wing  
Options 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 Monday–Thursday, 7:30 a.m.–7 p.m., Friday: 7:30 a.m.–2 p.m. Vending machines are located in every classroom building on the Livonia campus.

Options at Radcliff provides service from 8 a.m. until 8:30 p.m. Monday through Thursday and Friday from 8 a.m. until 1 p.m. during the fall and winter semesters. Soups, sandwiches and a wide selection of convenience foods are offered daily.

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.

## 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 and staff may use the area if they present a Schoolcraft College current I.D., class schedule or tuition receipt to the supervisor or attendant. A schedule of open swim and fitness room hours is available in the PE Equipment Room.

## Athletics

**734-462-4804**

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 basketball, bowling, cross country, soccer and volleyball. The men's intercollegiate program includes basketball, bowling, cross country, golf and soccer. The Athletic Committee reviews general policies relating to the scope of athletic programs.

## Health Emergencies

When a student is injured or becomes ill while on campus, contact Campus Security Police at ext. 4424 from any campus phone. Campus Security Police will provide the initial response to a call for assistance. If the emergency is of an urgent nature, you also may call 9-911.

## Health Insurance

Sickness and accident insurance coverage is available for full- and part-time students. Insurance brochures and prices on this program are available in all student service offices and from the Finance and Business Services Office in the McDowell Center and on the College Web site under Health Services.

## Performing Arts Groups

**734-462-4403**

Schoolcraft College offers performance opportunities in the College choirs and instrumental ensembles, including the Schoolcraft College Jazz Band, Schoolcraft College Synthesizer Ensemble, and Schoolcraft College Community Wind Ensemble. The Schoolcraft College Choral Union meets regularly and performs large choral works. These groups rehearse regularly and perform concerts both on- and off-campus. Students may elect to participate for credit, audit or through Continuing Education Units.



## 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 personal 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 are available in the Student Activities Office. Campus clubs and organizations at Schoolcraft College are:

- African-American Student Association
- Asian Student Association
- Baptist Student Union Christian Challenge
- Beekeepers Club
- Catholic Student Association
- Computer Graphics Technology Club
- Edge Runners Ski Club
- Future Educators Club
- Gourmet Club
- Health Information Technology Club
- International Student Relations Club
- National Association for the Education of Young Children
- Native American Club
- Otaku Anime Animation Club
- Pageturners
- Phi Theta Kappa Honor Society
- Psychology Club
- Quilting Club
- Student Activities Board
- Video Production Club

### 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.

### 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.



# Community Resources

## Business Development Center

VisTaTech Center Room 410  
734-462-4438  
[www.schoolcraft.edu/bdc](http://www.schoolcraft.edu/bdc)

The Business Development Center helps companies in southeastern Michigan build sound organizational strategies, develop new markets, create successful products, find and keep new customers, and incorporate new technologies. Services include:

### Market Development Services

The Procurement Technical Assistance Center has helped area companies win more than \$1 billion in state and federal government contracts. It has helped many local firms identify new international markets, locate bidding opportunities, and navigate through the government contracting process.

### The Small Business and Technology Development Center

The SBTDC provides counseling, training and research to startups, existing small businesses and innovative technology companies to explore new product opportunities and develop new markets. The Center's training programs help clients write business plans, develop growth strategies and create marketing plans.

### Entrepreneur Support

The Business Development Center provides the above services in addition to acting as a portal to other entrepreneur support services available at the college.

## Corporate Training

Continuing Education Center  
734-462-4441

The Corporate Training Department at Schoolcraft College provides training solutions for business and industry throughout Southeast Michigan. Corporate Training helps organizations develop a training plan, identify instructors to meet their needs, and provides a venue in which to hold the classes. Offerings are cost effective and can be customized, short-term, non-credit classes or full-credit courses, according to customer needs. Instructors are highly qualified practitioners with industry experience and training expertise.

Corporate classes available include:

### Quality and Process Improvement

- TS16949, ISO, FMEA, PPAP, SPC, Quality Function Deployment, Total Quality Management, Internal Auditor
- Project Management, GD&T, Print Reading, Problem Solving, Lean Manufacturing

### Manufacturing:

- Welding, Pneumatics, PLC
- Health and Safety, Hazardous Materials, Lock Out/Tag Out

### Professional Skills Development:

- Teambuilding, Supervision, Customer Service, Conflict Management

### Computer Technology:

- Microsoft Office, CATIA, AutoCAD

A comprehensive list of class offerings is available through the Corporate Training Department at Schoolcraft College.

## VisTaTech Center

734-462-4610  
[vistatech@schoolcraft.edu](mailto:vistatech@schoolcraft.edu)

Schoolcraft College is an integral member of the community, serving more than 30,000 persons a year in credit courses, continuing and professional education and corporate training. The College took a giant step forward as a hub for community activity in 2003 when it opened the VisTaTech Center, a new campus landmark.

In addition to housing the instructional kitchens of Schoolcraft's acclaimed Culinary Arts Department and the Business Development Center, the VisTaTech Center provides an attractive, functional and technology-rich venue for corporate training, conferences and business meetings. There also is space for major presentations or musical performances, as well as the student-operated American Harvest Restaurant which offers the public fine gourmet dining during lunch and dinner.

VisTaTech can accommodate groups ranging in size from one-on-one meetings to industry expositions. It is equipped to receive satellite teleconferences, features flexible furniture configurations and offers on-site catering services. For rental information, call 734-462-4610 or e-mail [vistatech@schoolcraft.edu](mailto:vistatech@schoolcraft.edu).



## Continuing Education and Professional Development

Continuing Education Center  
734-462-4448

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. The Continuing Education and Professional Development Department can help you develop new interests and insights in a wide range of fascinating subjects. When you are looking for knowledge but not a degree, look to Continuing Education and Professional Development.

Your choices include:

- Opportunities for career-minded individuals in business management and computers.
- Certification and licensure classes for professional and technical personnel in fields such as nursing, K–12 teaching and school administration, real estate licensure preparation, insurance, culinary arts, pharmacy technician training, pharmaceutical sales, caregiver management, truck driving, personal training and physical fitness careers.
- Small business management seminars that stimulate entrepreneurial leadership and local economic development.
- Personal development workshops, as well as courses and programs that enhance the quality of life in the community.
- The Kids on Campus program, serving more than 1,700 children annually, provides extensive enrichment programs and academically enhanced activities for children in the first through the ninth grades.
- Wellness and physical fitness programs for health-conscious individuals interested in dance, fitness, Yoga, Tai Chi, swimming and other recreational activities.

Continuing Education and Professional Development classes are designed for students of all ages. Instructors are professionals who bring a special expertise to the learning process.

Students receive nationally recognized Continuing Education Units, based on attendance and participation, for most Continuing Education and Professional Development classes.

Requests for refunds are to be mailed or faxed to the Continuing Education and Professional Development 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 for most classes. Exceptions are noted.
- Thereafter, no refund.

There are no refunds for motorcycle classes.

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

## 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 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 2½ 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.





# Schoolcraft College



College Personnel 2008-2009

# Schoolcraft College Personnel

## Administrators

- BEAUDOIN, MARY 1974  
*Bursar*  
AAS Schoolcraft College
- BONNER, APRIL 1981  
*Director of Administrative Computing*  
AAS Schoolcraft College  
BS Madonna University  
MS Walsh College
- BORTON, JEFFREY 1990  
*Director of Technology Services*  
AAPS Schoolcraft College  
BS Lawrence Technological University
- CHAMPNELLA, CINDY 2003  
*Executive Director of Human Resources*  
BA Albion  
MA Central Michigan University
- CICCHELLI, CYNTHIA 2001  
*Director of Curriculum and Assessment*  
BA Concordia University  
MEd Wayne State University
- DAIEK, DEBORAH B. 1998  
*Associate Dean Learning Support 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
- FOX, SIDNEY I. 2006  
*Director of Athletics*  
BS Wayne State University  
ME Wayne State University
- GLASS, WAYNE R. 2006  
*Director of Grants*  
BS Indiana University of Pennsylvania  
MBA Auburn University
- GOODEN, SAMUEL 1995  
*Director of Media/*  
*Instructional Support Services*  
AS Schoolcraft College
- GREEN, STEPHEN J. 2007  
*Director of Building Systems*  
*and Maintenance*  
AS Henry Ford Community College
- HAGEN, CHERYL M. 2001  
*Dean of Student Services*  
BA Valparaiso University  
MA Eastern Michigan University
- HAWKINS, CHERYL D. 1996  
*Associate Dean Liberal Arts*  
BS Eastern Michigan University  
MS Wayne State University
- HEATOR, MARTIN G. 2001  
*Director of Marketing*  
BS and MA Eastern Michigan University
- HOLMAN, CHERI 1997  
*Director of Distance Learning and*  
*Instructional Operations*  
AAPS Schoolcraft College  
BBA Cleary University  
MSA Central Michigan University
- JEFFRESS, CONWAY A. 1982  
*President*  
BA Washington and Jefferson College  
MEd and PhD University of Pittsburgh
- LILLEY, JEFFREY 1987  
*Director of Finance*  
BS Lawrence Technological University
- LUPO, SUSAN 1993  
*Executive Director of Planning and Research*  
BS and MA Eastern Michigan University
- MONGE, JOHN A. 1997  
*Director of Campus Security Police*  
BS Madonna University  
MSA Madonna University
- MOSLEY, REGINA 2005  
*Director of Financial Aid*  
BS University of Michigan-Flint  
MS Central Michigan University
- NORDMAN, DONNA 1985  
*Director of Counseling and Career Services*  
AS Schoolcraft College  
BGS University of Michigan  
MA Eastern Michigan University
- O'SULLIVAN, JILL F. 1982  
*Vice President and Chief Financial Officer*  
BS Michigan State University  
MBA Wayne State University
- PARDON, PATRICK J. 1996  
*Director of Facilities Services*  
BBA Eastern Michigan 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*  
*and Risk Management*  
BS Wayne State University
- REID, AMY 1994  
*Director of Business Development Center*  
AA Schoolcraft College  
BBA Walsh College  
MBA Wayne State University
- SAVAGE, THOMAS S. 1985  
*Director of Food Service*  
AA Henry Ford Community College  
BA Michigan State University
- STIRTON, EDWARD R. 2001  
*Director of Institutional Research*  
BA University of Michigan-Dearborn  
MA New Mexico State University
- SULLIVAN, MONICA 2003  
*Dean of Instruction*  
BSN 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, Business, Technology,*  
*and Economic Development*  
BS and MA Central Michigan University
- THOMAS, TAHLIA E. 2002  
*Director of Academic Computing and*  
*Information Services Projects*  
BA Johns Hopkins University
- WALSH, JOHN J. 2001  
*Executive Director of Development*  
*and Governmental Relations*  
BA Michigan State University  
JD Wayne State University
- WAVREK, DIANE M. 1967  
*Director of College Disbursements*  
AAS Schoolcraft College
- WEINKAUF, RICHARD J. 2007  
*Assistant Dean Sciences*  
AAS Paul Smith's College  
AAS Schoolcraft College  
BS State University of New York  
BS Syracuse University  
MS University of Michigan
- WIELECHOWSKI, ROBERT A. 1988  
*Executive Director of Facilities Management*  
AAS Schoolcraft College  
BET Wayne State University  
MS Walsh College
- WILSON, MATTHEW W. 2001  
*Director of Purchasing*  
BA and MBA Michigan State University
- WILSON-FENNELL, NICOLE L. 2002  
*Director of Enrollment Services/Registrar*  
BA Eastern Michigan University  
MA University of Michigan
- WILTRAKIS, DANIEL 1988  
*Director of Networking and Security*  
AS Henry Ford Community College
- WILTRAKIS, FRANK P. 1985  
*Chief Information Officer*  
AS Henry Ford Community College
- ZAPPALA, SHIRLEY 1994  
*Director of Corporate Training*  
AA Bay de Noc Community College  
BS and MS Central Michigan University
- ZYLKA, SHERYL 1982  
*Associate Dean, Continuing Education*  
*and Workforce Development*  
AS Schoolcraft College  
BS University of Michigan  
MA Eastern Michigan University

**Full-Time Faculty**

- ABBAS, MOHAMMED 1991  
*Professor, Biology*  
BS Baghdad University  
MS Purdue University  
PhD Wayne State University
- ADDI, OMAR, 1990  
*Professor, English*  
BA University of Mohamed V  
MA State University of New York
- ANDERSON, KATHERINE 2001  
*Associate Professor, Mathematics*  
BS Northern Michigan University  
MS Michigan State University  
BA and MA Wayne State University
- ARSZNOV, JANET M. 1996  
*Associate Professor, Mathematics*  
BS and MA University of Michigan  
MA Eastern Michigan University
- AUSTIN, HOLLY 2004  
*Assistant Professor, Nursing*  
BS Northern Michigan University  
MSN Eastern Michigan University
- BAKER, ENOCH W. 2006  
*Instructor, History/Political Science*  
BA University of Michigan  
MA Wayne State 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  
*Professor, Mathematics*  
BA and MA Eastern Michigan University
- BEARDEN, LOIS J. 1990  
*Professor, Mathematics*  
BA and MA University of Michigan
- BERG, STEVEN L. 2000  
*Associate Professor, English/History*  
BA, MA, PhD Michigan State University
- BRIGGS, ROBERT A. 1967  
*Professor, History*  
BA Dartmouth College  
MAT Johns Hopkins 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
- CHAUDHERY, SUMITA 1968  
*Professor, English*  
BA Howard University  
MA Howard University  
PhD University of Michigan
- COURIE, JOHN 2007  
*Instructor, Criminal Justice*  
JD University of Detroit-Mercy  
BS and MS Wayne State University
- DECKER, JOSEPH 1991  
*Professor, Culinary Arts*  
Certified Master Pastry Chef  
American Culinary Federation
- DICKSON, PAUL M. 2001  
*Associate Professor, Chemistry*  
BS University of Michigan, Dearborn  
PhD Wayne State University
- DITOURAS, HELEN 2006  
*Instructor, English*  
BA University of Windsor  
MA 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  
*Associate Professor,*  
*Computer Information Systems*  
BBA Eastern Michigan University
- FERMAN, CATHERINE 1992  
*Professor, CAD/Drafting*  
BS, GMI, Engineering and  
Management Institute  
MS University of Michigan  
Professional Engineer
- FLYNN-HAHN, DIANE E. 1996  
*Associate 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 University
- GAWRONSKI, KEVIN P. 1982  
*Professor, Culinary Arts*  
AAS Schoolcraft College  
Certified Master Chef  
American Culinary Federation
- GRACE, ELIZABETH A. 2000  
*Associate Professor,*  
*Child Care and Development*  
AAS Schoolcraft College  
BGS University of Michigan  
MEd Wayne State University
- GRAY, STACEY 2007  
*Instructor, Biology*  
BS University of Michigan-Dearborn  
MS Eastern Michigan University
- HAIGHT, MARCUS 2003  
*Assistant Professor, Culinary Arts*  
Certificate Culinary Arts Schoolcraft College  
Certified Executive Chef  
Certified Executive Pastry Chef  
American Culinary Federation
- 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
- HOLODY, PAUL 2002  
*Assistant Professor, Physics*  
BS University of Michigan  
PhD Michigan State University
- HOWIE, CEDRIC 1991  
*Professor, Economics*  
BA University of North Carolina  
MS Murray State University
- HUGELIER, DANIEL 1991  
*Professor, Culinary Arts*  
Certified Master Chef  
American Culinary Federation
- HUSTON, MARK R. 2006  
*Instructor, Philosophy*  
BS Central Michigan University  
PhD Wayne State University
- JOHNSON, RODNEY 1986  
*Associate Professor, 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
- KAVANAUGH, EDWARD A. 1982  
*Professor, Mathematics*  
BS and MA University of Michigan
- KERR, SANDRA J. 1994  
*Professor, Mathematics*  
BSE University of Michigan  
MA Wayne State University
- KIRKPATRICK, KENT 1992  
*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
- LAJOY, MARY B. 2001  
*Counselor, Associate Professor*  
BS Western Michigan University  
MA Eastern Michigan University
- LAZARSKI, ANDREA L. 2006  
*Instructor, Mathematics*  
BS University of Michigan  
MA Wayne State University
- LOVING, SHAWN 2008  
*Instructor, Culinary Arts*  
AAS Schoolcraft College  
Certified Executive Chef  
American Culinary Federation
- MAHESHWARI, ARCHANA 2002  
*Associate Professor, English*  
BA and MA Osmania University  
MA Wayne State University

- MARROSO, MARLYNN J. 1998  
*Associate Professor, Nursing*  
AAS Henry Ford Community College  
BSN University of Michigan  
MSN Wayne State University
- MCNUTT, CAROLINE H. 2000  
*Associate Professor, Biology*  
BS and MS University of Western Ontario
- MCPHERSON, DORIS 1992  
*Professor, Computer Information Systems*  
BS, MA and Specialist  
Eastern Michigan University  
EdD Nova University
- MEHALL, MICHAEL J. 1998  
*Associate Professor,*  
*Computer Graphics Technology*  
BFA and MA Wayne State University
- MELLNICK, GERARD J., CPA 2007  
*Instructor, Business*  
AC Henry Ford Community College  
BBA University of Michigan–Dearborn  
MBA Wayne State University
- MINGELA, AUDRONE M. 2000  
*Associate Professor, Mathematics*  
BS University of Michigan  
MA Eastern Michigan University
- MONROE, CARL 2002  
*Assistant Professor, 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
- 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  
*Associate Professor, Spanish*  
BA and MA Michigan State University
- NUFFER, ROY A. 1987  
*Librarian, Professor*  
BA and MSLS Wayne State University
- O'CONNELL, DIANE 1990  
*Professor, Geography*  
BA College of William and Mary  
MS Eastern Michigan University
- O'CONNOR, THOMAS A. 1990  
*Professor, Biology*  
BA and MS Purdue University  
PhD University of Washington
- OLSON, SARAH M. 2000  
*Associate Professor, Art*  
BAEd, BFA, MA University of Michigan
- ONTKO, SUSAN M. 2006  
*Instructor, Business*  
BA General Motors Institute  
MBA University of Michigan
- ORICK, MICHAEL 1993  
*Professor, Biology*  
BA University of Michigan, Dearborn  
MS Eastern Michigan University
- PALM-LEOPOLD, MARY ALICE 1993  
*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
- PICKETT, KENNETH M 2006  
*Assistant Professor, Metallurgy*  
AAS Schoolcraft College  
BS Madonna University  
MSIT Eastern Michigan University
- PILGRIM, COLLEEN C. 2000  
*Associate Professor, Psychology*  
BS Michigan State University  
MA and PhD Wayne State University
- POLCYN, BRIAN D. 1997  
*Associate Professor, Culinary Arts*  
Certified Executive Chef  
American Culinary Federation
- POLOT, BARTON L. 2001  
*Associate Professor, Music*  
BM, MM and PhD University of Michigan
- POMPEY, SHARON Y. 1988  
*Professor, Nursing*  
BSN Mercy College  
MSN Wayne State University
- PRICER, WAYNE F. 1994  
*Librarian, Associate Professor*  
ALA Oakland Community College  
BA Madonna University  
MSLS Wayne State University
- QUELL, ELIZABETH 1991  
*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  
*Associate Professor, Accounting*  
BBA University of Michigan  
MBA Wayne State University
- REGNER, DEBORAH A. 2006  
*Instructor, Psychology*  
BS and MS Eastern Michigan University
- REXIUS, JAMES E. 1981  
*Professor, Geology*  
BA University of Michigan  
MS Eastern Michigan University
- RICHARDS, CHRISTOPHER 2001  
*Counselor, Associate Professor*  
BS and MA Eastern Michigan University
- RUBIO, PATRICIA A. 1969  
*Professor, Health Information Technology*  
BS Mercy College of Detroit  
MSA Central Michigan University
- RYBICKA, ELZBIETA T. 2006  
*Instructor, English*  
BA and MA Jagiellonian University
- SANTIAGO, RODOLFO 2002  
*Assistant Professor,*  
*Computer Information Systems*  
BS University of the Philippines  
MBA University of Detroit
- SCHAUMANN, KAREN 2007  
*Instructor, Sociology*  
BS and MA Eastern Michigan University
- SCHELLER, JODY 1993  
*Professor, Health Information Technology*  
AS, BS and MS Mercy College of Detroit
- SCHLICK, WILLIAM 1995  
*Professor, Computer Information Systems/*  
*Electronics Technology*  
AAS Schoolcraft College  
BEE Wayne State University  
Microsoft Certified Systems Engineer  
Certified Bio-Medical Electronic Technologist
- SCHUETT, FAYE 1992  
*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 2002  
*Associate Professor, Nursing*  
BSN Mercy College of Detroit  
MSN Madonna University
- SIMMONS-SHORT, IDA 1990  
*Professor, English*  
BA and MA University of Michigan
- SNYDER, CHERYL A. 1998  
*Associate 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
- STETSON, BRADLEY D. 2006  
*Instructor, Mathematics*  
BS University of Michigan  
MS University of Florida
- STEVENS, HOLLY 2002  
*Assistant Professor, Art History/Humanities*  
AA Elgin Community College  
BA and MA Northern Illinois University

SUESS KAUSHIK, ANITA B. 2006  
*Instructor, French/German*  
 BA Eidgenossische Dolmetscherschule  
 MA University of Paris  
 MA and PhD University of Cincinnati

TAYLOR, BONNITA 2002  
*Associate Professor, 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  
*Associate Professor, Political Science/History*  
 BA, MA and PhD Wayne State University

TITUS, JOHN 1997  
*Counselor, Assistant Professor*  
 BS Urbana College  
 MS Wright State University

VENDITTELLI, DEBORAH S. 1989  
*Professor, Nursing*  
 AA Lake Superior College  
 BSN Lake Superior State College  
 MSN University of Texas

WALDYKE, MICHAEL J. 2001  
*Associate Professor, Chemistry*  
 BS Calvin College  
 MS University of California, Berkeley

WALE, JERRY C. 1973  
*Professor, Computer Information  
 Systems/Electronics Technology*  
 BSEE Lawrence Institute of Technology  
 MSEE University of Detroit

WOOD, CHRISTOPHER J. 2006  
*Instructor, Physics*  
 BS and MS University of Michigan  
 MS Eastern Michigan University

WROBLE, STEPHEN A. 1991  
*Professor, Art,  
 Computer Graphics Technology*  
 BFA Michigan State University  
 MA Wayne State University

ZACCONE, LISA A. 2000  
*Associate Professor,  
 Computer Aided Design/Drafting*  
 AAS Delta College  
 BS Michigan Technological University  
 MS Capella University  
 Professional Engineer

### Support Staff

ADAMS, LISA 2002  
*Primary Caregiver*

ADAMS, SUSAN 1991  
*Help Support Specialist*

ALTESLEBEN, MICHAEL 2004  
*Utility II*

ANCHOR, ELIZABETH 1997  
*Secretary III*

ANDERSEN, GERALDINE 1997  
*Counseling Office Assistant*

ANDERSON, BRUCE 1999  
*Electronic Technician*

ANDERSON, MELISSA 2001  
*Electronic Technician*

APPELLE, APRIL 2004  
*Utility I*

APPLE, ROSE 1999  
*Customer Service Associate*

ARAMBASICH, DENISE 2003  
*Financial Aid Specialist*

BARNES, FRANCES 1992  
*Utility II*

BARNEY, CYNTHIA 2000  
*Financial Services Office Assistant*

BAZYLEWICZ, CHRISTINA 2002  
*Supervisor, Duplication Design Center*

BELLAIRE, BARBARA 1996  
*Office Assistant*

BELLINO, PAMELA 2000  
*Purchasing Assistant*

BERENDT, AMY 1989  
*Compensation Specialist*

BETTIS, PATRICIA 1981  
*Accounts Payable Associate*

BIALO, MICHELE 2006  
*Program Manager, CE & PD*

BLAZIC, CAROL 1992  
*Secretary III*

BLOEDEL, MARY 2004  
*Secretary III*

BODURKA, JENNIFER 2006  
*Coordinator, CE & PD*

BOISSEAU, PATRICIA 1992  
*Coordinator—Assessment Center*

BONA, ROBERTA 1995  
*Enrollment Services Office Assistant*

BOWE, STELLA 1986  
*Enrollment Services Office Assistant*

BOYLE, CHARLENE 1992  
*Accounts Payable Associate*

BROWN, BERNICE 1990  
*Curriculum and Assessment Associate*

BROWN, CATHERINE 2001  
*Secretary III*

BROWN, DAVID 1997  
*Media Technician*

BROWN, KATHY 1997  
*Coordinator—Instructional Services*

BROWN, PAUL 1983  
*General Maintenance*

BUREK, NORMA 1979  
*Coordinator—Computer Operations*

BURGESS, STEVEN 2007  
*Shift Supervisor*

CAPPS, RACHEL 2005  
*Coordinator of Financial Aid Programs*

CHATHAM, ROBERT 2001  
*Campus Security Police Officer*

CHEEMA, LAKHBIR 1996  
*Culinary Sanitarian*

CICHONSKI, CAROL 1995  
*Secretary III*

COLLING, GREGORY 1985  
*Campus Security Police Officer*

COMMON, SHARON 1998  
*Secretary IV*

COOK, AARON 2004  
*Assistant Director of Food Service/  
 Executive Chef*

COOK, JENNIFER 1997  
*Utility II*

COUTTS, ROGER 1995  
*Network Support Specialist*

CREASON, ERIN 2008  
*Instructional Designer*

CROSS, VICKI 1994  
*Utility II*

CZESZEWSKI, SCOTT 2007  
*Computer Technician*

DANI, DEBORAH 1992  
*Human Resources Technician*

DEANE, JANN 1998  
*PTAC Coordinator*

DEGIUSTI, CHRISTINE 2008  
*Secretary II*

DIXON, SHIRLEY 1989  
*Research Coordinator*

DORSEY, JUANITA 1979  
*Secretary III*

DUKA, KENNETH 1986  
*Utility II*

DUNCAN, JR., TIMOTHY 1997  
*Networking and Software Specialist*

DURLING, BRENDA 1998  
*VisTaTech Operations Manager*

ELESON, BELINDA 1979  
*College Receptionist*

ERISMAN, BRADLEY 1995  
*Bookstore Operations Associate*

EVANS, PENDY 2006  
*Secretary III*

FISHER, SANDRA 2003  
*Coordinator, CE & PD*

FLEMING, MICHAEL 1983  
*Operations Technician*

FORD, RACHEL 2006  
*Secretary II*

FORD, JR., THOMAS, 2000  
*Technical Support Specialist*

FOURNIER, JEFFREY 2001  
*Media Technician*

FOURNIER, KIMBERLEY 1998  
*Learning Resources Assistant*

FOURNIER, RONALD 1998  
*Skilled Maintenance—HVAC*

- FOX, WILLIAM 1986  
*Computer Technician*
- FRADER, SHERI 2006  
*Secretary III*
- FRENTZOS, KARLA 1993  
*Executive Assistant*
- FULTON, GARY 2003  
*Coordinator—Academic Computing Labs*
- GALINDO, JOYCE 1996  
*Coordinator of Athletic Operations*
- GALLAGHER, DIANA L. 1989  
*Utility II*
- GAYNIER, MICHELLE 2007  
*Coordinator—College Communications*
- GEINZER, CHRISTINE 2000  
*Project Manager*
- GEORGE, KIMBERLY 2006  
*Office Assistant—Facilities Management and Campus Security Police*
- GERARGE, ELAINE 1984  
*Coordinator—Student Employment*
- GERNERT, KERRY 2001  
*Interior Design Coordinator*
- GILLOW, JANINE 1998  
*Accounting Associate*
- GNIWEK, DONNA 1999  
*Graphic Designer*
- GOODRICH, STEPHEN 2002  
*Media Technician*
- GRANT, PHILIP 1977  
*Utility II*
- GREENSHIELDS, THEA 2000  
*Secretary III*
- GREIFENBERG, JASON 1997  
*Technical Support Specialist*
- GRIFFIN, JEFFREY 2001  
*Utility II*
- GUMINA, SARA 1996  
*Corporate Services Technician*
- GUMM, DEBRA 2007  
*Enrollment Services Office Assistant*
- HALL, JEREMY 2001  
*Instructional Designer*
- HAMM, APRIL 1995  
*Assistant Director College Bookstore*
- HARRISON, BECKY 1988  
*Utility II*
- HAYES, SYLVIA 1989  
*Marketing/Merchandising Specialist*
- HEUSNER, SCOTT 1997  
*Programmer/Analyst*
- HINZMAN, SYLVIA 1988  
*Public Safety Education Associate*
- HOCHBERG, ELLEN 1998  
*Senior Graphic Designer*
- HOEY, MAUREEN 2007  
*Lead Account Manager*
- HOLTSCHNEIDER, DONNA 1996  
*Primary Caregiver*
- HOOPER, MARY 2001  
*Primary Caregiver*
- HOWELL, BRADLEY 1999  
*Skilled Maintenance*
- HUBENSCHMIDT, JOHN 1990  
*General Maintenance*
- HUDSON, CHRISTINA 2004  
*Utility II*
- HUDSON, JR., ROBERT 1980  
*Utility I Leader*
- ISABELL, AGNES 1995  
*Secretary IV*
- JARVIS, SANDY 2005  
*Payroll Associate*
- JONES, DAVID 1995  
*Campus Security Police Officer*
- JONES, TERASA 1991  
*Continuing Education Office Assistant*
- KENDALL-WILLIAMS, MICHELE 2007  
*Record Retention/Archive Specialist*
- KERSHAW, MARLENE 1985  
*Displaced Homemaker Coordinator*
- KING, DAVID 1980  
*Utility II*
- KIURSKI, CATHERINE 1976  
*Administrative Assistant and Project Coordinator*
- KLINCK, KERRI 2000  
*Operations Specialist*
- KLOTZ, HOLLY 2002  
*Coordinator, PE & PD*
- KOMIENSKY, ADAM 2006  
*Utility II*
- KOROL, GEORGE 1992  
*Campus Security Police Officer*
- KOTRBA, CONNIE 2002  
*Corporate Training Coordinator*
- KOVACS, CHRIS 1991  
*Campus Security Police Officer*
- KOVACS, CONNIE 1998  
*Primary Caregiver*
- KRAMER, PHYLLIS 2002  
*CE & PD Technician*
- KRAWCZYK, THERESA 1990  
*Secretary III*
- KRYSTYNIAK, KAREN 2000  
*Academic Advisor*
- KUDLAWIEC, JOHN 1994  
*Utility I*
- LABO, HOLLY 1982  
*Physical Education Attendant*
- LANDAU, BRENT 2006  
*Academic Advisor*
- LARENTE, JANET 2006  
*Primary Caregiver*
- LAVEQUE, RANDOLPH 1999  
*Utility II*
- LEAVENS, BRENDA 1999  
*Accounts Receivable Associate*
- LIGHTFOOT, RUSSELL 1977  
*Utility I Group Leader*
- LOSEY, KEVIN 1994  
*General Maintenance*
- LOUNSBERY, RICHARD 1989  
*Campus Security Police Officer*
- LOWE, CLAUDETTE 1998  
*Administrative Coordinator*
- LOZINSKI, STANLEY 1993  
*Utility II*
- LUBECK, SUSAN 1998  
*Financial Aid Associate*
- LYNCH, MARJORIE 1973  
*Special Events Coordinator*
- 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 I*
- MARGHERINI, RANDY 2004  
*Utility II*
- MARTIN, COLLEEN 2008  
*Academic Advisor*
- MASON, DENISE 1992  
*Utility II*
- MATTSON, LORNA 1987  
*Accounts Receivable Associate*
- MATUSIK, SHERRINE 1983  
*Technical Support Coordinator*
- MCCARDELL, TIMOTHY 2001  
*Utility II Group Leader*
- MCCARDELL, CATHERINE 2002  
*Assistant Director—Enrollment Services*
- MCCOLLISTER, DONALD 1987  
*Storekeeper Leader*
- MCCOLLISTER, DONNA 2004  
*Utility II*
- MCDERMOTT, HOLLY 2005  
*Service Supervisor*
- MCDONALD, CHERYL 1990  
*Instructional Services Specialist*
- MCVITTIE, DONALD 1979  
*Business/Technology Lab Coordinator*
- MILEWSKI, DANNY 1977  
*Bookstore Assistant A*
- MILEWSKI, ROBERT 1986  
*Bookstore Assistant B*
- MILLER, DONALD 2005  
*Utility II*
- MILLER, JAMES 1986  
*Utility I*
- MILLER, TRACY 2006  
*Assistant Registrar*
- MISIAK, CHRISTOPHER 1986  
*Culinary Arts Administrative Specialist*
- MODICA, JEFFREY 2004  
*Skilled Maintenance—HVAC*
- MOG, PATRICK 1983  
*Skilled Maintenance—HVAC*
- MOLONEY, STEVEN 1996  
*Multimedia Coordinator*
- MORAND, MARY 1993  
*Coordinator of Academic Services*
- MOSCHET, JUDY 1999  
*Document and Layout Associate*
- MOSS, CARL 1996  
*Utility II*

- NOWACKI, DARRYL 1987  
*Networking and Software Specialist*
- O'CONNOR, DEBRA 1996  
*Lead Help Support Specialist*
- OLIVER, SHEBA 2007  
*OE/OE Lab and Testing Administrator*
- PARKS, PEGGY 1988  
*Cashier II*
- PATOW, CRAIG 2005  
*Coordinator, Academic Computing Labs*
- PATTERSON, ELAINE 2007  
*Laboratory Technician*
- PAXTON-KEEHNER, PAMALA 2003  
*Academic Advisor*
- PEPPER, MARIANNE 1985  
*Benefits Specialist*
- PEREZ, PATRICIA 1973  
*Secretary IV*
- PERUGIA, COLETTE 1995  
*Project Manager*
- PETRICCA, JULIE 1997  
*Senior Buyer*
- PIASENTIN, GERARD 1997  
*Project Engineer*
- PLEMMONS, LARRY 1997  
*Campus Security Police Officer*
- POPKES, JENNIFER 2000  
*Bookstore Assistant C*
- PUHLMAN, JEFFREY 1974  
*Media Systems Technician*
- PUHLMAN, SHAROL 2004  
*Secretary II*
- PURCELL, THOMAS 1981  
*Utility II Leader/Repair Technician*
- RAGAN, SR., MICHAEL 1976  
*Skilled Maintenance*
- RICE, RUTH 2000  
*Assistant to the Director of Food Service*
- RILEY, BONNIE 1980  
*Cashier III*
- RISATTI, ANGELA 2000  
*Secretary III*
- ROSENBERGER, ROBERTA 1996  
*Campus Security Police Officer*
- ROURK JR., THOMAS 2003  
*Utility II*
- RYDZEWSKI, DAVID 2000  
*Shipping and Receiving Operations Supervisor*
- SATHER, SUSAN 1986  
*Payroll Coordinator*
- SAUDER, JANEL 1999  
*Sous Chef*
- SCHAFFRATH, ROCHELLE 1980  
*Coordinator, Labor and Employee Relations*
- SCHARMEN, BARBARA 1995  
*Administrative Assistant/Budget Coordinator*
- SCHOPIERAY, KRISTEN 2008  
*Clerk A*
- SCHULTZ, ROBERT 2007  
*Media Technician*
- SEEWALD, MATHIAS 2007  
*General Maintenance*
- SHAUGHNESSY-SMITH, JEAN 1989  
*Supervisor, Children's Center*
- SHELTON, CAROLINE 2002  
*Secretary IV*
- SKAGGS, B. IONE 2001  
*Document and Layout Associate*
- SKIERA, KATIE 2006  
*Employment Coordinator*
- SMITH, EMILY 1997  
*Enrollment Services Office Assistant*
- SMITH, JONATHAN 1998  
*Account Management Associate*
- SMITH, KENNETH 1987  
*Storekeeper*
- SMITH, PIERA 1984  
*Coordinator—Support Services*
- SMOLEN, SAMANTHA 2007  
*Financial Aid Assistant*
- SPRINGER, SHERRY 1983  
*Coordinator of Student Activities*
- STAKNIS, BARBARA 1996  
*Secretary A*
- STANTON, FRED 2007  
*Public Safety Education Coordinator*
- STAPULA, JEANNE 1999  
*Secretary III*
- STOVER, STACEY 2002  
*Supervisor, Student Activities and Student Recruitment*
- STOWELL, TODD 1996  
*Student Activities Technician*
- SULLIVAN, PATRICK 1988  
*Physical Education Attendant*
- SWIGER, CURTIS JR. 1983  
*Sergeant, Campus Security Police*
- SZUKIELOWICZ, GAIL 1989  
*Transfer Credit Specialist*
- TAGAREL, LYNDASAY 2003  
*Bookstore Purchasing Associate*
- TAYLOR, LUCIAN 1980  
*Storekeeper*
- TAYLOR, PATSY 2002  
*Primary Caregiver*
- THEAKSTON, JENNIFER 2002  
*Secretary III*
- THOMPSON, KEVIN 2002  
*Coordinator—Academic Computing Labs*
- THOMSON, TAMMY 2000  
*Corporate Services Coordinator*
- TONG, MICHAEL 1988  
*Utility II*
- TREMBLAY, LOU-ANN 2002  
*Utility II*
- UTLEY, JAMES 1987  
*Research Technician*
- VAN HEUSDEN, VALERIE 2007  
*Secretary III*
- VANLUE, JR., ROBERT 1997  
*Programmer/Operator*
- VERT, PENELOPE 1996  
*Purchasing Assistant*
- WAGERS, MARK 1998  
*Utility II*
- WALLACE, LINDA 1995  
*Secretary III*
- WALLEN, LYNN 1992  
*Administrative Coordinator*
- WATKINS, JOEL 1989  
*Laboratory Coordinator*
- WEBER, MATTHEW 1995  
*Web/Application Developer*
- WEBER, REBEKAH 1998  
*Secretary III*
- WEGIENKA, GENA 2007  
*Secretary II*
- WESOLOWSKI, DOUGLAS 2003  
*Utility I*
- WESTWOOD, HERBERT 1980  
*Utility II*
- WHITE, ANN 2007  
*Financial Aid Assistant*
- WIKTOR-PROFFITT, MICHELLE 1988  
*Document and Layout Associate*
- WILLIAMS, MICHAEL 2007  
*Assistant Director—Financial Aid*
- WILSON, JANET 1993  
*Accounting Supervisor*
- WISNIEWSKI, KIMBERLY 2003  
*Accounts Receivable Associate*
- YOUNG, SUSAN 1987  
*Senior Buyer*
- ZACHOS, PATRICIA 1999  
*Secretary IV*

**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)

Allen, Robert, PhD.....PHIL  
 Andersen, Katherine, MA.....MATH  
 Bagdadchi, Mahin, MS.....CHEM  
 Bartha, Paul, Z., MS.....CIS  
 Bell, Carolyn, PhD.....ENG  
 Belloli, Patricia, A., MEd.....ECOUN  
 Binkowski, Christine, MS.....MA  
 Bogarin, Russell, MA.....COUNS  
 Bondie, Susan, MA.....CIS  
 Bowers, Jr., Anne, PhD.....COMA  
 Brennan, Judith, M., MS.....PSYCH  
 Buchta, Patricia, BSN.....NURS  
 Burke, William, MA.....POLS  
 Burnham, Robert, MS.....QM  
 Burnside, Robert, MEd.....COUNS  
 Cardellio, Carla, MA.....BUS  
 Cavan, Paul, MS.....COR  
 Cavanaugh, Gerald, MA.....DRFG/CAD  
 Cieslak, Daniel, H., BS.....BUS  
 Clack, Donna, MA.....COLLS  
 Conway, Daniel, J., MA.....POLS  
 Cramb, Richard, Jr., MA.....CJ  
 Dagher, Joseph, P., MA.....ENG  
 Delonis, Richard, JD.....CJ  
 Dembicki, Helen, MA.....ENG  
 Derr, Carol L., MA.....SOC  
 DiDonato, Jeanine, A., MS.....MATH  
 Donkers, Sylvia, MEd.....OIS/BUS/CIS  
 Dostal, Frederick, MB.....ACCT  
 Driscoll, Faye, MA.....COUNS/HDS/PSYCH  
 Edwards, Allan, EdD.....MATH  
 Fletcher, Debra, MA.....BIOL  
 Friedrich, Paul, MA.....MATH  
 Garcia, Glenda, MA.....PSYCH  
 Gibbons II, Charles, AAS.....MET/WELD  
 Glass-Boyd, Crystal, MA.....GEOG  
 Gordon, Richard A, MA.....ENG  
 Gordon, Suzanne, BSN.....NURS  
 Grewe, Barbara, BSN.....NURS  
 Griffith, Robert, MBA.....ACCT  
 Hanert, Frederick, MA.....ECOUN  
 Harden, Shirley, EBM.....MUSIC  
 Harm, Nancy, EdS.....PSYCH  
 Harper, Ellen, MSA.....AHE  
 Hawkins, Cheryl, MS.....AHE/HIT  
 Hoffmann Jr., Walter, MEd.....PSYCH  
 Holman, Cheri, MSA.....BUS/MATH/OIS  
 Holtzman, Roberta, MA.....FR/SPAN

Hopfner, John, MBA.....BUS  
 Horvath, John, MA.....PSYCH  
 Hurick, Patricia MA.....COUNS  
 Jacobs, Jan, PhD.....PSYCH  
 Johns, Michael, MA.....HIST  
 Jooharigian, Robert, PhD.....PHIL  
 Josiah, George, MS.....MATH  
 Jubenville, Lawrence, ME.....SOC  
 Julien, Bruce, BA.....CIS  
 Kappen, Orville, MA.....CJ  
 Kaufman, Judith, MEd, MA.....COUNS/HDS  
 Keller, Mary, J., BS.....CCD  
 Kilbert, Louis PhD.....CHEM  
 Kitakis, Frank, G., PhD.....BIOL  
 Kiurski, Thomas, E., MPA.....FIRE  
 Koelzer, Leonard, MBE.....CIS  
 Kohlert, Peter, A., MSA.....MATH  
 Korenchuk, Nancy, I., MA.....COMA  
 Kulnis, Edward, MA.....ECOUN  
 Kurland, Sheila, MS.....BIOL  
 LaBerge, Brenda, BSN.....NURS  
 Lane, Robert, H., MA.....BIOL  
 Lesko, John, MS.....PHYSICS  
 Levy, Barbara, S., MSN.....NURS  
 Lindenber, Arthur, MFA.....ENG  
 Liss, Marianna, MA.....COMA  
 Little, Patricia, A., MA.....ECOUN  
 Lonigro, Antonio, MA.....SPAN  
 Madsen, James, MA.....CJ  
 Marilley, David, MS.....MATH  
 McAllister, Emily, MS.....MATH  
 McBride, Ronald E., MA.....ELECT  
 McCartney, James, MA.....BUS  
 McPeak, Russell, MA.....BUS  
 Meehan, Cheryl, MEd.....MATH  
 Meehan, George, MEd.....MATH  
 Melia, Nancy, BS.....BIOL  
 Mendenhall, Heather, BSN.....NURS  
 Misiak, Christopher, BA.....CAP/CHEM  
 Monge, John, MSA.....PA  
 Nathan, John, PhD.....ENG  
 O'Kelly, James, MA.....POLS  
 Oakes, Michael, MA.....GEOG  
 Olech, Timothy, MS.....BIOL  
 Parsons, Wayne, A., MA.....CIS  
 Perry, Robert J., AAS.....FIRE  
 Phillips, Clyde, T., MS.....CIS  
 Poledink, Alice, MA.....ENG  
 Probelski, James, MS.....MATH  
 Rabotnick, Seymour, MBA.....ACCT  
 Ramia, Rafael, MS.....MATH  
 Reppenhagen, Gilbert, ME.....ENG  
 Reynolds, John, R., MA.....HIST  
 Robinson, Ronald, MA.....POLS  
 Safran, Kenneth, JD.....BUS  
 Sarris, Cynthia, MFA.....ART

Sarris, Stephanie, MFA.....ART  
 Schaden, J. R., PhD.....PHIL/PSYCH  
 Schuby, Thomas, MA.....SOC  
 Sikorski, Gary.....PA  
 Simo, C.T., MSA.....BUS  
 Sitzler, Mardell, MA.....MATH  
 Skinner, Robert.....PE  
 Smilnak, John, BS.....FIRE  
 Smith, Craig, MA.....ART  
 St Chur, Joseph, BE.....COMPS  
 St John, Beverly, J., MS.....BIOL  
 St. Louis, Mary, MA.....MATH  
 Stanley, Dorothy, MA.....MATH  
 Stanton, Fred, BS.....PA  
 Swarup, Chitra, MS.....MATH  
 Szabo, Sharon, MBEd.....CIS  
 Talbert, Linda, S., MA.....COLLS  
 Taylor, Kathy, BS.....MT/HIT  
 Temporelli, Barbara, MS.....CHEM  
 Trembath, Darryl, MBA.....BUS  
 Turnau, III, William, BS.....CAD  
 Viksne, Edgars, G., MBA.....BUS  
 Vukmirovich, Sylvia, EdD.....COUNS  
 Washka, Jack, MEd.....PE  
 Weiskopf, Barbara, MS.....PSYCH  
 Woodruff, Cecil, PhD.....PE/MATH  
 Woods, Robert, MA.....ENG/PHIL  
 Worosz, Gregory, MBA.....BUS  
 Wroblewski, Veronica, MA.....COLLS  
 Yee, Donald, MA.....BUS

**ADJUNCT ASSOCIATE PROFESSOR**

(Min. 8 yrs. service & 150 points)

Abani, Kaveh, MA.....CIS  
 Alway, Peter, MS.....PHYS  
 Anderson, Diane L., MS.....BIOL/HIT  
 Anderson Jr., Thomas, PhD.....HIST  
 Baker-Reed, Shirley, MA.....CCD  
 Bartlett, David, MA.....CCD  
 Behler, Conrad, MA.....HIST  
 Bell, Patricia PhD.....HIST  
 Bielat, Robert, MA.....ART  
 Bodrie, Carol, BSN.....AHE/NURS  
 Bonner, Jeanne, MS.....BUS  
 Boron, James, MA.....CIS  
 Boyde, Silvia, A., MA.....COLLS  
 Breger, William, MBA.....ACCT  
 Brooks, Gale, BSN.....NURS  
 Brown, Kathy, MS.....ACCT/MATH  
 Derderian, Harry, MBA.....BUS  
 Doinidis, Elgene, MS.....OIS/BUS/AVM  
 Ellies, Karen, MBA.....BUS  
 Enteshary-Najafabady, Abbas, MS.....CIS  
 Fox, Harvey, MS.....CIS  
 Frank, Robert, Licensed Paramedic.....EMT  
 Gates-Palombo, Debora, MA.....ECOUN  
 Grant, Dorothy, MA.....COLLS

Grodsky, Elliott, MA.....	ENG	Brewer, Janice, MS .....	ACCT	Porter, Donald, BS .....	CIS
Hackman, Bruce, MA .....	COMA	Brodowicz, Pamela, J., MS.....	BIOL	Prescott, Jennifer, MBA.....	MATH
Harper, Michael, AAS.....	FIRE	Burhans, Bruce, MA .....	HIST/ANTH	Puggini, Julie, MA .....	COUNS/HDS
Hays, Samuel, K., MA .....	ENG	Buslawski Jr, Robert, MA.....	COMA	Rainey, Anne, ME .....	MATH
Hewelt, Barry, MA.....	ENG	Catalano, Timothy.....	FIRE	Reed, Gary, B., MS .....	BIOL
Hiller, David, MS.....	CJ/PA/FIRE	Chaudhery, Mitali, MA ....	HUM/ENG/COLLS	Reeds, Janet, MA .....	ANTH/HIST
Huber, William, BBA.....	CIS	Connolly, Colleen, M., MBA.....	COMA	Renas, Kim, MA .....	MUSIC
Hummer, Herbert, MS .....	COR	Crawley, Christopher .....	FIRE	Rintz, Michael, MS, JD.....	CM
Hunley, Ellen, M., MA.....	ENG	Dalton, Douglas, BFA, Licensed EMT ....	EMT	Rochon, Steven, MBA .....	CAD
Jackson, Harold, MA.....	MATH	Donahee-Rader, Mary, Certificate.....	MA	Rogers, Jerry, MS.....	BIOL
Jacobs, Elisabeth, MA.....	CGT	Dowd, Timothy, J., MA.....	PHIL	Roth, Diane, MA.....	MATH
Johnson, Theodore, J., MBA.....	CJ	Dreyfus, Raymond, MBA.....	BUS	Scott, Todd, MPA .....	CJ/HS
Kasenow, Gary, JD.....	COR	Eliasson, Jonene, MA.....	FR	Spolsky, Susan, MSW.....	SOC/PSYCH
Kelly, Gary, L., MA.....	HIST	Frame, Kathleen, MA.....	COMA	Steele, Ramona, D., MA .....	COLLS
Lai, Hongyuan, PhD .....	MATH	Gillette, Carmela, MTESL.....	ENG/ESL	Stovall, Clarice, MA .....	COR
Laird, Anita, S., MS .....	CIS	Gordon, L. G, MS/MSA.....	BIOL	Synpniwski, Matthew, MA.....	ENG
Lovelace II, Robert, AS .....	EMT	Graham, Jeanne, R., BA.....	ENG/COMA	Tarachuk, Deborah, Z., MA .....	ENG
Marriott, Cindy, PhD.....	PSYCH	Gueorguiev, Emil, A., MA .....	MATH	Thomson, Dennis, MA.....	HIST
McCulloch, Celia, M., AAS.....	CGT	Haldane, Judith, MA .....	MATH	VanOrnum, Scott, BMus.....	MUSIC/HUM
Modlin, Russell, BSN .....	NURS	Hallberg, Brenda, L., AAS.....	CAP/CBPA	Vinod, Roshin, MS.....	BIOL
Mogelnicki, Margaret, MA .....	CIS	Handelman, Nancy, MA.....	COLLS	Vitori, Karen, JD.....	BUS
Moucoulis, Ellen, MA.....	ART	Haynes, Constance, MSBA.....	OIS/BUS/CIS	Wauldron, Barry BS.....	GEOG
Moylan, Mark, MA .....	COMA	Hill, Michele, L., MS .....	ACCT	Wimpari, Jr., Daniel, L. ....	CAD
Murphy, Susan, MBA .....	CIS	Hochberg, Ellen, MA .....	CGT	Woodside, Kenneth, MS .....	CHEM
Murray, Steven, M., PhD .....	PSYCH	Hunt, Dennis, MA.....	ECON	Zorn, Lila, K., MS.....	ENG
Musto, Samuel, A., MA .....	CAP	Jawad, Afif, PhD .....	PHYS		
Nadon, Robert, MA.....	FIRE	Jawad, Badri, MBA.....	ECON		
Ndukwe, Ernest, PhD.....	GEOG	Johnson, Kelly, MS .....	PSYCH		
Patail, Bryanne, MLS.....	ELECT	Keyes, Gene .....	MFG		
Pederson, Vera, MA .....	CCD	Kirkby, Frederick, MA.....	COMA		
Peters, Chris, AAS .....	BMET/COMPS	Knox, Mary, BA.....	CJ		
Pniwski, Stanley, MAT.....	MATH	Korri, Joy, F., BSN.....	NURS		
Qiu, Yun, MS .....	MATH	Kronk, James, MBA.....	BUS		
Redmond, Charles, MS.....	CIS	Krueger, Richard, MSA .....	BUS		
Roney-Hays, Sandra, MA .....	SOC/ANTH	Krystyniak, Karen, A., MA .....	HDS/COUNS		
Rothstein, Barbara, MA .....	GER/FR	Lahaie, Kayla, S., MBA.....	BUS		
Saratovtsev, Dena, L., BA.....	ENG	Langdon, Julie, E., BAA.....	CGT		
Siegel, Marie, C., BSN.....	NURS	Leopold, Larry, MALS .....	ENG		
Snyder, Jill .....	CAP	Lewton, Kelli, L. ....	CAP		
Switalski, Jurgin, PhD.....	CHEM	Maheras, Nancy, BSN.....	NURS		
Swope, Michael, MA .....	HIST	Maheshwari, Neal, MBA, MS .....	MATH		
Towner Jr., Melvin, MBA .....	CIS	Martin, James, MA.....	PHIL/PSYCH		
Trpovski, Jovan, BAA.....	POLS	Mathieson, Karen, K., BSN .....	NURS		
Walker, Andrew.....	FIRE	Matthews, Janice, MSBA.....	BUS		
Wlosinski, Raymond, BS .....	FIRE	Mazur, Brian, MBA .....	BUS		
Yemets, Aleksandr, K., MS.....	MATH	McGinnis, Jr., Donald, MA.....	POLS		
		McMahon, George, EdD.....	SOC		
		Mercer, Sarah, E., BS.....	CAP		
		Moss, Frederick, MM .....	MUSIC		
		Nanian, Marjorie, JD.....	POLS		
		Nicklaus, Ronald, MA.....	MATH		
		O'Reilley, Sean, PhD .....	MATH		
		Oxley, Robert, PhD .....	PHIL/POLS/SOC		
		Pearce, Robert, F., MPA.....	CJ/COR		
		Pfaendtner, Jean, MSW.....	CCD		
		Pfannes, Daniel, P., MA .....	PA/CJ		
		Phillips, Thelma, BSN .....	NURS		

**ADJUNCT ASSISTANT PROFESSOR**

(Min. 3 yrs. service &amp; 100 points)

Anderson, Mark, E., MA.....	HIST/POLS
Aquila, Dominic, PhD.....	ENG/HUM/MUSIC
Badry, Peter, MA.....	ECON/BUS
Baehre, Theodore, AAS .....	PE
Baron, Timothy, BS.....	ELECT/COMPS/CIS
Barrett, Jennifer, BA .....	SPAN
Begle, Catherine, AA .....	CGT
Blau, Ben, Certification.....	MUSIC

**Emeritus–Honoraire Employees**

❖ = Deceased

- 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*
- ANDERSON, ROGER 1968–2002  
*Biology 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*
- BERKAW, MOLLY 1988–2003  
*Secretary to the Assistant Vice President  
FOR INSTRUCTION HONORAIRE*
- BLACK, AGNES J. 1973–1992  
*Personnel Specialist Honoraire*
- BLACK, J. ROBERT 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*
- BRAUN, SHARON 1992–2006  
*Director of Health, Fitness and Senior Adult  
Programs Emeritus*
- BREITHAAPT, ROBERT L. 1966–1987  
*Assistant Dean of Culinary Arts Emeritus*
- BURKE, WILLIAM 1967–2004  
*Political Science Professor 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*
- CAVANAUGH, GERALD 1969–2004  
*Related Trades Professor Emeritus*
- CLACK, DONNA 1988–2004  
*Developmental Education Professor Emeritus*
- COLLINS, LOIS 1970–1993 ❖  
*Secretary to the Dean of Educational  
SERVICES HONORAIRE*
- COOK, LOWELL T. 1967–1997  
*Business Professor Emeritus*
- COOLEY, MARGOT 1997–2007  
*Business Services Secretary Honoraire*
- 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*
- DROUILLARD, CLARENCE 1966–2004  
*Facilities Management Utility II Honoraire*
- 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*
- GANS, MARVIN 1964–2002  
*Assistant Dean, Continuing Education  
Services Emeritus*
- GARRETT, EVAN 1968–2004  
*History Professor Emeritus*
- GARRITANO, ROCCO 1966–1991 ❖  
*Mathematics Professor Emeritus*
- GEIL, BARBARA A. 1964–1995  
*Vice President for Student Services Emeritus*
- GIBBONS, II, CHARLES L. 1976–2005  
*Metallurgy Associate Professor Emeritus*
- GILBERT, BETTY J. 1986–2001  
*Executive Director of Human Resources  
Emeritus*
- GORDON, RICHARD 1969–2004  
*English Professor Emeritus*
- GREEN, ANNE 1978–2002  
*Administrative Coordinator to the  
President Honoraire*
- GREENWELL, DIANE F. 1978–2004  
*Accounts Receivable Associate Honoraire*
- GRIFFITH, RONALD 1971–2003  
*Assistant Vice President for Instruction  
Emeritus*
- GUDAN, SIRKKA 1980–1998 ❖  
*Assistant Dean for Academic and  
Assessment Services Emeritus*
- HAMMOND, PATSY R. 1970–1995  
*Nursing Professor Emeritus*
- HARJU, DEBBIE 1980–2002  
*Assistant to the Director of  
Enrollment Management Honoraire*
- HEINZMAN, DAVID L. 1970–1986  
*Assistant Dean for Instruction Emeritus*
- HEISE, WILLIAM R. 1969–1998 ❖  
*Counselor Professor Emeritus*
- HERSHOREN, GARY 1967–1996  
*Counselor Professor Emeritus*
- HOFFMANN JR., WALTER O. 1964–2004  
*Psychology Professor Emeritus*
- HOLTZMAN, ROBERTA 1964–2004  
*Foreign Language Professor Emeritus*
- HULIK, KATHLEEN 1996–2007  
*Public Relations/Media Coordinator Honoraire*
- HURICK, PATRICIA 1990–2002  
*Counselor Professor Emeritus*
- HUSTON, D. LOUISE 1964–1982 ❖  
*Director of Accounting, Payroll Honoraire*
- JOSWIAK, FRAN 1992–2005  
*Executive Assistant Honoraire*
- JAWOR, MARY 1964–1989  
*English Professor Emeritus*
- JONES, CLAREN 1964–1979 ❖  
*Chemistry Professor Emeritus*
- KAPLAN, SUZANNE 1964–2002  
*English 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*
- KELLY, SANDRA L. 1976–2006 ❖  
*Counseling Secretary III Honoraire*
- 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, J. 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*
- MCBRIDE, RONALD 1974–2005  
*Electronics 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*
- MUNRO, KENNETH F. 1986–2006  
*Physical Education Attendant Honoraire*
- NASLUND, RAYMOND L. 1966–1985 ❖  
*Accounting Professor Emeritus*
- NATHAN, JOHN G. 1975–2004  
*English 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 JR., MICHAEL A. 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*
- POWELL, MARY S. 1966–2004  
*English 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*
- REIBLING, LOUIS A. 1980–2004  
*Vice President for Instruction Emeritus*
- RICHMOND, MERLE J. 1970–1999  
*Accounting Professor Emeritus*
- RIEF, MARY JO H. 1987–2004  
*Administrative Assistant to the Vice President for Finance and Business Services Honoraire*
- 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*
- RYKTARSKY, DONNA 1967–2003  
*Assistant Director-Financial Aid Honoraire*
- RYKTARSKY, DONALD 1964–2004  
*Business Professor Emeritus*
- SAMPSON, DOROTHY 1967–1998  
*Nursing Professor Emeritus*
- SATTIG, HARRIETT H. 1963–1980  
*Director of Health Careers Emeritus*
- SCHADEN, J. ROBERT 1993–2004  
*Philosophy Professor Emeritus*
- SCHARMEN, LARRY L. 1985–2000  
*Biomedical Engineering Technology Professor Emeritus*
- SCHWE, STEPHEN J. 1972–2004  
*Physics Professor Emeritus*
- SCHNEIDER, JANET 1989–2004  
*Librarian 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*
- STEIN, JOANNE 1967–2002  
*English Professor 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*
- TIMTE, JACQUELINE 1994–2004  
*Secretary –Business Services Honoraire*
- TOMALTY, R. ELAINE 1987–2001  
*Secretary for Women's Resource Center Honoraire*
- TOMALTY, RICHARD L. 1970–2000  
*Counselor Professor Emeritus*
- TOMEY, CAROLYN S. 1991–2005  
*Registrar's Office Assistant Honoraire*
- TOMEY, JOHN B. 1974–2005  
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*Health and Physical Education Professor Emeritus*
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*Chemistry Professor Emeritus*
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*Director of Counseling Emeritus*
- WILLIAMS, LARRY G. 1969–2006  
*Mathematics Professor Emeritus*
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*English Professor Emeritus*
- WILSON, JOHN M. 1965–1993  
*History Professor Emeritus*
- WITTEN, DOROTHY B. 1975–2001  
*Child Care Development Professor Emeritus*
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*Accounting Professor Emeritus*
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Darnell Blackburn	Field Representative, MCOLES, Lansing
John Buck	Chief, Redford Police Department, Redford
Charles Castle	Chief, Southgate Police Department, Southgate
Jerry Champagne	Director, Van Buren Township Police Department, Belleville
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Tim Bosman	Chief, Riverview Fire Department, Riverview
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Daniel McNamara	4th District Vice President, Michigan State Fire Fighter's Union, Lansing
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James Buford	Director of Homeland Security, County of Wayne, Detroit
Michael Celeski	Chief, Dearborn Police Department, Dearborn
Daniel Grant	Chief, Wyandotte Police Department, Wyandotte
Larry Hall	Deputy Chief, Wayne County Sheriff, Belleville
Michael Makowski	Chief, Grosse Pointe Woods Department of Public Safety, Grosse Pointe
Dan Pfannes	Undersheriff, Wayne County Sheriff, Detroit
Robert Stevenson	Chief, Livonia Police Department, Livonia
Kym Worthy	Prosecutor, County of Wayne

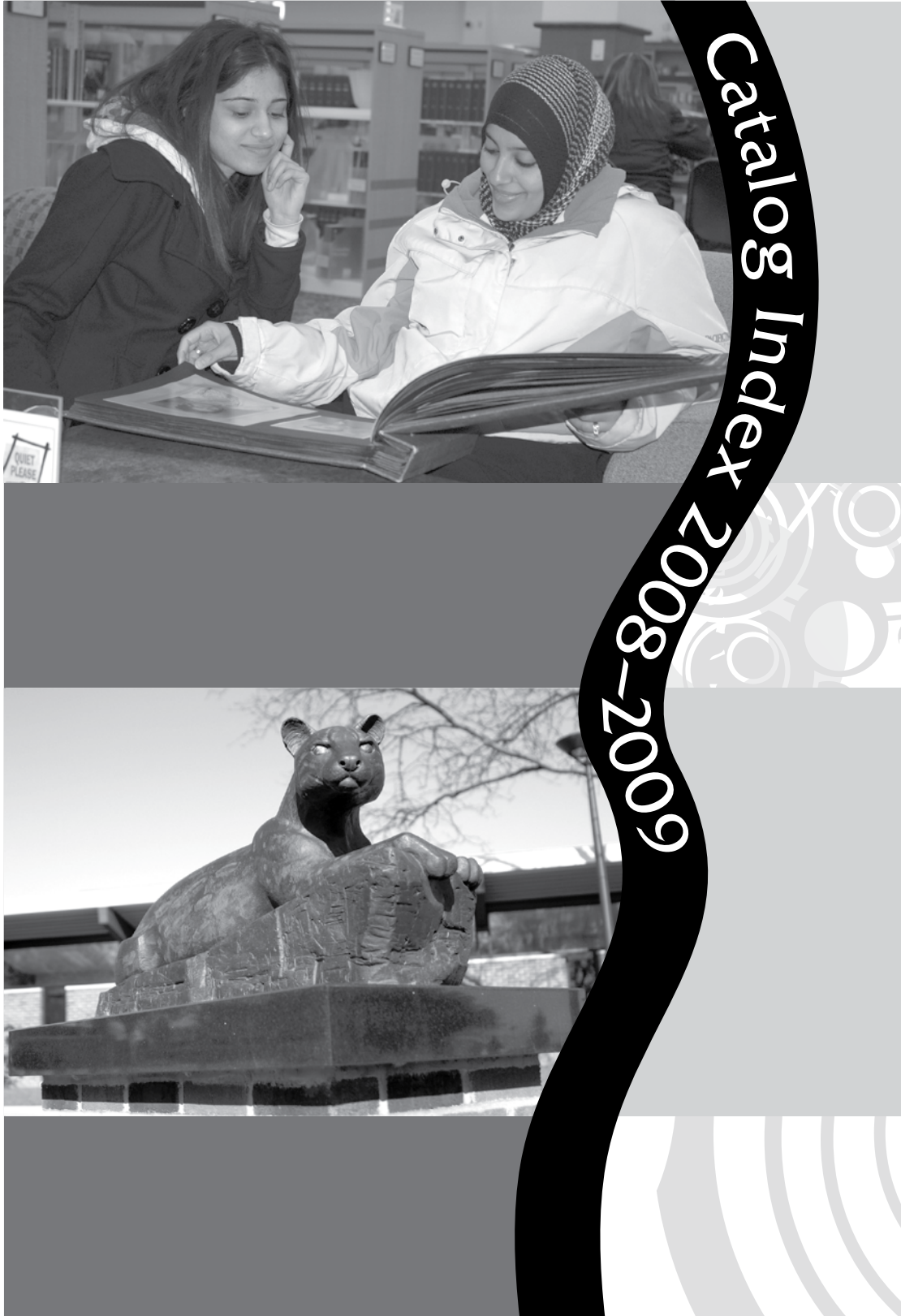
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Elizabeth Allen	Business Proprietor, Certified Financial Planner, Farmington Hills
Laura Callow	Women's Rights Advocate Member, Human Relations Commission Member, City of Livonia, Livonia
Mary Dumas	Past Member of Board of Directors, YWCA Western Wayne County, Former Wayne County Commissioner, Livonia
Dolly Ettenhofer	Stylist, Charisma Salon, Livonia
Dorothy Fobes	Retired Human Resource Specialist, Ford Motor Company, Plymouth
Elizabeth M. Johnson	Attorney-at-Law, Plymouth
Vera McGregor	Retired Placement Specialist, Michigan Employment Security Commission, Westland
Adelard H. Raby III	Retired Vice President, Schoolcraft College Board Member, Michigan Educational Credit Union, Northville
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Sally Randall, RN	Retired, Community Health Coordinator, Botsford Hospital President, Northwest Wayne Chapter, Zonta International
Jacqueline Gold Roessler	Certified Divorce Financial Analyst, Divorce Solutions, LLC Southfield, MI
Valda Vandersloot	Financial Advisor, Retired, Livonia City Clerk, Livonia





# Schoolcraft College



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## 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 colegio 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 disability, be excluded from participating in, be denied benefits of, or be subjected to discrimination during any program or activity or in employment.

## Produced by the Marketing Department

In cooperation with Student Services and the Office of Instruction.



# Schoolcraft College

## Application for Admission and Readmission

Assigned Student Number

**✓ Applications are accepted throughout the year**

Return your completed application to the Admissions and Enrollment Center:

Schoolcraft College  
18600 Haggerty Road  
Livonia, Michigan 48152-2696

**OR apply online at [www.schoolcraft.edu](http://www.schoolcraft.edu)**

When do you plan to start school?    (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** (To receive resident tuition rates, proof of residency will be required at time of admission.)

Number and Street	PO Box or Apartment Number
City	State      Zip Code

**3. TELEPHONE**

Primary Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell <input type="checkbox"/> Business	ext.	Alternate Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell <input type="checkbox"/> Business	ext.

**4. E-MAIL**

--

Your social security number and date of birth are used for identification purposes. The information in items 7, 8 and 9 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**

M	M	D	D	Y	Y		

**7. GENDER**

- Female
- Male

**8. ETHNICITY**

- White
- Black or African American
- Other
- Asian
- Hispanic or Latino
- American Indian or Alaskan Native
- Native Hawaiian or Other Pacific Islander

**9. CITIZENSHIP**

- USA
- Non-US      Indicate your status below and provide requested information. You will need to submit documentation for admission. Contact the Admissions and Enrollment Center 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 pages 27–28 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?	<input type="radio"/> Yes — Graduation Date: <input type="text"/> / <input type="text"/> / <input type="text"/> (month and year)		
<input type="radio"/> No	Did you receive a GED? <input type="radio"/> Yes — GED Date: <input type="text"/> / <input type="text"/> / <input type="text"/> (month and year)		
<input type="radio"/> No			

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:	<input type="radio"/> Associate <input type="radio"/> Bachelor's	<input type="radio"/> Master's <input type="radio"/> PhD	<input type="radio"/> No Degree Number of credit hours
<input type="text"/>				<input type="text"/>
City	State	if non-US, Country		Number of classes successfully completed
<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>

College/University	Degree Earned:	<input type="radio"/> Associate <input type="radio"/> Bachelor's	<input type="radio"/> Master's <input type="radio"/> PhD	<input type="radio"/> No Degree Number of credit hours
<input type="text"/>				<input type="text"/>
City	State	if non-US, Country		Number of classes successfully completed
<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>

College/University	Degree Earned:	<input type="radio"/> Associate <input type="radio"/> Bachelor's	<input type="radio"/> Master's <input type="radio"/> PhD	<input type="radio"/> No Degree Number of credit hours
<input type="text"/>				<input type="text"/>
City	State	if non-US, Country		Number of classes successfully completed
<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>

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.

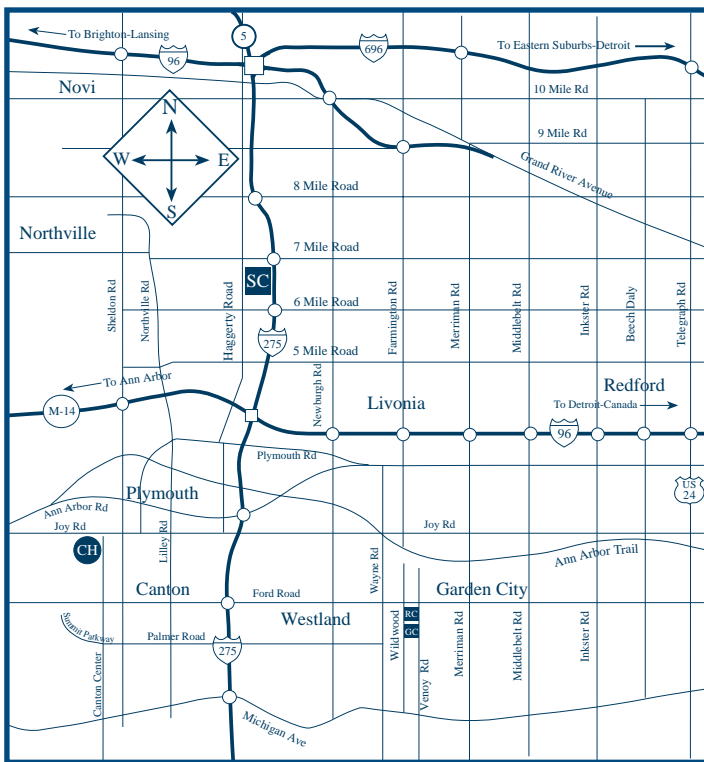
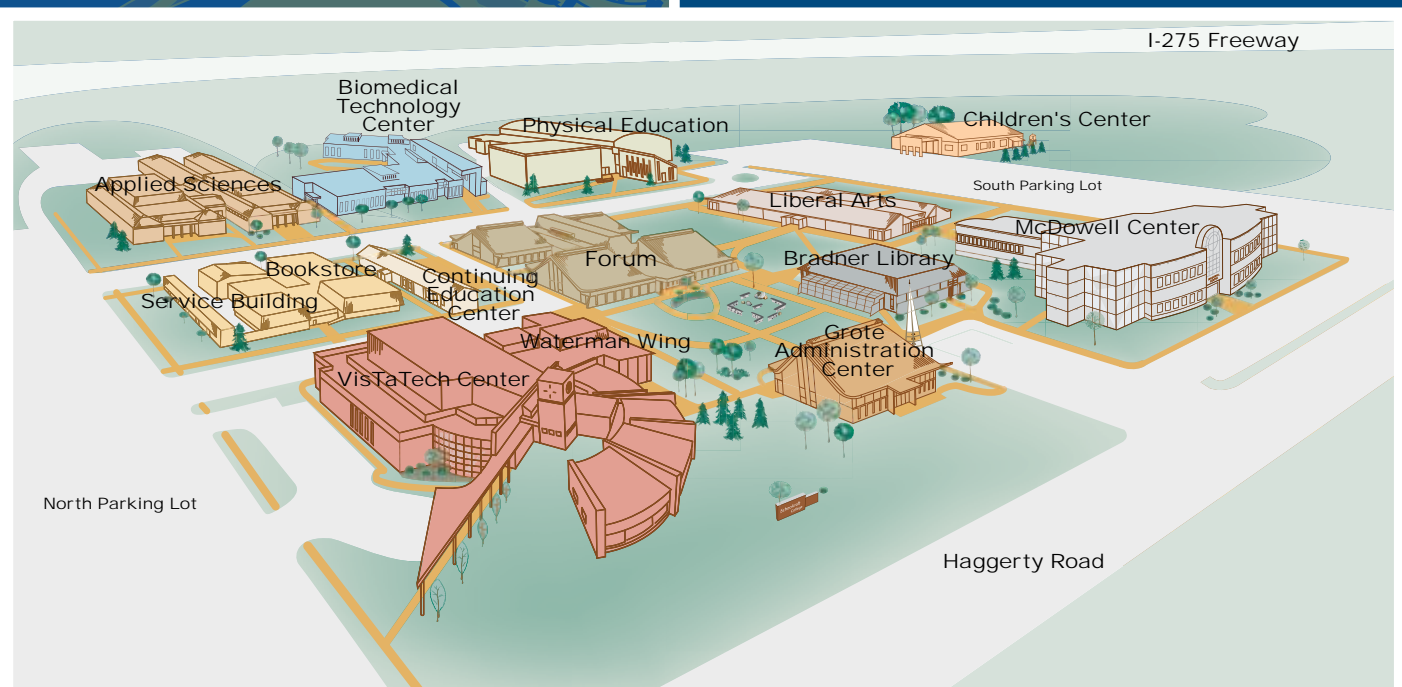
Any student requiring accommodations information for a disability, please contact the Learning Assistance Center at 734-462-4436.

Signature of Applicant \_\_\_\_\_ Date of Application \_\_\_\_\_

*It is the policy of Schoolcraft College that no person shall, on the basis of race, color, national origin, gender, age, marital status, creed or disability, be excluded from participating in, be denied benefits of, or be subjected to discrimination during any program or activity or in employment.*

*The Annual Security Report is available at [www.schoolcraft.edu/cleryact](http://www.schoolcraft.edu/cleryact) or a copy may be obtained from the Campus Security Police Department.*

**Admissions and Enrollment Center**  
**Schoolcraft College**  
**18600 Haggerty Road**  
**Livonia, MI 48152-2696**  
**Phone: 734-462-4426**  
**Fax: 734-462-4553**



**Schoolcraft Campus**  
18600 Haggerty Road  
Livonia, MI 48152-2696  
734-462-4400

**Applied Sciences Building**  
Associate Dean,  
Business, Technology, and  
Economic Development  
Business Programs  
Classrooms  
Computer Graphics Technology  
Computer Programs  
Nursing  
Technology Programs

**Biomedical Technology Center**  
Classrooms  
Learning Theatre  
Open Entry/Open Exit Lab  
Science Programs  
Technology Programs

**Bookstore**

**Bradner Library**  
Archives  
Learning Assistance Center

**Continuing Education Center**

**Children's Center**

**Forum Building**  
Art Programs  
Assistant Dean, Sciences  
Classrooms  
Forum Recital Hall  
Music Programs  
Science Programs

**Grote Administration Center**  
Human Resources  
Institutional Research  
Marketing Department  
Office of Instruction  
Office of the President

**Liberal Arts Building**  
Associate Dean,  
Liberal Arts/Independent Learning  
Classrooms  
Liberal Arts Programs  
Liberal Arts Theatre

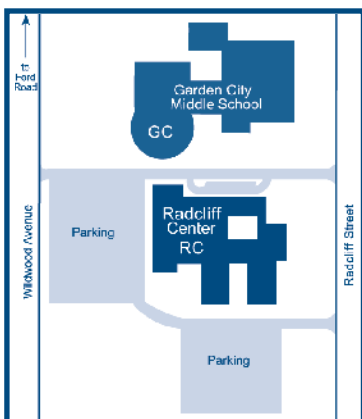
**McDowell Center**  
Admissions and Enrollment Center  
Career and Transfer Center  
Cashier  
Classrooms  
Computer Labs  
Counseling Center  
Dean of Instruction  
Dean of Student Services  
Distance Learning  
Finance and Business Services  
Financial Aid  
Open Entry/Open Exit Office  
Purchasing  
Student Accounts  
Student Recruitment and Records  
Testing Center  
Women's Resource Center

**Physical Education Building**

**Service Building**  
Campus Security Police  
Facilities Management  
Lost and Found

**VisTaTech Center**  
American Harvest Restaurant  
Business Development Center  
Classrooms  
Culinary Arts Program  
Development and  
Governmental Relations  
Grants  
Main Street Cafe  
Schoolcraft Foundation

**Waterman Wing**  
Food Services  
Henry's Food Court  
Meeting Rooms  
Recreational Areas  
Student Activities  
Student Clubs  
Study Area



**Radcliff Center**  
1751 Radcliff Street  
Garden City, MI 48135  
734-462-4770

Associate Dean, College Centers  
Allied Health Programs  
Emergency Medical Technology  
Fire Academy  
Library  
Massage Therapy Program  
Police Academy



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Livonia, Michigan 48152-2696  
734-462-4400  
[www.schoolcraft.edu](http://www.schoolcraft.edu)