MONROE COUNTY COMMUNITY COLLEGE

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MONROE COUNTY
COMMUNITY COLLEGE

enriching lives

Main Campus
1555 South Raisinville Road
Monroe, Michigan 48161-9746

1-877-YES-MCCC

Whitman Center
7777 Lewis Avenue
Temperance, Michigan 48182

1-734-847-0559

www.monroeccc.edu

A Message from the President

Thank you for your interest in Monroe County Community College. We are proud of our national accreditation and the quality education we provide. At MCCC, we strive to build character, nurture personal and professional growth and make work and life more rewarding for everyone in the community.

At MCCC, you'll receive an education that's both accessible and personal. From one of the lowest tuition rates in the region to two convenient locations to counselors, faculty, staff and services that are there when you need them, MCCC strives to make higher education accessible to everyone. And, through our small class sizes and committed faculty and staff, we provide the personal attention that makes a real difference. Our students enjoy learning relationships with instructors and counselors who are passionately committed to their success.

MCCC is a learning institution where the focus is on providing the practical knowledge, information and experiences that will help our students reach their career goals.

So, whether you plan to go straight from MCCC to the workforce or continue your education at a four-year college or university, you'll find that our priority is to provide an education with lasting value and return-on-investment that will benefit you long after your studies are complete.

As president of Monroe County Community College, I am joined by all faculty and staff in welcoming you to a college that is dedicated to enriching lives.

David E. Nixon, Ed.D.
President

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About Monroe County Community College

HISTORY

Monroe County Community College is a public, two-year institution supported by tax monies from Monroe County, educational funds from the state of Michigan and student tuition. The Monroe County Community College District was formed on June 29, 1964, by the electors of Monroe County. On July 3, 1964, the district was given statutory authority under the provisions of Michigan Act 188 of the Public Acts of 1955 to function as a community college.

The 210-acre Main Campus is centrally located in Monroe County with easy access to Detroit and Toledo. The Whitman Center in Bedford Township near the Michigan-Ohio border offers a wide selection of courses.

Monroe County, Michigan

French missionaries came to this territory as early as 1634. The river that flows through the center of the city of Monroe was named the River Aux Raisin because of the many grapes growing in the locality. A trading post and fort were established here in 1778. Francois Navarre was the first white settler in 1780. The first settlement was called Frenchtown, when about 100 French families came here from Detroit and Canada. The American flag was first raised in Michigan in Monroe in 1796. In 1817, Frenchtown was renamed Monroe by Governor Lewis Cass in honor of President James Monroe. St. Antoine's Church on the banks of the River Raisin was the second church in the state.

Monroe County is located at the west end of Lake Erie and has a population of approximately 146,000. Parts of the county are industrialized, but much of it is also devoted to agriculture. The Port of Monroe is located on the St. Lawrence Seaway and could lead to increased business and industrial expansion. A modern hospital is located within the county. There are many opportunities to attend the church of one's choice.

Cultural and recreational facilities are available in the county and in nearby areas. The county is within easy driving distance of Detroit, Ann Arbor, and Toledo. Other institutions of higher learning nearby include the University of Michigan (40 miles), Eastern Michigan University (35 miles), University of Toledo (20 miles), Wayne State University (35 miles) and the University of Detroit-Mercy (35 miles).

MISSION STATEMENT

Monroe County Community College was established to provide a variety of higher education opportunities for the residents of Monroe County. The college's mission is to provide:

- Programs for students planning to transfer to four year institutions
- Programs for students seeking an associate degree or certificate in an occupational area
- General education courses/experiences integrated throughout the curriculum
- Training and retraining for business and industry
- A strong complement of student support services, and
- Other activities to meet the lifelong educational and employment needs of its students

ACCREDITATION

Monroe County Community College is accredited by the Higher Learning Commission and is a member of the North Central Association. Copies of documents regarding accreditation may be reviewed in the office of the Vice President of Instruction.

Program Accreditations:

North Central Association
30 North LaSalle Street, Suite 2400
Chicago, Illinois 60602-2504
email: info @ncahigherlearningcommission.org
1-800-621-7440

The following MCCC programs have earned specialized accreditation:

- Nursing
    National League for Nursing Accrediting
        Commission (NLNAC)
    350 Hudson Street
    New York City, New York
    1-800-669-9656, extension 153
- Respiratory Therapy
    Committee on Accreditation for Respiratory
        Care (COARC)
    1701 W. Euless Boulevard, Suite 300
    Euless, Texas 76040-6823
    1-817-283-2835

PHILOSOPHY

Monroe County Community College is dedicated to the philosophy that the nation's most precious resource resides in the diverse knowledge and abilities of its citizens. The college endeavors to provide educational opportunities to enhance this knowledge and refine these abilities.

The college offers its programs and services within a framework of ethical integrity in all relationships and practices.

The college believes that liberal admissions requirements are an essential part of its philosophy.

The college admissions policy affords equal opportunity for all qualified individuals for higher educational experiences.

EDUCATIONAL OBJECTIVES

The college is organized to meet the educational needs of the community by:

1. Offering freshman and sophomore, college-level programs in the liberal arts, sciences and preprofessional fields for students who plan to transfer to senior educational institutions;
2. Offering one- and two-year occupational and/or career programs for students preparing for employment in technical, business or health-related fields;
3. Providing general education courses and experiences integrated throughout the curriculum that will enable students to write and communicate effectively, utilize mathematics and employ appropriate methods of critical thinking and problem solving;
4. Providing opportunities for intellectual, cultural and personal development for adults in a wide range of lifelong learning courses;
5. Working with business and industry to develop training and retraining programs to meet ever-changing employment needs;
6. Providing a strong complement of comprehensive support services to assist students in pursuit of their academic and vocational goals; and
7. Cooperating with other school systems, civic groups, educational institutions and private individuals and corporations to offer educational services.

ASSESSMENT PHILOSOPHY

Assessment at MCCC is a systematic and comprehensive examination of the college mission. Relevant academic and non-academic activities will be used to determine if the mission mandates continue to be met. Assessment illustrates that the college is committed to improving in all areas, particularly the central institutional mission: teaching and learning effectiveness.

Assessment at MCCC enables the institution to demonstrate concretely and convincingly that students are learning those skills, competencies and attributes necessary to successfully function as productive citizens. Assessment also provides our constituency with an ongoing reporting mechanism that indicates high-quality performance at an institution where public resources are effectively expended for the betterment of the MCCC district. The assessment process at MCCC provides an appropriate, self-determined accountability mechanism that provides assurances that MCCC continues to meet its institutional mission. It provides a clear avenue for reporting results to its accrediting organization and to the State of Michigan.

POLICY STATEMENT ON ILLEGAL DISCRIMINATION AND SEXUAL HARASSMENT

The Community College District of Monroe County, Michigan affirms its desire to create a work and study environment for all individuals that is fair and responsible. The college endeavors to support an environment that will support, nurture and reward career and educational goals on the basis of relevant factors such as ability and work performance.

The college believes that illegal discrimination and sexual harassment are inconsistent with a supportive environment, and as such, endorses all applicable state and federal legislation, which includes the Elliot-Larsen Civil Rights Act (Michigan) and the 1964 Civil Rights Act (Federal) involving prohibiting discrimination or harassment in employment and in the utilization of education facilities.

It is therefore the policy of the college that no employee or qualified person participating in a college-sponsored program, service or activity shall be discriminated against because of race, color, religion, national origin or ancestry, age, height, weight, sex, marital status, veteran status or disability.

It is furthermore the policy of the college that any illegal acts of discrimination or sexual harassment of students or employees will be considered as unacceptable and impermissible conduct. Such acts will not be condoned or tolerated by the college.

The college will investigate any allegation of illegal discrimination or sexual harassment. If inappropriate behavior is found to have occurred, prompt remedial action will be taken. Any employee found to have engaged in prohibited discrimination or sexual harassment is subject to immediate discipline up to and including termination, and any student found to have engaged in prohibited discrimination or sexual harassment is subject to immediate discipline, up to and including expulsion.

No employee or student will be disciplined or retaliated against for making a good faith complaint or request for investigation pursuant to this policy.

The college's Equal Opportunity Officer and Title IX and Section 504/ADA Coordinator and Compliance Officer for discrimination and sexual harassment is the director of human resources, Monroe County Community College, 1555 South Raisinville Road, Monroe, Michigan 48161, phone (734) 384-4245.

For procedural information, please go to www.monroeccc.edu.

POLICY STATEMENT ON SOCIAL SECURITY NUMBER PRIVACY

The State of Michigan Public Act 454 of 2004 establishes regulations to help ensure the privacy of student Social Security numbers. This includes the proper use, disclosure and disposal of student Social Security numbers.

The Community College District of Monroe County Michigan will follow procedures to ensure that these requirements are met.

For procedural information, please see the Web site at www.monroeccc.edu.

MAIN CAMPUS

The Monroe County Community College campus, located on South Raisinville Road, opened for students in October, 1967. The campus buildings are related to one another by an attractively landscaped center mall. Each building is both functionally and esthetically designed.

The Campbell Learning Resources Center is the focal point of the campus. This two-story building contains classrooms, faculty offices and the necessary space to house library facilities for a collection of over 46,000 volumes and over 300 current subscriptions, as well as electronic access to thousands of magazines and journals.

The Audrey M. Warrick Student Services/Administration Building, across the mall from the Campbell Learning Resources Center, provides dining facilities, a recreation area and a bookstore for the student body. In addition, this facility houses four community-use conference rooms, a student lounge, an art room, the Cuisine 1300 restaurant and a beautiful courtyard. The Student Government conducts its activities from this center. The counseling, admissions, administrative and general offices are also located in this building.

The technology buildings are two separate units connected by a covered walkway. The East Technology Building contains an art studio, drafting area and business education rooms. The West Technology Building houses the Regional Computer Technology Center, classrooms, offices and laboratories related to the industrial technology curricula. A lab annex for automotive engineering technology and construction management technology was added in support of these two programs in 2002.

The Life Sciences Building, located across the mall from the technology buildings, contains offices, the student newspaper, laboratories and classrooms related to the physical and natural sciences. The building also contains two auditorium-type lecture halls and a climate-controlled greenhouse.

The Gerald Welch Health Education Building, located on the north end of campus, houses the nursing, respiratory therapy and physical education program classrooms and laboratories, a day-care center, a multi-purpose room, a dance-aerobics room and a fitness center.

In the latter part of 2004, the college opened the La-Z-Boy Center and Meyer Theater. This 52,000-square foot building combines facilities equipped for education and training with a performing arts venue. The La-Z-Boy Center also houses the Corporate and Community Services Division offices.

LEARNING RESOURCES CENTER

The Learning Resource Center (LRC) provides students and faculty with services, print materials and online resources selected to support the college curricula and promote independent research and lifelong learning. Located on the first floor of the Campbell Learning Resource Center, the Library includes areas for quiet and group study, workstations for Internet access, on-line databases, reserve class materials, wireless access and magazine articles in both print and on-line format. Classrooms, faculty offices and the Learning Assistance Laboratory (LAL) are located on the second floor. The Little Theatre, Educational Media Services office, Information Systems, a microcomputer lab and additional classrooms are located on the lower level.

Learning Resources Center faculty and support staff are available to assist students and faculty in all phases of library, audiovisual and LAL services. Reference librarians provide both individual reference help and classroom research education sessions.

Learning Assistance Lab (LAL)
The LAL provides academic support services as well as services to students with disabilities. Our goal is to help students improve their classroom performance and achieve academic success. All LAL services are free to MCCC students. The LAL is located in room C-218. Appointments can be made in person or by calling (734) 384-4167.

Tutoring
Tutoring is available for most MCCC courses. Most tutoring is done one-on-one, but group tutoring is sometimes scheduled when students request it. Although walk-ins are accepted, appointments should be made to insure a time is reserved for you. Tutoring is also available to help students improve their study strategies.

Writing Center
Student Writing Fellows assist with all stages of the writing process from pre-writing to revision and editing. The Writing Fellows are students who have demonstrated writing ability in English 254, Advanced Composition. Many courses at MCCC are assigned a Writing Fellow; however, assistance on any writing project is also available by appointment in the LAL.

Supplemental Instruction
Group study sessions are led by a trained student leader for selected courses. The leader attends class, takes notes, reads the assigned materials and conducts two study sessions per week. The scheduled group study sessions are informal and have proven helpful to students who attend.

First Steps for Classroom Success Workshop
This workshop highlights study skills and other "success strategies." Some of the topics covered are Organizing for Effective Study, Taking Lecture Notes, Proven Learning Tools and Surviving the First Day of Class. These free workshops are offered the day before the Fall and Winter semesters begin, and are available to anyone interested in improving their classroom performance.

DISABILITY SERVICES

Students with documented disabilities may be entitled to classroom and instructional accommodations, as well as access to all college facilities and programs. Accommodations are intended to "level the playing field" as much as possible, so that the student with a documented disability has an equal opportunity to succeed. Access is provided while maintaining high academic standards.

Disability counselors are available to assist students with disabilities in all aspects of their educational planning. Students may schedule an appointment with a disability counselor in the LAL to request accommodations, plan their schedule, obtain career and transfer information and provide collaboration with outside agencies.

Procedures for Requesting Accommodations for Students with Disabilities

1. Under the Americans with Disabilities Act or the Rehabilitation Act of 1973, an individual with a disability includes any person who has a physical, learning, emotional, behavioral or mental impairment which substantially limits one or more major life activities.

2. At least ten business days prior to the first class session, it is the responsibility of the student with a disability to schedule an appointment with a Learning Assistance Laboratory counselor/coordinator to begin the accommodation process. (Room C-218 of the Campbell Learning Resources Center, phone 734-384-4167)

3. Once an accommodation plan has been developed, instructors will be notified by the LAL as to the specific accommodation(s) to be provided. If a special request is received after the course/semester begins, a decision regarding the type and extent of the accommodation will be communicated to the instructor with implementation to follow within a reasonable amount of time. Testing accommodations are made on a test by test basis and require at least one week notice for special arrangements to be made.

4. Within 30 calendar days of an accommodation request or by the first meeting of class (whichever comes first), acceptable documentation substantiating any accommodation request must be provided to the Learning Assistance Lab. (For guidelines regarding acceptable documentation, contact the LAL at 734-384-4167.) If it is not received within this time frame, any future accommodations may be in jeopardy.

5. A student who receives an accommodation must:
   A. Notify or leave a message for a counselor when he/she will not be in class. (Non-credit students must notify or leave a message with the Corporate and Community Services Office by calling 734-384-4127.
   B. Use the same procedure to notify the LAL if he/she has difficulty with any accommodations (note taker, scribe, interpreter, etc.).
   C. (Credit Students Only) Keep in regular contact with the Learning Assistance Lab (734-384-4167).

6. No charge will be made to the student, although cooperative arrangements with third party agencies (i.e. Michigan Jobs Commission, Commission for Blind, etc.) will be considered.

7. Any loaned equipment or materials must be returned to the LAL within 7 working days after termination of services. Failure to return equipment will result in a financial hold on student records.

8. Accommodations are made on a case-by-case basis each semester. A credit student must complete paperwork to reactivate his/her file each semester. Non-credit students must reactivate each time they register for a class to continue to receive any accommodations.

All reasonable attempts will be made to accommodate an individual's special needs. However, this is not a guarantee that services can be provided.

BOOKSTORE

Located in the Audrey M. Warrick Student Services/ Administration Building, the Bookstore is a one-stop place for all school supplies. The Bookstore provides new and used books, book bags, school supplies, Scantron sheets, clothing, gift items, greetings cards and snack foods. Textbooks for classes offered at the Whitman Center may be purchased at the Whitman Center during the first few days of each semester. Check the semester schedule for specific dates and times.

Please do not open packages or write in books until you are certain there is no need to return them. Books must be in original condition with all unused components as packaged. Refunds are given the first two weeks of Fall and Winter semesters and within one week of Spring and Summer semesters. The cash register receipt MUST accompany books. Check the Bookstore for refund and exchange policies.

The Bookstore will buy back used books depending on the requirements for the next semester. The Bookstore will typically pay 50 percent of the current new book price. In addition, a used book warehouse representative will buy back other books with market value. Book buy-back is held during the last three days of Fall, Winter and Spring semesters.

CORPORATE AND COMMUNITY SERVICES DIVISION

The basic mission of the Corporate and Community Services (CCS) Division is to provide a variety of educational opportunities to adults within the college service area. Courses and programs are designed in response to education and training needs expressed by individuals, community groups and business and industry, as well as demands for enrichment and recreational activities.

The CCS Division of Monroe County Community College is a comprehensive educational provider to many segments of the community. The diverse offerings and services touch a wide variety of citizens and organizations.

Community service programs and activities are an on-going part of the division. The CCS Division manages room usage of the college by on- and off-campus organizations for over 50,000 people annually. Community service programs include the annual Business and Industry Luncheon and other programs that reflect the diverse interests of the community. For more information regarding the services available through the CCS Division, visit our Web site at www.monroeccc.edu/ccs/corporat.htm.

Campus and Community Events
The College sponsors a wide array of cultural, educational and recreational events throughout the year for students and the entire community. A monthly calendar of exhibits, demonstrations, lectures, slide shows, concerts, plays, athletic and seasonal events is available, spotlighting well-known regional and national artists. Many events, are free, and all are open to the public. For more information or to view the calendar of events, visit our Web site at www.monroe.edu/ccs/events/cce-events.htm.

Customized Training
The CCS Division plays a significant role in economic development activities throughout Monroe County by providing training programs designed to maintain a competitive work force. Through contract education with area business and industry, specific training programs may be offered on site at the workplace. CCS personnel are regularly involved in county-wide programs with the Chamber of Commerce, Industrial Development Corporation and a variety of local and state agencies and organizations dedicated to economic development activities. The college is also active in the Michigan Economic Development Corporation's Economic Development Job Training Program and the Incumbent Worker Training Program, which provide grant funds for employee training programs.

Under contract with the UAW-Ford National Programs Center, the CCS Division also provides staffing/services for the Skills Enhancement Program Center (SEP, located in the Learning Center of the Auto Alliance International Plant at Flat Rock, Michigan). The SEP Center staff provides instruction to UAW hourly employees in a variety of areas including: academic advising, math enrichment, computer and technical skills, reading comprehension, general math and science, high school completion and GED certificate preparation, English as a second language and adult basic skills.

For information on specific training programs available, visit the CCS Division Web site at www.monroeccc.edu/ccs/training.htm.

Fitness Center
The Fitness Center is available to all MCCC students and staff free of charge. MCCC Alumni Association members also have access to the facility for a modest annual fee. Located in the Gerald Welch Health Education Building on the north end of the campus, the Fitness Center is equipped with a full range of exercise equipment for cardiovascular workouts and strength training. Lockers and shower facilities for men and women are also available. Visitors must present a photo ID and complete an orientation session to utilize the exercise equipment. For more information and hours of operation, visit our web site at www.monroe.edu/ccs/fitnesscenter.htm.

Lifelong Learning

The Lifelong Learning Office provides educational opportunities for adults in a wide range of non-credit, non-degree programs. Through the Lifelong Learning schedule of classes, published twice a year, a variety of classes and programs are offered for professional development in business, computers, construction/real estate, industrial technology, medical skill training and professional relicensure. Personal interest, crafts/hobby, sports/recreation and health/wellness classes are also offered for individuals seeking personal development and leisure activities.

Evening office hours, evening and weekend class offerings, one-night classes, one-day workshops and an easy registration process that includes automated telephone and Web registration are just some of the many advantages that Lifelong Learning offers to the adult student at MCCC.

For specific class information or to receive a current schedule of classes, contact the Lifelong Learning Office, located within the Corporate and Community Services Division office (Room 286 of the La-Z-Boy Center) at (734) 384-4127, or visit the CCS Division Web site at www.monroeccc.edu/ccs/lifelong.htm.

Workforce Development

The Workforce Development Office assists current and former Monroe County Community College students, as well as alumni and county residents in locating job opportunities in the surrounding employment area. The Workforce Development Office provides information regarding available part-time, full-time, permanent and temporary positions in a wide variety of occupational areas. Student assistant positions in all areas of the college are also available through the Workforce Development Office.

Upon registration with the Workforce Development Office, students and job seekers can obtain job information and referrals and request mailing of credential packets to potential employers. They also have access to a variety of job seeking skills seminars and reference materials.

Area employers use MCCC's Workforce Development Office free of charge to post available jobs and access qualified candidates registered with the office.

The college's Workforce Development Office is also part of a network of ACT authorized WorkKeys Service Centers located throughout the State of Michigan. One of the primary goals of the WorkKeys Service Center at MCCC is to help employers hire qualified employees, and, in turn, build a stronger workforce for Monroe County.

If you would like more information about WorkKeys job profiling, skill assessments, registering for employment opportunities or posting a job, contact the Workforce Development Office at 734-384-4124 or visit the CCS Division Web site at www.monroeccc.edu/ccs/employme.htm.

WHITMAN CENTER

The Whitman Center is administered by the CCS Division and exemplifies the community service commitment of the college by taking courses to the community. Designed to serve the residents of Southeast Michigan and Northwest Ohio, the Whitman Center - located in Temperance, Michigan - offers a wide range of credit courses applicable toward an associate degree or transfer to a four-year institution. The Center also offers Lifelong Learning programs and customized training.

For more information on Whitman Center office hours, available classes, counseling appointments, etc., visit the CCS Division Web site at www.monroeccc.edu/ccs/whitman.htm.

STUDENT ORGANIZATIONS AND ACTIVITIES

Monroe County Community College supports student organizations and activities. It is believed that such programs contribute to the overall intellectual, social and emotional development of students. Participation in campus-sponsored activities can be a source of opportunity for 1) leadership development, 2) cultivation of broader interests, 3) recognition of achievements, 4) encouragement of social skills and 5) practice in the skills of citizenship.

Opportunities are available for individuals to participate in extracurricular student-sponsored organizations and activities and to help organize new programs or direct existing ones. Much of the responsibility for the types of student programs and their management rests with the student body. However, all organizations and activities must have the support of a staff adviser. The following list represents some of the extracurricular student-administered activities that are available at Monroe County Community College:

- Student government
- Student clubs:
    Academic interest groups
    Special interest groups
- Vocal and instrumental music

GIFTS AND BEQUESTS - THE FOUNDATION AT MONROE COUNTY COMMUNITY COLLEGE

Established in 1998, The Foundation at Monroe County Community College is a non-profit corporation designated by the college's Board of Trustees as the development and enrichment organization for the college. The Foundation receives and administers private gifts, bequests and donations to benefit Monroe County Community College. The Foundation, through its fund raising activities and financial awards, seeks to enhance the educational, cultural and financial strength of the college.

A board of directors, comprised of distinguished business and community leaders as well as MCCC faculty and staff, develops The Foundation's policies and activities. Each member brings to the board a unique combination of experiences, skills and perspectives that assist The Foundation in meeting its goal of providing a vehicle for contributions to support college programs and activities.

A portfolio of giving opportunities is available. Each giving opportunity is within a framework that respects the wishes and charitable choices of the donor. The giving programs enable the donor to receive maximum tax benefits under existing tax laws. Donations may be cash, securities, gifts made through a will or trust, insurance and/or real estate and personal property. The donation may be awarded for specific purposes or given without restrictions to the general fund. Gifts are provided for scholarship, program enrichment, special purchases, faculty/staff mini-grants, special events, physical facilities and other projects that augment high quality education at Monroe County Community College.

For more information about The Foundation at Monroe County Community College, contact the MCCC Office of Institutional Advancement at (734) 384-4206 or visit The Foundation at MCCC Web site at www.monroeccc.edu/foundation.

Admissions

ADMISSIONS POLICY

Monroe County Community College believes that liberal admissions requirements are an essential part of its philosophy. The college Admissions Policy affords equal opportunity for all qualified individuals for higher education experiences. The policy is based on the student's ability to benefit and does not discriminate on the basis of race, color, religion, national origin or ancestry, age, sex, marital status or disability. Any exception to this policy must be approved by the vice president of student and information services or his/her designee.

All applicants must be high school graduates or have successfully completed the General Education Development (G.E.D.) test for admission to Monroe County Community College (for exceptions see Special Admission). High school students may be admitted (dual enrollment) pursuant to State of Michigan law, or on a concurrent enrollment basis.

Individuals seeking admission to the college must submit a completed application along with official high school transcripts. All applicants who desire advanced standing consideration must provide an official transcript for all colleges attended or official certification of other educational experiences. Graduates of regionally accredited two-year and four-year colleges need not provide a high school transcript.

Falsification of any admissions information may be grounds for admission denial or dismissal from the college.

All new students as defined in Procedure 3.00(b) must participate in an assessment program.

> * *Information on location and times of testing is available in the Admissions and Guidance Office, located in the Student Services/Administration Building, 1555 South Raisinville Road, Monroe, Michigan 48161.*

Main Campus: (734) 384-4104
Within 313, 419, and 734 area codes: 1-877-YES-MCCC
Whitman Center: (734) 847-0559

ADMISSIONS STATUS

The admission status of an applicant to Monroe County Community College is determined by records of his/her previous educational performance. Admission is based on the following:

1. Regular Admission
In Fall and Winter Semesters students may carry a maximum of 17 credit hours per semester. During the shorter Spring and Summer Sessions, students may carry a maximum of seven credit hours. Approval of the vice president of instruction, vice president of student and information services or their designees is required to exceed either limit.

2. Special Admission
Applicants who have not graduated from high school may receive special admission status if five years or more have elapsed since the date their high school class would have graduated. For their first semester, these individuals may be admitted to no more than seven credit hours of course work during either the Fall or Winter semester or four credit hours for either the Spring or Summer session. Admission will be based upon an evaluation of the applicant's background, experience and assessment scores. The vice president of student and information services or his/her administrative designee will make the final decision for admission. Students entering the college as a special admission must maintain a minimum 1.8 grade point average. Specially admitted students must comply with all other admissions policies and procedures.

3. Restricted Admission
Any student who enrolls at this institution with an assessment score at or below the minimum level in writing, reading or math will have a limited enrollment status. Restrictions are described in Procedure 3.00(b) – Procedures on Student Assessment.

Students who score below specified minimums on the English portion of an assessment must successfully complete English 090 prior to enrolling in a 100-level or higher English course.

Students who score below specified minimums on the Math portion of an assessment must successfully complete Math 090 prior to enrolling in a 100-level or higher Math course.

Students who score below specified minimums on the reading portion of an assessment must successfully complete Reading 090 within the first 15 attempted credit hours.

4. Programs with Selective Admission
The following programs have selective admission:
   a. Nursing
   b. Respiratory therapy
   c. Culinary skills and management

Criteria used in selecting students for these programs are stated in Procedure 3.00(a).

5. Guest Student Admission
Guest students must present a completed MCCC Application and a Guest Application form. The form is available in the Admissions and Guidance Office and must be completed by the student and the registrar and/or dean's office of the college or university that he/she is currently attending. This form is required each semester the student enrolls at MCCC.

6. High School Student Admission

High school students may be admitted on the basis of dual or concurrent enrollment upon completion of the following:

a. Submission of an MCCC Application for Admission.

b. All new students as defined in 3.00(b) must meet assessment requirements. The admission decision, in part, will be based upon assessment results.

c. The MCCC High School Approval Form must be completed and signed by the high school superintendent or his/her designated representative prior to each semester of attendance.

d. Official high school transcripts are required prior to admission.

e. Approval by the vice president of student and information services or his/her designee is required for enrollment. A high school student is typically limited to one class.

7. International Student Admission

Monroe County Community College is authorized under Federal law to enroll nonimmigrant alien students.

International student applicants must be sponsored by a family residing in the college district. Sponsorship requires that the student will live with the family, who will assume responsibility for his/her support. The sponsor must certify this by signing an International Student Sponsorship Form, having the form notarized and returning it to the Admissions and Guidance Office.

Prospective international students whose native language is not English are required to demonstrate proficiency in the English language. This can be accomplished in one of two ways: scoring 80 percent or higher on the University of Michigan Language Institute's English Proficiency Examination (MELAB) or scoring 550 or more on the Test of English as a Foreign Language (TOEFL). Certification of English as the native language must be approved by the vice president of student and information services or his/her designee.

Once these requirements are met, the international applicant must complete the regular admissions process. A copy of his/her high school and college transcripts (in English) must be sent to the Admissions and Guidance Office.

8. Advanced Standing

Students admitted to the College may be granted advanced standing according to the procedures noted in MCCC's Procedure 3.00(c), Advanced Standing–Awarding of Credit.

ADMISSIONS/GUIDANCE SERVICES

Orientation

Prior to the first session of classes, new students are introduced to the college through an orientation program. During this program, students are acquainted with the philosophy of the college, its physical facilities, educational opportunities, administrative procedures, student services and co-curricular activities. All students attending MCCC for the first time are encouraged to attend a new student orientation program.

Counseling

Monroe County Community College admits students with a variety of backgrounds to its diverse instructional programs. The purpose of counseling is to help students become better decision makers, formulate realistic educational and vocational goals and develop more effective personal skills.

The college supports a counseling program that is comprehensive in its service and is staffed by professional counselors. These services are available to all students whether enrolled on a full-time or part-time basis.

Students are not assigned to a specific college counselor. If students wish to avail themselves of the counseling services, they should make an appointment in the Admissions and Guidance Office. Students enrolled at the Whitman Center can make an appointment at the Whitman Center.

Educational Counseling

Help may be needed in dealing with issues that interfere with college studies. An objective listener can often help unscramble ideas which need to be brought into clear focus. Whether a student is simply in need of information or whether he or she needs to gain better self-understanding, a counselor can assist.

Career Counseling

The professional counselors in the Admissions and Guidance Office can help you to obtain the decision-making skills necessary to organize the knowledge of values, interests and opportunities necessary to select a career.

Testing Services

Many decisions require objective data. Career inventories can often assist in the process of acquiring this data. MCCC offers, free of charge, various career inventories to students (and other members of the community). Inventories are available that measure personality characteristics and career interests.

Career Center

The Career Center provides the most current research materials for those who are developing their career goals or entering the job market. The collection includes books, periodicals and subscription services which provide detailed job descriptions. Career packets containing occupational information are sent upon request. Resume and job interview resources are available. Computerized career guidance systems assist with assessing occupational goals, searching for the right college and writing an effective resume. Students who are interested in college transfer information will find a collection of catalogs from colleges in Michigan and Northwest Ohio, as well as applications for admission and program transfer guides. Transfer guides are also available on the MCCC Web page.

The Career Center is located in the Audrey M. Warrick Student Services/Administration Building, A-103.

Advising

During an initial counseling interview, a program of study for a certificate, associate degree or the first two years of a four-year degree will be developed with the assistance of a college counselor in the Admissions and Guidance Office. Prior to second semester, a faculty advisor will be assigned to each new student based on the student's declared major. Each student is encouraged to meet with the faculty advisor to discuss educational goals and course scheduling.

Advanced Standing

TRANSFER CREDITS

Credits from other regionally accredited colleges and universities which are earned with a grade of C- or better and are applicable to the student's declared MCCC program will be accepted in transfer and appear on the student's permanent record. Requests for awarding of credit for work at unaccredited institutions or for non-collegiate educational experiences will be evaluated by the Registrar in consultation with the respective division deans. To be considered official, transcripts must be sent directly from your previous college to the Registrar's Office at Monroe County Community College. Grades and grade point average are not transferred. A student's grade point average will be computed only for the courses earned at Monroe County Community College.

CREDIT BY EXAMINATION

Credit by examination can be obtained by three methods at MCCC. Testing can be in the form of the College-Level Examination Program (CLEP), the Advanced Placement Program (AP) (through the College Board) or the MCCC credit by exam process.

The CLEP and AP options are tests given by outside testing services and cover primarily subjects designated as transfer.

Advanced Placement Program (AP)
Credit may be granted to students who have participated in the College Entrance Board's Advanced Placement Program in their high schools. A score of 3 or better is required to earn academic credit. Students planning to attend Monroe County Community College should arrange to have their advanced placement examination records sent to the Registrar's Office.

College Level Examination Program (CLEP)
Credit may be granted to students who have participated in the College Entrance Examination Board's College Level Examination Program. To earn credit, a student must score in at least the fiftieth percentile in the sophomore norms. Students planning to attend Monroe County Community College should arrange to have their CLEP scores sent directly to the Registrar's Office.

CLEP credit is not available in cases where a student has earned credit in the same course previously. For additional information regarding which tests are accepted and how credit will be awarded, please contact the Registrar's Office.

MCCC Credit by Examination
The third option for credit by examination available to Monroe County Community College students is divisional testing for other courses, primarily occupational and technical. This opportunity is limited to courses identified by the division deans and faculty. By passing a comprehensive examination with a grade of "C" or better, students can earn this credit.

Students may obtain applications for such examinations in the appropriate division office. There is a non-refundable fee for credit by examination. Upon successful completion of the examination, the Registrar will be notified by the division dean of the grade, and credit for the course will be entered on the student's academic record.

A student is limited to a single attempt per course for credit by examination as certified by the division dean. Credit by examination is not available as a vehicle for repeating a course. Advanced placement is not available in cases where a student has earned credit in the same college course previously. Attainment of a "C" or better grade in a course that requires a prerequisite disqualifies the student from gaining credit in the prerequisite course(s) via credit by examination (e.g., a student may not receive credit by examination for Math 151 if he or she attained a grade of "C" or better in Math 152).

TECH PREP

The Monroe County Tech Prep Consortium is a community-wide partnership among K-12 school districts, community colleges and business/labor, which provides the counseling and curriculum cooperation that will produce qualified graduates for the work force.

While in high school, students can earn college credit in occupational programs that may lead to a college certificate, associate degree and, in some programs, a bachelor's degree. Any student interested in earning Tech Prep credit should work with his/her high school counselor, contact the Monroe County Community College Admissions and Guidance Office, or visit www.monroeccc.edu/techprep.

CREDIT FOR MILITARY SERVICE EXPERIENCE

Credit for service experience may occur in two forms. Use of this credit is based on its appropriateness to the student's program at Monroe County Community College.

1. A student presenting the Registrar's Office with a DD-214 form showing a minimum of one year of service with the character of discharge being either "honorable" or "general under honorable conditions" will be awarded two semester hours of general elective credit.

2. Service personnel, having successfully completed certain approved training courses, may be awarded a limited amount of academic credit once proof of this training has been provided to the Registrar's Office. MCCC follows the American Council on Education Guide to the evaluation of educational experience in the armed services.

DEFINITION OF CLASS STANDING

A freshman at Monroe County Community College is one who has earned 29 or fewer semester hours, including semester hours transferred from other institutions.

A sophomore is one who has earned 30 or more semester hours, including approved semester hours transferred from other institutions.

Registration Information

SCHEDULE OF CLASSES

Prior to the registration period for each semester, a schedule of classes is published and posted on the MCCC Web site containing the classes offered and information on registration procedures. There is an advance registration period well in advance of the beginning of each term.

Fall and Winter Semesters

Each Fall and Winter semester consists of approximately 15 weeks. The maximum full-time load is 17 credits. A student desiring to carry more than 17 must obtain the approval of the vice president of instruction, the vice president of student and information services or their designated representative.

Students may be required to limit their course load to fewer credits per semester if on academic probation or if placement test scores indicate that such limitation is desirable. Such students may also be required to take specified courses.

Spring and Summer Sessions

As part of the regular academic calendar, the college schedules a six-week Spring and a six-week Summer session from early May through the first week of August.

The maximum number of credits allowed in either Spring or Summer session is seven hours.

FULL-TIME STUDENT DEFINITION

The minimum course load required to be considered a full-time student is 12 credits for the Fall and Winter semester, and six credits for Spring/Summer sessions. Audited courses do not count toward determining course load.

LATE REGISTRATION/ ADDING A COURSE

Courses may be registered for or added prior to the second scheduled meeting of the class. Short courses – Spring, Summer, or evening and Saturday classes that meet only once a week – may not be entered once the class has met for the first time.

On-line and video classes may not be entered once orientation has been held or the date to email the instructor has passed.

DROPPING/ADDING CLASSES

Adds and drops may be processed via WebPal, SMART or by completing an add/drop form and returning it to the Registrar's Office on main campus.

Course Drops and Withdrawals

Student-initiated Drop from Class or Classes

Upon official voluntary withdrawal from class or classes, a "W" (indicator of withdrawal) is assigned as follows:

1. If a drop is made by the end of the first week of a full semester (15 weeks) class, no "W" will be recorded.
2. After week one but before the end of the twelfth week of a full semester class (prorated for classes less than the full semester), the "W" (withdrawal) is automatically recorded.
3. After the twelfth week of a full semester class (prorated for classes less than the full semester), no withdrawals will be processed. Exceptions properly documented, including health and medical emergencies or error in processing, may be considered.
4. The "W" (indicator of withdrawal) is not assigned by instructor. After the semester (Fall, Winter, Spring/Summer) has ended, no grade may be changed to "W." Exceptions properly documented, including medical emergencies or error in processing, may be considered.
5. Spring, Summer and courses shorter than a semester in length will have the appropriate dates for drop and withdrawal, prorated as necessary.

Instructor-initiated Drop from Class or Classes

A faculty member may request that a student be withdrawn from class during the first 10 weeks of the Fall and Winter semester. Dates are prorated for Spring and Summer semesters and any nonstandard length course. The procedure is as follows:

1. The faculty member submits a Faculty Initiated Withdrawal Form to the Registrar's Office.
2. The Registrar notifies the student that the instructor recommended the student be withdrawn from class and assigned the indicator of "W" (withdrawal).
3. If the student does not respond within seven calendar days, the withdrawal form is processed and a "W" will be recorded.
4. The "W" (indicator of withdrawal) is not assigned by instructor. After the semester (Fall, Winter, Spring, or Summer) has ended, no grade may be changed to "W."

WITHDRAWAL

Students may withdraw from a full semester course via WebPal, SMART or in person up to and including the twelfth week of the class. No withdrawals will be processed after that date. The withdrawal deadline is prorated for any course less (or more) than the full semester.

PASS/FAIL OPTION

Students are strongly encouraged to investigate carefully the pass/fail option as it relates to restrictions on programs, as well as the effect upon the future employment and transferability to senior institutions. Students must also investigate the effect of a pass/fail when applying to the various graduate schools.

1. The pass/fail option will be available to all students once the required form is completed and submitted to the Registrar's Office.
2. All courses that appear on the schedule will be made available to students on a pass/fail basis.
3. The "P" (pass) grade shall be equivalent to A,B,C, and D.
4. The deadline for changing from the pass/fail option to the traditional grading system, and vice versa, will be no later than the mid-point of any course.
5. Courses elected on the pass/fail option will count toward graduation. However, a student shall not exceed 12 hours of "P" (pass) in a degree program and/or one course during any semester.
6. The "P" (pass) and "F" (fail) will appear on the transcript but will not be used in the computation of the honor point average.

AUDITING COURSES

A student wishing to enroll in a class as an auditor may do so by completing and submitting the necessary form to the Registrar's Office by the mid-point of the semester. Auditors are charged the same as students taking the course for credit. There is no credit earned for courses taken on audit. Auditors are not required to take exams, but are expected to attend class on a reasonable basis.

A student may not change to or from audit after the midpoint of the course.

SENIOR CITIZEN SCHOLARSHIPS

Monroe County residents who are age 60 or older qualify for a waiver of tuition. Registration, course and lab fees will be charged.

INCOMPLETE COURSE WORK

A student whose semester work is incomplete in a minor way may, upon presentation of reasons satisfactory to his or her instructor, be granted the privilege of completing the work by the end of the twelfth week of the next regular semester. If granted this privilege, a grade of "I" will be recorded. The instructor will file with the registrar the Student Request for Incomplete form which includes the grade to be given if the work is not completed. Failure on the part of the student to make up the incomplete work within the specified period of time will result in the grade indicated, becoming the grade of record. It is the student's responsibility to complete the work within the specified time limits. An "I" will not revert to a "W." In extenuating circumstances, an extension beyond the normal period may be obtained by the completion of an incomplete extension request by the student, endorsed by the instructor.

REPEATING COURSES

When repeating a course, the most recent attempt is the "grade of record" for earning credit and computing the grade point average. All previous attempts, however, remain on the transcript and are identified as repeats.

SEQUENTIAL COURSE LIMITATIONS

After students have received a grade of "C" or better in a course which requires a prerequisite, they may not enroll for credit in the prerequisite course.

CREDIT FOR INDEPENDENT STUDY

Independent study in a variety of academic disciplines is possible and encouraged for those students who desire the opportunity and challenge of investigating a particular body of knowledge outside of the structured classroom setting. Credit of one to four semester hours is available upon successful completion of an approved independent study plan. For further information, contact the appropriate division dean.

VETERANS' BENEFITS

Monroe County Community College welcomes veterans and provides information, guidance and counseling to those eligible for educational benefits under applicable public laws. All students who are eligible for and elect to receive education and training benefits while attending Monroe County Community College may address inquiries for information to the Registrar's Office, MCCC, 1555 S. Raisinville Road, Monroe, MI 48161.

A student whose Monroe County Community College cumulative GPA drops below 1.800 may be certified for a maximum of two additional semesters. If, after these two semesters, he or she does not raise the cumulative GPA to a 1.800, no additional certifications will be submitted on behalf of the veteran, and the Veterans Administration will be notified that the student is on VA probation. Should the veteran raise his or her cumulative GPA to a 1.800 in subsequent semesters, the college can retroactively certify the veteran one full year.

Developmental courses (those numbering 090-099) are not eligible for the GI Bill, therefore, credit courses in which the student will earn the grade of H, U, S, N or AU (audit) are not eligible.

Applications for veterans' benefits and assistance, as well as directions on how to apply for the benefits, may be obtained from the Registrar's Office.

ATTENDANCE

Regular class attendance is necessary if a student is to receive maximum benefits from his or her work. Students are expected to attend all the sessions of class for which they are registered. Penalties may be imposed at the discretion of the individual instructor when he or she feels that the quality of the student's work has been affected by absence or tardiness.

As a matter of courtesy, students should explain the reason for absence to their instructors.

Excused absences for participation in authorized campus activities shall in no way lessen student responsibilities for meeting the requirements of the class. Instructors will be notified of students participating in authorized campus activities. Students anticipating absences for these activities should notify the instructor.

RELEASE OF INFORMATION

Monroe County Community College is in compliance with the 1974 Family Educational Rights and Privacy Act. Students are encouraged to stop in the Registrar's Office to learn more about their rights and privileges under this law. Essentially, it allows students to view the contents of most of their records currently on file at the college.

Also, under the provisions of the Family Educational Rights and Privacy Act of 1974, as amended, the college is allowed to release directory information on a student. MCCC has defined directory information as: name, address, email address, terms of attendance, enrollment status, degrees and awards received and most recent previous educational institution attended. No other information will be released without written authorization from the student.

If a student wishes the college to withhold this information, the student must so inform the registrar, in writing, each semester. MCCC does not sell or otherwise provide mailing lists to companies or individuals outside the college other than required by state or federal regulations.

RECORDS RETENTION

Registration and drop/add forms are normally retained by the college for a period of three years. Students with inquiries regarding their academic records are expected to contact the Registrar's Office within that time period.

Fundamental to the community college philosophy, is the concept that quality education be available at low cost.

TUITION AND FEES

See current schedule of classes for a listing of tuition and fees.

PAYMENT OF TUITION AND FEES

Tuition and fees are due and payable at the time of registration. A Deferred Payment Plan is available for students. The formulation of regulations regarding payment of tuition and fees and granting of refunds is the responsibility of the vice president of business affairs.

RESIDENCE STATUS

Tuition will be assessed and collected according to the residence status of the student on the first day of the semester, or the first day the student is officially enrolled after the first day of the semester.

Resident rates will be assessed in cases where:

1. The student, or parents of a dependent student, own either property or a business that is located within Monroe County (Michigan).

2. The student's tuition is paid by his or her employer and either the student or the employer is considered a county resident. (An employer is considered a county resident if that employer operates a business, or branch thereof, within Monroe County (Michigan).

3. The student is considered a resident, as defined below:

   • If a student is a minor and his or her parent or legal guardian is a resident of Monroe County.

   • A person may qualify as a resident by residing: 1) six months within the state of Michigan, and 2) 30 days within a Monroe County (Michigan) precinct. If a person moves to another precinct within the county, he or she is still considered a resident of the county.

   • A person on active duty in the Armed Services of the United States, who has met the residency requirements as stated above, may register as a resident of the district.

In cases where the residency of a student is considered in doubt, the student will be asked to provide proof in the form of: 1) an up-to-date voter registration card, 2) a vehicle registration form (preprinted by the Secretary of State), 3) a driver's license, 4) an official communication from a municipal official indicating how long the student has resided in the county.

Questions concerning individual cases in regard to these regulations should be directed to the registrar.

REFUND OF TUITION AND FEES

The following is the standardized policy established by the college for refunds of tuition and fees and covers individual class drops, class withdrawals and complete withdrawals from the college.

A student is considered enrolled in a class until written notice is submitted to the Registrar's Office or until the student successfully processes a drop via WebPal or SMART. Non-attendance is not considered as official notice of withdrawal.

The tuition refund computation is not based on the amount paid, but rather on the total amount of tuition and fees assessed. No tuition refunds will be made after the end of the second week of classes and no exceptions to the policy will be made to students who enter late. Exceptional circumstances such as military service, death in immediate family, serious illness or hospitalization will be taken into consideration. A written request for exception to the refund policy must be submitted to the Registrar's Office within 10 days of last attendance in class.

Fall and Winter Full Semester Courses
During the first week of the semester – 100 percent refund on any or all classes dropped.

During the second week of the semester – 50 percent refund on any or all classes dropped; however, lab fees are not refundable.

Spring, Summer and Courses Less than One Semester in Length
If a course is completed within 1-13 calendar days, the 100 percent refund will apply when withdrawing prior to the day of the first class meeting. No refund will be issued after this time.

If a course is completed within 14-63 calendar days, the 100 percent refund will apply when withdrawing on the first or second business day of the semester. If withdrawing on the third or fourth business day of the semester, students will receive a 50 percent refund; however, lab fees are not refundable. No refunds will be issued after this time.

REFUNDS FOR STUDENTS RECEIVING FINANCIAL AID

No refunds will be made to students receiving assistance through the MCCC Financial Aid Office, Michigan Bureau of Rehabilitation, Michigan Office of Services for the Blind or Michigan Veterans Trust Fund until the amount of the financial assistance is recovered.

All students who wish to withdraw must follow MCCC official withdrawal policy. If you officially withdraw or stop attending all your classes, you may be required to repay all or part of the financial aid disbursed to you in the term you withdraw.

Students receiving federal funds may be required to repay aid determined to be "unearned." The earned/unearned calculation is based on the percentage of days attended during the term in which you withdrew. The amount of aid earned is determined on a pro-rata basis. That is, if you completed 30 percent of the term in which you withdrew, you earn 30 percent of the federal aid you received. Once you have completed 60 percent of the term, you are considered to have earned all of your aid for that semester.

The difference between your earned federal aid and 100 percent equal the percent of unearned federal funds that are subject to repayment. Federal regulations require Title IV aid to be refunded in the following order: Federal Unsubsidized Stafford Loan, Federal Stafford Loan, Federal PLUS Loan, Federal Pell Grant and Federal Supplemental Education Opportunity Grant.

TUITION RECIPROCITY AGREEMENT

Monroe County Community College and Owens Community College

Monroe County Community College agrees to accept, at out-of-district rates, residents of Ohio wishing to enroll at Monroe County Community College. Out-of-district rates shall only apply to students enrolled in those programs at Monroe County Community College which are not offered at Owens Community College. Any students so admitted must meet all regular admission requirements of Monroe County Community College, including those for the specific program for which admission is sought.

Programs at Monroe County Community College that are part of this reciprocal agreement will vary each year. Please contact the Registrar's Office for more information.

To apply for this agreement, an application is available at both the Main Campus and Whitman Center. The application for reciprocity must be submitted prior to the first day of class for the semester it is requested. Once approved by the Registrar, or designated representative, the student will be entitled to pay out-of-district tuition at Monroe County Community College.

The reciprocity agreement is reviewed annually and is subject to change by the states of Michigan and Ohio.

Financial Aid

MCCC, in conjunction with the federal and state governments and private and civic organizations, offers a variety of scholarship, grant, loans and employment opportunities to assist students in financing their education.

Approximately 60 percent of all MCCC students receive some form of assistance from these sources. The purpose of financial aid is to ensure the college continues to make it possible for students of all degrees of financial capability, special talent or high scholastic merit to attend MCCC.

No student should hesitate to apply for admission because of financial circumstances. It is the college's goal to offer financial assistance to all candidates accepted for admission who demonstrate financial need.

The following information is provided to inform prospective and continuing undergraduate students of the various alternatives available.

FINANCIAL AID ELIGIBILITY – GENERAL REQUIREMENTS

Applying for Financial Aid
To be eligible for MCCC, federal and state assistance, a student must:

- Have financial need, except for some loans and scholarships
- Have a high school diploma, General Education Development (GED) certificate or pass an independently administered test approved by the U.S. Department of Education
- Be enrolled as a regular student in an eligible program
- Be a U.S. citizen or eligible noncitizen
- Have a Social Security Number
- Not be incarcerated
- Make satisfactory academic progress
- Sign a statement of educational purpose/ certification statement on refunds and default
- Sign a statement of updated information
- Register with the Selective Service, if required
- Have completed the admissions process at MCCC

The Application Process
Students can apply for federal and state aid by filling out the "Free Application for Federal Student Aid" (FAFSA) available from their high school or the Financial Aid Office located in the Administration Building, Room 159.

You may submit a FAFSA:
- Through the Internet by using FAFSA on the Web
- By mailing a paper FAFSA

You must reapply each school year.

FAFSA on the Web is a free U.S. Department of Education Web site where you can complete a FAFSA on-line and submit it via the Internet. You can use FAFSA on the Web on a personal computer (PC) or a Macintosh that is equipped with certain U.S. versions of Netscape. The address is www.fafsa.ed.gov.

To be considered for non-federal aid such as institutional and/or state aid, students may have to complete an additional application. Check with the Financial Aid Office to see which non-federal application to complete, if any. Remember, there's no charge to apply for federal student aid.

For the Federal Family Education loan programs, there are some additional steps students must take to apply.

When completing the FAFSA, pay special attention to any questions on income. This area is where most mistakes are made. Also, in Section H of the FAFSA, fill out carefully the name(s) of the school(s) you're interested in attending. If any of these schools participate in at least one of the programs mentioned in the Federal Student Guide, it will have a "Title IV Institution Code." You can get a list of Title IV codes from the Financial Aid Office, your high school or your local public library and on the Internet at www.fafsa.ed.gov.

Apply as soon as possible AFTER January 1st. If not applying electronically, mail the completed FAFSA in the envelope found in the application package. It will take approximately four weeks for the federal application to be processed. When you apply, you should have certain records on hand. These records are listed on the application. You should save all records and all other materials used in completing the application. You may need them later to prove the information you reported is correct. This process is called verification.

The Financial Aid Office reserves the right to request income and asset verification of financial statements be submitted for need-based aid. Failure to provide the requested information will result in cancellation of award action. Falsification of income information submitted for the purpose of receiving financial assistance will result in cancellation of all future assistance and repayment of all prior assistance received falsely. If federal and/or state funds are involved, notification of the false information will be provided to the proper agencies (U.S. Office of Education and/or Michigan Higher Education Assistance Authority) for their further disposition.

All MCCC awards are made for a period of one academic year only. Reapplication must be made for each year. Copies of the required forms may be obtained from the Financial Aid Office.

Financial aid awards for the prospective student are not approved before the student has attained regular admission status through the Admissions and Guidance Office. Financial aid funds are limited, and late applicants may be either denied assistance, given loan and job aid only or receive lower than normal scholarship awards when funds are limited or exhausted.

Financial Aid Deadlines
Fall - August 1
Winter - December 1
Spring/Summer - April 1

Files completed after the deadline date may not receive funding before the start of the semester.

Financial Need
Aid from most financial aid programs is awarded based on financial need. (Exceptions are the Federal Loan Programs. It's possible to receive a Federal Stafford Loan regardless of income.)

The information reported when applying for aid is used in a formula, established by Congress, that calculates your Expected Family Contribution (EFC), an amount families are expected to pay toward education. For the Federal Pell Grant Program, if the EFC is below a certain number, students are eligible for a Pell Grant.

$$\begin{array}{r} \text{Cost of Attendance} \\ - \ \text{Expected Family Contribution} \\ \hline = \ \text{Financial Need} \end{array}$$

The financial aid administrator takes the cost of attendance for the college and subtracts the amount you and your family are expected to pay toward that cost. If there's anything left over, students are considered to have financial need. For a complete list of budget components and cost of attendance figures, please see www.monroeccc.edu/financialaid. costsatmccc.

Dependency Status
Certain questions answered when applying for financial aid will determine whether students are considered dependent on their parents and must report their income and assets as well as their own, or independent and report only their own income and assets (and those of a spouse). Income and asset information are used in determining your eligibility for federal student aid.

Students are classified as dependent or independent because federal student aid programs are based on the idea that students' parents have the primary responsibility of paying for their children's education. Students who have access to parental support (dependent students) should not receive federal funds at the expense of students who don't have that access (independent students).

An independent student is one of the following —

(2007-2008):

- Someone born before January 1, 1984
- Married
- A graduate or professional student
- Someone with legal dependents other than a spouse
- An orphan or ward of the court
- Veteran of U.S. armed forces

If you claim to be an independent student, the school will ask for proof before awarding any federal student aid. If you think you have unusual circumstances that would make you independent even though you normally would be considered dependent, talk to the financial aid administrator. The aid administrator can change your status to independent if he or she thinks your circumstances warrant it. Remember, the financial aid administrator won't automatically do this. That decision is based on his or her judgment, and it's final – you can't appeal it to the U.S. Department of Education.

NOTE: Independence criteria are determined annually by the Federal Government and are subject to change.

THE STUDENT'S FINANCIAL AID PACKAGE

Usually a combination of gift (scholarship and grant) and self-help (job and loan) aid is offered the student. The proportion is determined annually.

Where Pell Grant, Michigan Competitive Scholarship or Stafford Student Loan estimates appear, students are responsible for obtaining and completing necessary application forms to secure this aid.

Changes in the Award
The Financial Aid Office anticipates that students will receive the aid package described in their award announcement. It may, however, be necessary for the college either to increase or decrease the award if changes occur in enrollment status, family financial status or the student's own financial resources or expenses.

Changes in enrollment status include changing majors, taking fewer than 12 credit hours per semester or withdrawal before the end of the semester. Reductions in credit hours below 12 credits in a semester without approval from the Financial Aid Office may result in a cancellation of assistance for that semester. Students should consult the Financial Aid Office before making a change of this type.

Special Circumstances

Although the process of determining a student's eligibility for federal student aid is basically the same for all applicants, there is some flexibility. For instance, if the financial aid administrator believes it's appropriate, based on the documentation you provided, they can change your status from dependent to independent.

In some cases, the financial aid administrator may adjust your cost of attendance or the information used to calculate your Expected Family Contribution (EFC) to take into account circumstances that might affect the amount you and your family are expected to contribute toward your education. These circumstances could include a family's unusual medical or dental expenses or tuition expenses for children attending a private elementary or secondary school. Also, an adjustment may be made if you, your spouse or either of your parents (if applicable) have been recently unemployed. If conditions such as these apply to you or your family, contact the financial aid administrator. Check with the financial aid administrator if you feel you have any other special circumstances that might affect the amount you and your family are expected to contribute. But remember, there must be very good reasons for the financial aid administrator to make any adjustments, and you'll have to provide adequate proof to support those adjustments. Also, remember that the financial aid administrator's decision is final and cannot be appealed to the U.S. Department of Education.

Award Revision

Overpayments resulting from full or partial cancellation of aid will normally result in a debt on the student's account and must be paid back according to normal repayment policies of the college. It is the student's responsibility to verify the accuracy of billing charges, aid credits and stipend checks.

Award Disbursement

Scholarships and Pell Grants are usually divided in half and credited directly toward the semester bill. When possible, awards are applied to the first bill in each semester; however, late awards or award revisions will be applied throughout each semester.

When FFEL Stafford Student Loan checks are received by the college, they will be released as soon as regulations permit.

Stipend checks and/or bookstore authorizations are usually available the day classes begin each semester. However, should federal or state money not be received, students should plan to have sufficient funds for books and other expenses until checks are available.

STATEMENT OF STUDENT FINANCIAL AID RIGHTS AND RESPONSIBILITIES

1. Students have the right to be informed of, and to apply for, all financial aid programs for which they are eligible. The responsibility to apply by program deadlines and to acquaint themselves with the application procedure resides with the student.

2. Students have the right to know how financial need and award packages will be determined, and to request a review of the financial aid package should circumstances change to affect negatively the family's ability to meet costs of attendance, and the responsibility to notify the college should new resources become available to the student that were not originally considered.

3. Students who borrow to attend the college have a right to full disclosure of the terms and provisions of loan programs, including typical repayment schedules and the responsibility to attend exit interviews before leaving college. They must repay loans on a timely basis and keep the college informed of their current address.

4. Students have the right to be informed of financial aid policies and have the responsibility to be aware of all published financial aid policies and to comply with these policies.

5. Students have the responsibility to submit accurate information on all college documents relating to the financial aid application process.

6. Students must continue to make satisfactory academic progress in the program in which enrolled. Students must not owe any refunds on Pell Grants or other awards or be in default on repayment of any student loan.

EDUCATION TAX BENEFITS

If out of pocket tuition payments are made, you may qualify for the Hope Credit, Lifelong Learning Credit and/or the higher-education tuition and fees deduction. The college will provide the tax filer with IRS form 1098-T. For more information see IRS Publication 970 at www.irs.gov.

STANDARDS OF SATISFACTORY PROGRESS FOR FINANCIAL AID RECIPIENTS

The Higher Educational Amendments of 1980 require Monroe County Community College to define and monitor standards of satisfactory progress for all students receiving Title IV student financial aid funding.

Maintaining Eligibility
Satisfactory progress may be evaluated on a semester basis. To be eligible for renewal of financial aid, students must satisfactorily complete 70 percent of the credit hours on which their award was based and maintain a cumulative 2.0 grade point average.

Financial Aid Policy on Satisfactory Academic Progress
Students must make satisfactory progress toward completion of their certificate/degree at MCCC to be eligible to receive aid from the following programs: Pell Grant, Family Federal Education Loans, Supplemental Educational Opportunity Grant, Michigan Educational Opportunity Grant, Federal College Work Study, Michigan Work Study, Michigan Competitive Scholarship Program, TIP and some institutional scholarships. Cumulative grade point average (GPA), per semester credits earned and a maximum time frame are all elements of the satisfactory progress determination.

	Cumulative GPA Required	Credit Hours Attempted	Credit Hours Earned	Semesters of Eligibility	Academic Year Equivalent
Full-time					
Undergraduate	2.0	12	9	6	3
Half-time/Less Than Full-time					
Undergraduate	2.0	6-11	6	10	6

Federal aid recipients may not owe a refund from any federal grant or loan or be in default on any federal loan to attend MCCC.

Students on leave of absence and students registered at other institutions are not eligible to receive MCCC financial assistance.

Students are eligible to receive federal aid funds at only one school per semester.

Guest students attending MCCC are not generally eligible to receive financial assistance through MCCC. Students should check their home institution to determine eligibility for financial assistance.

Financial Aid Probation
A student who fails to complete the minimum number of credits or grade point average required for his or her attendance status (e.g., full-time, etc.) will be placed on financial aid probation. To be removed from probation, the student must complete the minimum number of credits in the full- or half-time status in which he or she was placed on probation. Upon completion of the required credits, the student will be removed from probation. Failure to earn the required credits and grade point average may result in financial aid suspension. While on probation, students may still receive financial aid. Students who are suspended are not eligible to receive aid from financial aid programs listed in this document. Students on financial aid probation are not eligible to receive student loans.

Financial Aid Suspension
To be removed from financial aid suspension status, a student must complete a regular semester and attain the minimum credit earned or grade point requirements while not receiving financial aid governed by this policy. Successful students may then make a written appeal to be placed on financial aid probation status.

Mitigating Circumstances
It is recognized that special mitigating circumstances may cause a student to fail to achieve satisfactory progress. If, in the judgment of the financial aid director, mitigating circumstances justify continued financial aid eligibility, the Financial Aid Office reserves the right to make this determination.

Right to Appeal
Any student who is denied financial aid or is placed on probation or suspension may appeal this decision to the financial aid director. A written appeal outlining the reasons for failure to meet the standards, as well as the appropriate third-party documentation, may be required. The decision is final.

Should other non-federal financial aid sources be involved where different criteria for renewal exists, such as MCCC scholarships, their criteria will be applied to that aid independently.

Other Considerations
Repeated courses will count toward determination of enrollment status. However, for purposes of financial aid satisfactory progress, only credits adding to the cumulative credits earned will be acceptable toward the required minimum number of credits per semester.

Incomplete courses do not earn credit nor influence the grade point in the semester in which the course is incomplete; however, they are counted once they are complete. Based upon student-initiated appeal, credit earned from incomplete courses may be counted as mitigating circumstances.

Withdrawn courses neither earn credit nor influence grade point average. Students may retake courses from which they have withdrawn that will count toward determination of enrollment status in that semester.

SOURCES OF STATE AND FEDERAL FINANCIAL AID

Pell Grants
Students may apply for a Pell Grant by filing the Free Application for Federal Student Aid.

The completed application should be submitted for processing according to the directions included on it. A calculated Student Aid Report (SAR) will be sent to the applicant. The applicant's award is then determined by MCCC based upon enrollment and submission of a SAR to the Financial Aid Office. Funds will be credited to the student's institutional account when all documentation is submitted to the Financial Aid Office.

The Pell Grant Program is an entitlement program based on financial need. The applicant must be enrolled as a student in an approved postsecondary institution and must need financial assistance to continue his or her education.

Financial need is determined by a formula applied to all applicants and the student eligibility index is calculated by this formula.

Awards are available for up to the period of time taken to receive the first baccalaureate degree. Students must reapply every year.

Awards range from $200 to $4,050, but may not exceed one-half the total cost of attendance. The amount of the award will be affected by costs of attendance and enrollment status after the 100 percent refund period.

Academic Competitiveness Grant (ACG)
This is a new federal grant program being offered to students who are Pell eligible, completed a rigorous high school curriculum and graduated after January 1, 2005. The scholarship is renewable for a second year, provided the student's cumulative college grade point average is a 3.0 or higher. Annual award amounts are as follows: first year $750, second year $1,300. If you meet the above criteria, contact the Financial Aid Office for more information.

Supplemental Educational Opportunity Grants (SEOG)
These are federal grants awarded by MCCC to undergraduate students who are U.S. citizens or permanent residents demonstrating financial need. The grants must be at least $100 and not more than $2,000 per year. Students must be making satisfactory progress to continue receiving the grant and meet all other conditions outlined in the Financial Eligibility section of this catalog.

Michigan Competitive Scholarship Program
These scholarships offer tuition and fees to Michigan residents of 12 months who qualify through a competitive examination and show financial need. Recipients must be attending MCCC full-time. Awards may be renewed annually for a maximum of 10 semesters, as long as need, a 2.0 grade point average and satisfactory academic progress are maintained.

More information is available from high school counselors and by calling the State of Michigan Office of Scholarships and Grants at 1-888-447-2687.

Michigan Adult Part-time Grant
This grant is designed to provide grant assistance for needy adults who enroll at MCCC on a part-time basis (3-11 credit hours). Maximum grant eligibility per year is $600 for a maximum of two years of study. Students must qualify as self-supporting under current federal criteria, demonstrate need, be out of high school (other than GED) for at least 2 years, be a Michigan resident for at least 12 months, be a U.S. citizen or permanent resident, not be incarcerated, not enrolled in a theology or divinity program, not be in default on a student loan and must be making satisfactory academic progress, as defined by MCCC.

Michigan Education Opportunity Grant
This grant is designed to provide need-based assistance to full-time undergraduate students in the amount of up to $1,000 per year. Student must be a Michigan resident for at least 12 months, be a U.S. citizen or permanent resident, be making satisfactory academic progress as defined by MCCC, not be incarcerated in a corrections institution and not be default on a student loan.

Michigan Merit Award Program

This program is a merit-based scholarship for high school seniors, beginning with the graduating class of 2000 and ending with the 2006 graduates. To be eligible, a student must have taken the Michigan Education Assessment Program High School Test (MEAP HST) in mathematics, reading, science and writing. Students who score at level 1 or 2 on these four tests and meet all other eligibility requirements will qualify to receive a $2,500 scholarship. For more information please contact the financial aid office or visit www.michigan.gov/mistudentaid.

MI Promise Scholarship

This scholarship is replacing the Michigan Merit Award and provides up to $4,000 to high school graduates for successfully completing two years of postsecondary education beginning with the high school graduating class of 2007. To be eligible, a student must be a Michigan resident, be a high school graduate or have passed the GED, take the Michigan Education Assessment Program High School Test (MME or MEAP), enroll at an approved postsecondary institution in Michigan or military service academy within two years of becoming a high school graduate, complete the postsecondary education requirements for a two-year degree within four years and have achieved a cumulative college grade point average of 2.5 or better. For more information, please contact the Financial Aid Office or visit www.michigan.gov/mistudentaid.

Michigan Bureau of Rehabilitation

The Bureau of Rehabilitation is an arm of the Michigan Department of Education designed to provide rehabilitative services to vocationally disabled or impaired individuals.

A student who feels that vocational rehabilitation services are needed may make inquiry and application for assistance by contacting the office of the State of Michigan Bureau of Rehabilitation serving the student's home area.

Bureau of Indian Affairs

Grants for qualified students of at least one-quarter American Indian descent are available through the U.S. Department of the Interior, Bureau of Indian Affairs. Information can be obtained by contacting the B.I.A. – Tribal Operations, 2901.5 I-75 Business Spur, Sault Ste. Marie, MI 49783-3519, (906) 632-6809.

Public Act 174
Michigan Indian Tuition Waiver

This program currently provides free tuition at MCCC for North American Indians. Information can be obtained by contacting the Inter-Tribal Council of Michigan at 1-800-562-4957.

EMPLOYMENT PROGRAMS

Job opportunities on campus are available to MCCC students, regardless of financial need, who are enrolled at least half-time. Employment in moderation can be beneficial to a student's educational experience, and earnings can often reduce or eliminate the necessity to borrow. Federal regulations prevent recipients of federal aid programs, i.e., College Work Study, Supplemental Educational Opportunity Grants, from obtaining campus job earnings that, when combined with other aid resources, would exceed their financial need as outlined on the award letter. Therefore students receiving aid from these programs are not able to work on campus without authorization from the Financial Aid Office.

Federal College Work Study Program

The college participates in the federally funded College Work Study (FCWS) Program. Students must be U.S. citizens or permanent residents and meet all other requirements included in the Financial Aid Eligibility section. Employment extends to most areas of college activity. Every effort is made to refer students to positions compatible with their interests and qualifications, although such opportunities are not always available. Pay rates are commensurate with federal minimum wage guidelines. Jobs for all student employees are obtained through the Workforce Development Office.

Once students have earned the amount for which they are eligible, they will be terminated from the program and will be unable to continue College Work Study employment.

Michigan Work Study

The Michigan Work Study Program (MWS) is designed to provide work opportunities for needy undergraduate students who enroll at approved degree-granting Michigan colleges on at least a half-time basis.

Qualification for this program is the same as for federally funded College Work Study.

College Employment

Other student jobs are available on campus in addition to those described under the College Work Study Program.

Applications for student assistant positions on campus are processed through the Corporate and Community Services Division, Room Z-286.

Off-campus Employment
Businesses throughout Monroe County and the surrounding areas utilize the Workforce Development Office to advertise available full- and part-time positions through up-to-date job postings. Qualified student and alumni may be referred for these positions. Information on summer employment is also posted and includes local, state, national and international opportunities. Contact the Workforce Development Office at 734-384-4270, or visit the Web site at www.monroeccc.edu/ccs/employme.htm.

LOAN PROGRAMS

Several loan programs are available. A student is not required to accept a loan in order to receive other types of aid. Students should discuss the possibility of replacing part of the value of a loan with a job.

Students accepting student loans are committing themselves to a serious legal and moral obligation: loans must be repaid. Repayment may take as long as 10 years after leaving college. Students are urged to consider their ability to repay a loan, their future credit rating and their potential indebtedness before accepting a loan. The staff of the Financial Aid Office is willing to discuss the implications of loans on students' future financial situations.

Family Federal Educational Loans

What Loans are available?
Family Federal Educational Loans are either subsidized or unsubsidized. A subsidized loan is awarded on the basis of financial need. The federal government pays interest on the loan ("subsidizes" the loan) until the student begins repayment and during authorized periods of deferment.

An unsubsidized loan is not awarded on the basis of need. Students are charged interest from the time the loan is disbursed until it is paid in full. If you allow the interest to accumulate, it will be capitalized. The interest will be added to the principal amount of your loan and will increase the amount you have to repay. If you choose to pay the interest as it accumulates, you'll repay less in the long run.

Students may receive a subsidized FFEL and an unsubsidized Stafford Loan for the same enrollment period.

Who can get a Family Federal Education Loan?
If you're a regular student enrolled in an eligible program of study at least half-time, you may receive a FFEL. Students must also meet other general eligibility requirements.

How much can I borrow?
A dependent undergraduate student can borrow up to:
- $3,500 if you're a first-year student enrolled in a program of study that is at least a full academic year;
- $4,500 if you've completed your first year of study, and the remainder of your program is at least a full academic year

An independent undergraduate student or a dependent student whose parents are unable to get a PLUS Loan, can borrow up to:
- $7,500 if you're a first-year student enrolled in a program of study that is at least a full academic year (at least $4,000 of this amount must be in unsubsidized loans);
- $8,500 if you've completed your first year of study and the remainder of your program is at least a full academic year (at least $4,000 of this amount must be in unsubsidized loans).

The total outstanding debt from all Stafford Loans combined cannot exceed:
- $23,000 as a dependent undergraduate student;
- $46,000 as an independent undergraduate student (no more than $23,000 of this amount may be in subsidized loans); or
- $138,500 as a graduate or professional student (no more than $65,500 of this amount may be in subsidized loans). The graduate debt limit includes any Stafford Loans received for undergraduate study.

NOTE: *The college can refuse to certify your loan application or can certify a loan for an amount less than you would otherwise be eligible for if the school documents the reason for its action and explains the reason to you in writing. The school's decision is final and cannot be appealed to the U.S. Department of Education.*

NOTE: *The preceding amounts are the maximum yearly amounts you can borrow in both subsidized and unsubsidized Stafford Loans. You may receive less than these yearly maximum amounts if you receive other financial aid that is used to cover a portion of your cost of attendance.*

What's the interest rate charged on these loans?
For Stafford Loans disbursed on or after July 1, 2006, the interest rate is fixed at 6.8 percent.

For Stafford Loans that were first disbursed before July 1, 1994, the interest rate on these loans may be different. Check with the lender or agency that holds the loan.

On subsidized loans, the federal government pays the interest while you're enrolled in school at least half time, during a grace period or during authorized periods of deferment. Interest will begin to accrue when you enter repayment.

For unsubsidized loans, you'll be charged interest from the day the loan is disbursed until it is repaid in full, including in-school, grace and deferment periods. You may choose to pay the interest during these periods or it can be capitalized.

Is there a charge for these loans?
You'll pay fees of up to 4 percent, which is deducted proportionately from each disbursement of your loan. For a FFEL Loan, a portion of this fee goes to the federal government to help reduce the cost of the loans.

When do I pay back these loans?
After you graduate, leave school or drop below half-time enrollment, you have six months before you begin repayment. This is called a "grace period."

During the grace period on a subsidized loan, you don't have to pay any principal and no interest will be charged. During the grace period on an unsubsidized loan, you don't have to pay any principal, but interest will be charged. You can either pay the interest or allow it to accumulate.

After you leave school or drop below half-time enrollment, you'll receive information about repayment and will be notified of the date repayment begins. However, you're responsible for beginning repayment on time even if you don't receive this information.

FFEL PLUS Loan
FFEL PLUS Loans enable parents who do not have adverse credit histories to borrow money to pay the education expenses of each child who is a dependent undergraduate student enrolled at least half-time. The yearly limit on a PLUS Loan is equal to the student's cost of attendance. The interest rate on a PLUS Loan is a fixed rate of 7.9 percent. Repayment on a PLUS Loan begins 60 days after the final disbursement for the period of enrollment in which you borrowed.

Short Term Loans
Short term loans are available to help pay for books and supplies. To qualify, students must have a cumulative GPA of at least a 2.0, and tuition and fees must be paid in full. A short term loan must be repaid by the end of the semester for which the loan is made. Application forms are available in the Financial Aid Office.

Endowed Scholarships

Dr. Florence Ames Fine Art Scholarship
Donor: Dr. Florence Ames
Eligibility: Full-time second year art major, minimum 3.0 GPA, artistic merit

William J. and Jennie E. Bacarella Scholarship
Donor: William J. and Jennie E. Bacarella
Eligibility: Business-related curriculum major, non-traditional age student, Monroe County resident

Beach Culinary Scholarship
Donor: Mrs. Eugene W. Beach
Eligibility: Culinary Skills and Management Program student

Helen M. and Eugene W. Beach Scholarship
Donor: Mrs. Eugene W. Beach
Eligibility: Nursing or Respiratory Therapy student, financial need

William J. and Hildreth C. Braunlich Scholarship
Donor: Family and Friends
Eligibility: St. Mary Catholic Central graduate, academic achievement

Elizabeth and Samuel Campbell Memorial Scholarship
Donor: Various Citizens
Eligibility: Financial need and academic excellence

Guire Scholarship Fund
Donor: Iva Mennig Trust
Eligibility: Math or Science major, financial need, scholastic achievement

Richard H. Hicks and Bernice Hicks
Nursing Education Scholarship Fund
Donor: Richard H. Hicks
Eligibility: Student enrolled in the Registered Nursing Program, preference given to veterans or those who have immediate family members who are veterans

Dr. Gerald L. Howe Scholarship
Donor: Dr. Gerald L. Howe
Eligibility: Full-time student enrolled in health-related curriculum, Monroe County resident, graduated in top 25 percent of high school class in college prep curriculum, academic promise

Gwendolyn M. Jacob Memorial Scholarship
Donor: C. S. and Marion F. McIntyre Foundation
Eligibility: Graduate of Monroe High School with preference given to a student who has also attended Lincoln Elementary School in Monroe (at least one year), full-time student enrolled in transfer program, financial need

Karen Karau-Collins Memorial Scholarship
Donor: Jane Karau and Family and Friends
Eligibility: Computer Science student, at least six hours per semester

Mary L. and Edward P. Kehoe Scholarship
Donor: Mary L. and Edward P. Kehoe
Eligibility: Minimum of six credit hours per semester, recipient working 30 hours per week or more in addition to attending college or have successfully completed a home school program

Dr. Martin Luther King, Jr. Scholarship
Donor: Concerned Citizens of the Community
Eligibility: Full-time student, resident of Monroe County, financial need

M. Carol Kish Culinary Scholarship
Donor: Monroe County Community College Library Staff and Friends
Eligibility: Culinary Skills and Management Program student, completed 24 credit hours toward culinary degree

C. S. & Marion F. McIntyre Memorial Scholarship
Donor: C. S. and Marion F. McIntyre Foundation
Eligibility: Full-time student enrolled in transfer program, demonstrate a financial need

David L. McIntyre Memorial Scholarship
Donor: C.S. and Marion F. McIntyre Foundation
Eligibility: Monroe High School graduate enrolled in a transfer curriculum, full-time student, minimum 2.5 GPA

Midway Products - Lyman E. Hoyt Memorial Scholarship
Donor: Midway Products Group, Inc. Employees and Friends
Eligibility: Student enrolled in one of the following programs at MCCC: Automotive Engineering Technology, Welding Technology, Mechanical Engineering Technology, or Manufacturing Technology; full-time student, financial need, Monroe County resident or child of Midway Products Group, Inc. employee, minimum 2.5 GPA

Pfc. Dennis J. Miller Jr. Memorial Scholarship
Donor: Family and Friends
Eligibility: Major in history and/or planning to teach history, minimum 3.0 GPA, enrolled at least three-quarter time, co-op/internship at Monroe County Historical Museum

Monroe County Community College Alumni Association Scholarship
Donor: Monroe County Community College Alumni Association
Eligibility: Nominated by Monroe County Community College Alumni Association member and additional letter of reference

LaVerne B. Norton Scholarship
Donor: Patrick H. Norton
Eligibility: Academic promise, minimum of six credit hours per semester, preference given to a Monroe County resident

Pearl K. Quermbach Memorial Scholarship
Donor: Family and Friends
Eligibility: Financial need

Robbin Ramage Memorial Scholarship
Donor: Ramage Trust Fund
Eligibility: Full-time student

C. Ernest Read Scholarship
Donor: C. Ernest Read Trust
Eligibility: Sophomore, significant contributions to campus life during the freshman year

Drew Reeves Memorial Scholarship
Donor: Family, Friends and Colleagues
Eligibility: Automotive Engineering Technology Program student

Milton G. Russell Memorial Scholarship
Donor: Mrs. Doris Russell
Eligibility: Monroe County resident for a minimum of five years, enrolled for a minimum of nine credit hours per semester, financial need, priority given to student with a history of Attention Deficit Disorder (ADD)

Annual Scholarships

Adopt-A-Student Scholarship
Donor: The Foundation at MCCC
Eligibility: Monroe County resident, financial need, good academic standing

Angela Ames Scholarship
Donor: Family and Friends
Eligibility: Sophomore, non-traditional student (25 years or older), minimum 3.0 GPA

Edward W. Banachowski Community Service Scholarship
Donor: Dr. Grace B. Yackee
Eligibility: Student with expressed interest and currently involved in community service, full-time student, Monroe County resident, minimum 2.5 GPA

Big Boy School Spirit Scholarship
Donor: The Monroe Big Boy Restaurants
Eligibility: Senior from winning high school of Big Boy Spirit Award, full-time student

Saverio Costello Memorial Scholarship
Donor: Judge Joseph A. Costello, Jr.
Eligibility: Financially disadvantaged

Dana Corporation Scholarship
Donor: Dana Corporation
Eligibility: Industrial Technology Division major, enrolled for a minimum of six credit hours per semester, 2.5 GPA, first or second year student, non-renewable

Education Plus Credit Union Scholarship
Donor: Education Plus Credit Union
Eligibility: Member of Education Plus Credit Union, enrolled for minimum of six credit hours, no other financial assistance

Fallen Firefighters Scholarship
Donor: Monroe County Firefighters Association
Eligibility: Monroe County firefighter or dependent

The Foundation at MCCC Scholarship
Donor: The Foundation at MCCC
Eligibility: Demonstrate financial need

Mary Fraser Nursing Scholarship
Donor: Estate of Joanne M. Fraser
Eligibility: Second year nursing student, Monroe County resident, enrolled for a minimum of six credit hours, preference given to students who are parents, minimum 2.5 GPA

Fraternal Order of Eagles Scholarship
Donor: Fraternal Order of Eagles
Eligibility: Monroe County resident, full-time student, financial need, preference to F.O.E. family members

Future Leaders of Monroe Scholarship
Donor: Alumni and Friends of Leadership Monroe
Eligibility: Minimum of six credit hours per semester, demonstrate community service in Monroe County

Global Engine Manufacturing Alliance Scholarship
Donor: DaimlerChrysler Corporation Fund
Eligibility: Full-time student; pursuing degree in business, engineering, design, or information technology; 3.0 GPA

Denise A. Gray Scholarship
Donor: Friends and Family
Eligibility: Monroe County resident, minimum of six credit hours per semester

Pfc. Nicholas J. Greer Scholarship
Donor: The Nicholas Greer Foundation
Eligibility: First- or second-year student pursuing a degree in computer information systems (either an occupational or transfer curriculum), minimum of ten credit hours per semester, Monroe County resident, demonstrated financial need, perform 20 hours of community service to organization of their choice

B. J. Harmon Mathematics Scholarship
Donor: Dr. B. J. Harmon
Eligibility: Enrolled for minimum of six credit hours, 3.0 GPA (mathematic/science coursework GPA 3.0), Monroe County resident

IAAM Scholarship
Donor: IAAM – Chapter six
Eligibility: Accounting major who has completed at least 15 credit hours in Business Division courses, enrolled for minimum of six credit hours

International Association of Administrative Professionals Scholarship
Donor: IAAP Monroe Chapter
Eligibility: Enrolled in Administrative Professional Program

Philip J. Iott Memorial Scholarship
Donor: Pennie M. Iott, Family and Friends
Eligibility: Participant in Balanced and Restorative Justice (BARJ) system

Sally J. Jaynes Fine Arts Scholarship
Donor: Sally J. Jaynes
Eligibility: Enrolled in art course, Monroe County resident, student at MCCC or dual enrolled student from a Monroe County high school

Herb Kehrl Memorial Scholarship
Donor: Family and Friends
Eligibility: Political Science, history or education major; resident of Michigan's 56th House District; public, non-charter school graduate, at least six credit hours per semester

Terri McConnaughey Scholarship
Donor: Family and Friends
Eligibility: MCCC Writing Fellow or a staff member on *The Agora*, enrolled for a minimum of six credit hours per semester, 3.0 GPA, work at least 15 hours per week during scholarship year, preference given to non-traditional age student, financial need

The Guild of Mercy Memorial Hospital Scholarship
Donor: Mercy Memorial Hospital Guild
Eligibility: Monroe County resident, Nursing student, financial need, volunteer experience in healthcare setting preferred

Mercy Memorial Nursing Scholarship
Donor: Mercy Memorial Hospital
Eligibility: Nursing students

Ruthie Merritt Memorial Scholarship Fund
Donor: Family and Friends
Eligibility: Monroe County resident, 10 semester hours completed with at least a 2.5 GPA, letters of recommendation, reflection/reaction paper

Miss Monroe County Scholarship Program Scholarship
Donor: Traci Calkins
Eligibility: Miss Monroe County Scholarship Pageant contestants using their MCCC Conditional Scholarship, full-time student at MCCC during scholarship year

Monroe County Association of Realtors Scholarship
  Donor: Monroe County Association of Realtors
  Eligibility: Monroe County resident, business curriculum major, at least six credit hours per semester, community service participation

Monroe County Community College Alumni Family Member Scholarship
  Donor: Monroe County Community College Alumni Association
  Eligibility: Immediate relative (child or spouse) of an MCCC graduate or student who earned 24 or more credits at MCCC with special consideration given to a relative of an MCCC Alumni Association member in good standing, Monroe County resident and United States citizen, full-time student, Monroe County high school graduate

Monroe Exchange Club Scholarship
  Donor: Monroe Exchange Club
  Eligibility: Full-time student, resident of Monroe County

Pepsi Scholarship
  Donor: Pepsi Bottling Company
  Eligibility: Financial need

George Rhodes Scholarship
  Donor: Friends and Colleagues
  Eligibility: Part-time student (six credit hours) who has worked at least one semester in tutoring program at MCCC, recipient must be active in MCCC tutoring program during award year, 3.0 GPA

Richard and Marjorie Sieb Scholarship
  Donor: Richard and Marjorie Sieb
  Eligibility: Monroe County resident, at least six credit hours per semester

Spartan Steel Coating Scholarship
  Donor: Spartan Steel Coating, LLC.
  Eligibility: Full-time student majoring in pre-engineering or Electronics and Computer Technology

Elizabeth Steffes Memorial Scholarship
  Donor: James J. Steffes
  Eligibility: Financial need

Roy Turner Scholarship
  Donor: Family
  Eligibility: Monroe County firefighter or child/grandchild of a local (Monroe County) firefighter, full-time student, Monroe County resident, minimum GPA of 2.5

David H. Yoas Memorial Scholarship
  Donor: Family and Friends
  Eligibility: Welding or Automotive Technology Program, enrolled for minimum of four credit hours per semester

Scholarships Provided by MCCC

Board of Trustees Scholarship
  Eligibility: Monroe County high school graduate or graduate of Milan High School who resides in Monroe County, upon recommendation of their respective facilities; must be enrolled for 12 or more credit hours per semester.
  Stipend: Tuition and fees
  Number: Two for each Monroe County high school, one for Milan High School, renewable
  Contact: High school counseling office

Presidential Scholarship
  Eligibility: Monroe County resident, cumulative high school GPA of 3.5 or better, leadership qualities; demonstrated participation in school and/or community affairs, must be enrolled for 12 or more credit hours per semester
  Stipend: Tuition and fees
  Number: Ten per year, renewable
  Contact: High school counseling office

Instructional Scholarship
  Eligibility: Must be enrolled for 12 or more credit hours in designated program per semester, GPA 2.2
  Stipend: Tuition and fees
  Number: Up to 16 per year, renewable
  Contact: Vice President of Instruction or high school counseling office

Performing Music Scholarship
  Eligibility: Monroe County resident, full-time student, participating in the MCCC Band or MCCC Agora Chorale, audition required
  Stipend: Tuition and fees
  Number: 14 per year, renewable
  Contact: College Humanities/Social Science Division

Lewis D. McClure Scholarship
  Eligibility: Monroe County resident, demonstrated financial need, minimum high school or college GPA 2.5
  Stipend: Tuition and fees
  Number: One annually
  Contact: Financial Aid Office

Senior Citizen Scholarship
  Eligibility: Monroe County resident, age 60 or over
  Stipend: Tuition
  Number: Variable
  Contact: Financial Aid Office

Grading System/Course Numbering

GRADE REPORTS

Grades are available to students on-line via WebPAL and by telephone via SMART.

Students who need a printed copy for scholarship or employer reimbursement purposes are still able to get one by calling the Registrar's Office at 734-384-4108. Grade reports requested by students will be mailed within 14 days of the request.

GRADING SYSTEM

The student's work in each course is graded on the following system. Grade points are assigned as indicated.

Letter Grade	Grade Points Per Credit Hour
A - Excellent	4
B - Good	3
C - Fair	2
D - Poor, but Passing	1
E - Failure	0
*E - Course included in Academic Forgiveness Policy	
I - Incomplete	
W - Withdrew	
AU - Audit	
*S - Satisfactory	
U - Unsatisfactory	
TR - Indicates Transfer Credit Accepted	
N - No Grade	
*P - Pass	
*F - Fail	
*H - Satisfactory completion of a developmental course – does not apply toward graduation.	
R - Repeated class, prior attempt.	
CEU - Courses that earn CEU's are identified with a course number between 700-899 and do not apply toward graduation.	

Not included in GPA

Grading practices regarding letter grades awarded in the Nursing program are different in that letter grades of A,B,C and E are issued; there are no D grades.

APPEAL PROCEDURE FOR GRADE CHANGE

The appeal process shall consist of an initial appeal to the instructor in question, a second appeal to the dean of the division the instructor is teaching in and a final appeal to a board consisting of three nonadministrative faculty and two students to be appointed by the vice president of instruction. The decision of the appeal board will be final and binding. A tie vote by the board will result in the grade remaining unchanged.

Students wishing to initiate a grade appeal have up to six months from the time the grade was issued to request the vice president of instruction to appoint an appeal board to hear the arguments. The request must be made in writing.

COURSE NUMBERING SYSTEM

090-099	Developmental courses that do not apply toward graduation.
100-149	Freshman Career/Occupational
200-249	Sophomore Career/Occupational
150-199	Freshman University Parallel
250-294	Sophomore University Parallel
295-299	Field Trips, Seminars, Workshops, Independent Study, Co-Op
700-999	Lifelong Learning - Non-Credit

GRADE POINT AVERAGE (GPA)

To compute the semester grade point average, divide the semester honor points earned by the semester credit hours attempted.

$$\frac{\text{Semester Honor Points Earned (Honor Points)}}{\text{Semester Hours Attempted (GPA Hours)}} = \text{Sem. GPA}$$

To compute the cumulative Grade Point Average, divide the total honor points earned by the total credit hours attempted in all semesters. A cumulative Grade Point Average of "C" (2.0) is required for graduation.

$$\frac{\text{Total Honor Points Earned (HP)}}{\text{Total Credit Hours Attempted (GPA CRED)}} = \text{Cumulative GPA}$$

NOTE: Credit accepted from other institutions is not used to calculate the student's GPA at Monroe County Community College.

CREDIT HOURS

All courses carry a specified number of credits. A three-credit lecture course meets three clock hours per week during the 15-week semester. More clock hours per week are required during short courses. Certain courses that require laboratory work or skill practice may meet for more hours per week than the number of credits they confer.

MCCC courses have a minimum of 800 instructional minutes per credit hour.

ACADEMIC HONORS

Dean's List

Full-time students completing 12 credits or more who earn a grade point average of 3.5 or higher will be placed on the Dean's List each Fall or Winter semester. The names of students qualifying for the Dean's List will be distributed to the media.

Graduation with Honors

Students who maintain a 3.5 overall average or higher upon graduation are awarded graduation honors at commencement. As grades are not available in time for the ceremony, honors in the commencement program are based on the cumulative GPA at the end of the term preceding graduation. Graduation with honors is, however, placed on the transcript and the diploma using the GPA upon completion of the requirements for the degree.

Honors Designation	GPA Required
Summa Cum Laude	3.900 to 4.000
Magna Cum Laude	3.700 to 3.899
Cum Laude	3.500 to 3.699

TRANSCRIPTS

A transcript is the official cumulative record of a student's enrollment at Monroe County Community College. This data is maintained by the Registrar's Office and is cumulative from the student's first attendance at MCCC.

A student may request an official transcript by making a request in writing or by using the secure WebPal system. The student's signature is required for all written requests. The cost of each transcript is $5. A transcript requested by 4 p.m. will generally be available by 9 a.m. the following business day. Any transcript issued to the student, either by mail or in person, will carry the inscription "issued to student."

Unofficial transcripts are issued to students by the Registrar's Office upon request – and at no charge. A photo ID is required. An unofficial transcript issued to the student will carry the inscription "unofficial transcript." A transcript will not be issued to/for any student who has an indebtedness to the college.

To comply with the provisions of the Family Educational Rights and Privacy Act of 1974, no transcript will be released without the written authorization of the student.

Graduation and Degree Requirements

GENERAL REQUIREMENTS FOR GRADUATION

Upon successful completion of an approved plan of study and provided the following requirements have been fulfilled, the student will be awarded an associate degree from Monroe County Community College:

- The student must earn a minimum of 60 semester hours of credit, 20 of which must be earned at Monroe County Community College.
- The student must attain a cumulative grade point average of "C" or higher (2.000 or higher on a 4.000 scale) at graduation.
- The student must meet the general education requirements for his or her program of study – as specified in the Monroe County Community College catalog – under which the student has applied for graduation.
- The student may fulfill requirements for graduation using any Monroe County Community College catalog published during their period of attendance, with the limitation that no student may use a catalog more than 10 years old at the time of graduation. Exceptions may be considered by the appropriate administrator.

Requirements for Graduation from a Certificate Program

The student must attain a grade point average of "C" or higher (2.000 or higher on a 4.000 scale) at graduation in the course work required for the certificate.

Students who enrolled in certificate programs of substantial length (45 or more semester hours) for the first time in Fall 2002 must meet the general education requirements as specified in the 2002-2003 or a subsequent Monroe County Community College catalog.

SECOND DEGREE

To earn a second associate degree from Monroe County Community College, the student must complete 20 semester hours in a specific subject area beyond the requirements of the first associate degree.

ABOUT MCCC DEGREES AND PROGRAMS

Any MCCC degree may be earned by fulfilling the general requirements and the requirements specific to the individual degree (AS, AA, AAS, AFA). This type of degree is called an undesignated degree and appears on the transcript as the degree only.

In addition to earning the specific degree, students who complete one of the occupational degree programs will have the program designation entered on their transcript along with the degree.

Specific program outlines which reflect a high level of specialization are listed elsewhere in this catalog. Deviation from degree requirements or from a specified program may be made only with approval of the division dean, the vice president of instruction or their designee.

GENERAL EDUCATION

General education unites students from diverse areas of study in the pursuit of knowledge that community college graduates should possess. At Monroe County Community College, general education courses are the foundation of each certificate program of substantial length (45 or more credit hours) and of each associate degree (60 or more credit hours). To earn a certificate of substantial length or an associate degree from MCCC, students must demonstrate competency in each of the five general education areas:

- **Written Communication.** Graduates will communicate ideas and information in writing using the rules of standard American English.
- **Mathematics.** Graduates will accurately apply appropriate mathematical approaches to the analysis and interpretation of numerical information.
- **Social Science.** Graduates will demonstrate understanding of social science concepts.
- **Science.** Graduates will demonstrate understanding of the processes of scientific inquiry.
- **Computer Skills.** Graduates will use computer technology to retrieve and communicate information. The competency may be demonstrated by successfully completing an approved course or by demonstrating competency on a designated examination.

Students must complete, at the minimum, the general education coursework or the standardized tests and skills assessments described below. Some degree programs require specific or additional general education courses.

Written Communication
Complete one course (three credits) from the following:
ENGL 101 Written and Oral Communication
ENGL 151 English Composition I

Mathematics
Complete one course (minimum of three credits) from the following:
> Any MATH course numbered 121 or higher
> BSMTH 101 Business Mathematics

OR
> Achieve a satisfactory score on a standardized mathematics test.

> *NOTE: Students who meet the Mathematics requirement by achieving a satisfactory standardized test score do not receive academic credit and may need to earn additional credit to meet degree requirements.*

Social Science
> POLSC 151 Introduction to Political Science

Science
Complete one course (minimum of four credits) from the following:
> ASTRN 151 (Introduction to Astronomy)
> BIOL 152 (Biological Science)
> BIOL 154 (Introduction to Environmental Science)
> BIOL 155 (Allied Health Anatomy and Physiology I)
> BIOL 157 (Anatomy and Physiology I)
> CHEM 150 (Fundamental Principles of Chemistry)
> CHEM 151 (General College Chemistry I)
> CHEM 160 (Fundamentals of Health Science Chemistry)
> ESC 151 (Earth Science)
> GEOG 151 (Elements of Physical Geography)
> PHY 101 (Technical Physics)
> PHY 151 (General Physics I)
> PHY 251 (Engineering Physics I)
> PHYSC 151 (Physical Science)

Computer Skills
Complete one course (minimum of two credits) from the following:
> CIS 130 Introduction to Computer Information Systems
> MDTC 160 Mechanical Drafting and CAD I
> WPR 102 Word Processing I
> WPR 110 Personal Word Processing

OR
> Achieve a satisfactory score on the Computer Skills Assessment.

> *NOTE: Students who meet the computer skills requirement by achieving a satisfactory skills assessment score do not receive academic credit and may need to earn additional credit to meet degree requirements.*

DEGREE REQUIREMENTS

Requirements for the
Associate of Arts Degree (AA)
To earn the associate of arts degree, the student must successfully complete courses from the following areas to meet the minimum general education distribution requirements:

Written Communication – 6 Semester Hours
> To meet this distribution requirement, the student must successfully complete English 151 and one additional course selected from English 102, 152, 155 or 254.

Mathematics and/or Science* – 8 Semester Hours
> To meet this distribution requirement, the student must:
> 1. Successfully complete courses selected from two or more of the following subjects: Astronomy, biology, chemistry, earth science, mathematics, geography 151, physical science or physics.
> 2. Pass the Mathematics Assessment or successfully complete at least three semester hours of mathematics from courses numbered MATH 121 or higher.

Social Science – 12 Semester Hours
> To meet this distribution requirement, the student must successfully complete Political Science 151 and additional courses selected from two different subject areas listed below:
> Anthropology, economics, geography (except 151), history, political science (except 151), psychology, social work or sociology.

Computer Skills
> To meet this distribution requirement, the student must successfully complete one course selected from CIS 130, MDTC 160, WPR 102 or WPR 110 or achieve a satisfactory score on a Computer Skills Assessment.

Humanities – 9 Semester Hours
> To meet this distribution requirement, the student must successfully complete courses selected from two different subject areas listed below:
> Art, communications, English (excluding 101 and ENGL courses taken to meet written communications requirements), humanities, journalism, music, philosophy, speech or theater.

Foreign Language – 8 Semester Hours
The student must successfully complete eight semester hours of one foreign language. Students with a minimum of four semesters of one foreign language in high school may petition the Dean of Humanities/Social Sciences for a waiver of one course (four credits) of this requirement. Students receiving waivers do not earn college credit and will need to earn additional hours to meet the 60-hour degree requirement.

   * *It is strongly recommended that students select a science course with a scheduled laboratory period.*

Requirements for the
Associate of Science Degree (AS)

To earn the associate of science degree, the student must successfully complete courses from the following areas to meet the minimum general education distribution requirements:

Written Communication – 6 Semester Hours
To meet this distribution requirement, the student must successfully complete English 151 and one additional course selected from English 102, 152, 155 or 254.

Mathematics and/or Science* – 8 Semester Hours
To meet this distribution requirement, the student must:
   1. Successfully complete courses selected from two or more of the following subjects: Astronomy, biology, chemistry, earth science, mathematics, geography 151, physical science or physics.
   2. Pass the Mathematics Assessment or successfully complete at least three semester hours of mathematics from courses numbered MATH 121 or higher.

Social Science – 9 Semester Hours
To meet this distribution requirement, the student must successfully complete Political Science 151 and additional courses selected from two different subject areas listed below:
   Anthropology, economics, geography (except 151), history, political science (except 151), psychology, social work or sociology.

Computer Skills
To meet this distribution requirement, the student must successfully complete one course selected from CIS 130, MDTC 160, WPR 102 or WPR 110 or achieve a satisfactory score on the Computer Skills Assessment.

Humanities – 3 Semester Hours
To meet this distribution requirement, the student must successfully complete one course selected from the subjects listed below:
   Art, communications, English (251 or higher, excluding 254 and 261), foreign language, humanities, journalism, music, philosophy, speech or theater.

   * *It is strongly recommended that students select a science course with a scheduled laboratory period.*

Requirements for the Associate of Applied Science Degree (AAS)

To earn the associate of applied science degree, the student must successfully complete courses from the following areas to meet the minimum general education distribution requirements:

Written Communication – 3 Semester Hours
To meet this distribution requirement the student must successfully complete English 101 or 151.

Mathematics
To meet this distribution requirement, the student must successfully complete one MATH course numbered 121 or higher or BSMTH 101 or achieve a satisfactory score on an achievement test.

   INDUSTRIAL TECHNOLOGY STUDENTS – MATH 121 and 124 (Technical Mathematics I and II) are recommended for students whose goal is to complete the associate of applied science degree and seek employment. MATH 157 (College Algebra) and MATH 159 (Trigonometry and Analytical Geometry) are recommended for students interested in transferring to a four-year institution. Other MATH courses may be selected for transfer depending on the student's choice of transfer institution. Students interested in transfer are encouraged to seek the assistance of a faculty advisor or admissions counselor.

Social Science and Humanities – 6 Semester Hours
To meet this distribution requirement, the student must successfully complete Political Science 151, and one additional course from the subjects listed below:
   Anthropology, art, communications, economics, English (except 101 and 151), foreign language, geography (except 151), history, humanities, journalism, music, philosophy, political science (except 151), psychology, social work, sociology, speech or theater.

Science* – 4 Semester Hours
>To meet this distribution requirement, the student must successfully complete one course selected from the subjects listed below:
>>Astronomy 151; Biology 152, 154, 155 or 157; Chemistry 150, 151 or 160; Earth Science 151; Geography 151; Physical Science 151; or Physics 101, 151 or 251.

Computer Skills
>To meet this distribution requirement, the student must successfully complete one course selected from CIS 130, MDTC 160, WPR 102, WPR 110 or achieve a satisfactory score on a computer skills assessment.

Technical and Specialty Areas – 32 Semester Hours
>Deviation from a specified program may be made only with approval of the division dean, vice president of instruction or their designees.

Requirements for the
Associate of Fine Arts Degree (AFA)
To earn the associate of fine arts degree, the student must successfully complete courses from the following areas to meet the minimum general education distribution requirements:

Written Communication – 3 Semester Hours
>To meet this distribution requirement, the student must successfully complete English 101 or 151.

Mathematics
>To meet this distribution requirement, the student must successfully complete one MATH course numbered 121 or higher or BSMTH 101, or achieve a satisfactory score on an achievement test.

Social Science – 6 Semester Hours
>To meet this distribution requirement, the student must successfully complete Political Science 151 and one additional course selected from the subject areas listed below:
>>Anthropology, economics, geography (except 151), history, political science (except 151), psychology, social work or sociology.

Science* – 4 Semester Hours
>To meet this distribution requirement, the student must successfully complete one course selected from the subjects listed below:
>>Astronomy 151; Biology 152, 154, 155 or 157; Chemistry 150, 151 or 160; Earth Science 151; Geography 151; Physical Science 151; or Physics 101, 151 or 251.

Computer Skills
>To meet this distribution requirement, the student must successfully complete one course selected from CIS 130, MDTC 160, WPR 102 or WPR 110, or achieve a satisfactory score on the Computer Skills Assessment.

Humanities – 6 Semester Hours
>To meet this distribution requirement, the student must successfully complete courses selected from two different subject areas listed below:
>>Art, communications, English (except 101 and 151), foreign language, humanities, journalism, music, philosophy, speech or theater.

Area of Specialization – 32 Semester Hours
of Art Courses
The student must successfully complete one of the art curricula that reflects a high degree of specialization.

>**It is strongly recommended that students select a science course with a scheduled laboratory period.*

Probation and Dismissal

ACADEMIC PROBATION AND ACADEMIC DISMISSAL POLICY

A student who has completed 10 credit hours or more (and received a grade of A, B, C, D or E) at Monroe County Community College is automatically placed on probation at the end of the semester when his/her cumulative grade point average falls below 1.8.

A student who has been placed on probation will be removed from probation when he/she has achieved a cumulative grade point average of 1.8 or more.

Students on academic probation may not enroll for more than 12 semester hours. A student on probation who earns a semester grade point average of 2.5 or higher while taking 10 credit hours may carry 15 hours the next semester with the approval of his/her adviser.

During the semester in which the twentieth semester hour is completed, a student on probation who fails to raise his/her cumulative grade point average to 1.8 or more will be subject to dismissal. Cases of dismissal may be appealed to the Academic Review Committee. A dismissed student who appeals to the Academic Review Committee and is readmitted must continue to meet with the Academic Review Committee prior to registration for any subsequent semester or until such time the cumulative grade point average improves to 1.8 or higher. A readmitted student who achieves a grade point average of 2.25 or higher, even though his/her cumulative grade point average is not 1.8, will be considered to have demonstrated significant improvement and will automatically be continued on probation for the next semester.

Exceptions to this policy may be made by the vice president of student and information services or his/her designee.

ACADEMIC FORGIVENESS POLICY

Monroe County Community College recognizes that some students experience difficulty with academic performance due to life's circumstances, and oftentimes their subsequent academic record prohibits them from achieving educational and career goals. For example, life's circumstances may include – but are not limited to – personal, emotional and/or financial problems, or devastating and unavoidable events that did not permit them to perform at a level representative of their abilities. In an effort to lessen the negative impact of past performance on the student's ability to earn a degree, certificate or successful transfer, the college offers to students the Academic Forgiveness Policy.

The primary purpose of this policy is to provide a "fresh start" to those students who performed poorly in the past but have since demonstrated an ability to succeed with college-level academic studies. This policy is not intended to permit students with chronically poor performance to stay in college, nor to raise false hopes for students who are not making progress.

Through Academic Forgiveness, the student may petition to have his/her academic grade point average (GPA) recalculated with failing "E" grades forgiven according to the eligibility criteria and stipulations specified below. As an alternative to Academic Forgiveness, students are encouraged to consider the course-repeat option whenever possible to improve the GPA. Because this forgiveness policy may be granted one time only, students should discuss its appropriateness with a college counselor in the Admissions and Guidance Office.

When the eligibility requirements have been fulfilled and approved, the student's cumulative GPA will be recalculated with the "E" grades removed from the calculation. Forgiven grades of "E" will remain on the student transcript with a special notation explaining this policy.

Eligibility Criteria

1. Forgiveness will be granted one time only for a student.

2. A maximum of 16 semester hours of "E" grades for courses numbered 100-level and above may be applied toward this policy.

3. If **fewer** than 36 months have elapsed since the end of the semester in which the last "E" grade to be forgiven was received, before the Academic Forgiveness Policy is applied, the student must have successfully completed (with a 2.00 GPA or higher) a minimum of 30 credit hours in courses numbered 100 or above.

4. If **more** than 36 months have elapsed since the end of the semester in which the last "E" grade to be forgiven was received, before the Academic Forgiveness Policy is applied, the student must have successfully completed (with a 2.00 GPA or higher) a minimum of 12 credit hours in courses numbered 100 or above.

Stipulations

1. The student may obtain an application for Academic Forgiveness from the college registrar. The submitted application is reviewed by the registrar for accuracy and is approved if all eligibility criteria and stipulations have been met.
2. The Office of Financial Aid does not accept "forgiveness status" in the calculation of cumulative GPA for standards of progress.
3. Academic Forgiveness, when granted, applies only to MCCC courses. There is no guarantee, expressed or implied, that academic forgiveness will be recognized by any other college or university.
4. Grades of "E" that have been documented for academic dishonesty are not eligible under this policy.
5. Limited access programs such as, but not limited to, nursing, respiratory therapy, and culinary arts have program-specific academic standards, which address course failure/ withdrawal for students enrolled in these programs.
6. A student can graduate with honors only if all grades are calculated, including forgiven "E' grades.

This policy may be evaluated by the Academic Review Committee at any time, but no later than Fall semester 2008.

STUDENT CONDUCT AND DISCIPLINE

Monroe County Community College recognizes that the purposes of the educational process (to question, experiment, test and confirm results) are shared by faculty, administration, students and community and that these crucial objectives carry with them mutual obligations.

DUE PROCESS WITH REGARD TO DISCIPLINE OTHER THAN ACADEMIC

The intent of this document is to retain the legal responsibility of the Board of Trustees as it is delegated through the president to the vice president of student and information services, or his or her designee, for the health and welfare of the student body. The steps outlined in this procedure will be used when a student's conduct is considered unsatisfactory, according to college standards. Unsatisfactory conduct may include, but is not limited to: disruptive/inappropriate behavior anywhere on campus and destruction, theft or mutilation of college property. Criminal activities will be referred to local legal authorities, in addition to any disciplinary sanctions the college decides to impose.

Disciplinary Procedure

Action by the vice president of student and information services may be initiated upon his/ her knowledge of any student conduct considered to be unsatisfactory. Action will also be initiated upon the receipt of a written statement from any Monroe County Community College employee who reports that a student's conduct has been unsatisfactory. The vice president of student and information services will then:

1. Notify the student in writing within five working days of the complaint filed against him/her and/or arrange for a conference with said student.
2. Meet with the student whose conduct has been accused of being unsatisfactory.
3. Make a decision of what disciplinary status to impose upon the student based upon the severity of the problem:
   a. Warn the student that past conduct or behavior has not been satisfactory and/or
   b. Curtail specified privileges for a designated period of time, and/or
   c. Have the student make financial restitution to the college, and/or
   d. Dismiss or suspend the student from the college.

4. Send a certified letter within five working days to let the student know what disciplinary action will be taken and that he/she can appeal the decision.

5. The vice president of student and information services will notify all parties that they can appeal the decision directly to the president of the college, whose decision is then final and binding. This appeal must be initiated within five working days of the receipt of the vice president's decision.

6. Procedural timelines may be waived by the Vice President in the interest of facilitating due process and fairness.

Guidelines For Classroom Discipline

If a student behaves in a disruptive or unsafe manner, the instructor in charge may dismiss the student responsible from the class. The instructor should review the student's behavior with the student prior to the next class meeting to determine cause for further action. The instructor may permit the student to return to class after satisfying himself or herself of the student's desire to refrain from the behavior that led to his/her suspension. The instructor may decide to disallow the student's continuation in the class. It is the duty of the instructor in charge, however, to inform the student that he/she may appeal the dismissal to the instructor's division dean. If the student is not readmitted to class, it is also the duty of the instructor to notify his/her division dean of the student's dismissal.

Should the student appeal his/her dismissal to the instructor's division dean, it will be the responsibility of the instructor and the division dean to come to an agreement as to whether the student should be allowed to return to the instructor's class. This agreement must be reached as soon as possible, but should not exceed 48 hours from the time the student is dismissed from class.

If the division dean, the instructor and the student cannot reach an agreement allowing a student to return to class, a committee will be established and called into session within an additional 48 hours to hear the facts from all parties involved. This committee will be formed as follows: Student Government shall appoint two students with no vested interest to the appeal committee; the chair of the academic review committee will appoint two non-vested faculty members to the committee; and the vice president of student and information services will appoint one administrator not directly related to the problem. This committee will make its recommendation to the vice president of instruction. The decision of the vice president of instruction is final and binding.

Academic Dishonesty

Statement on Academic Honesty

The college expects students to be honest in all academic work and maintain their own integrity as well as the academic integrity and reputation of their institution. Students who seek to better their records in dishonest ways demean themselves and show a lack of regard for others. Instead, students should take full advantage of the opportunities offered by the college to ensure that their time here is well spent, their experience is productive and their academic credentials are valuable. Students who do this will be better prepared for future endeavors and are more likely to meet with success in a world in which their performance will be the main criterion of recognition and advancement.

Acquisition of knowledge and the development of the skills necessary for success in one's chosen field are among the aims of education. Academic dishonesty is inconsistent with those aims and will not be tolerated. Academic dishonesty is an intentional act of fraud in which a student seeks to claim credit for the work or efforts of another without authorization or uses unauthorized materials or fabricated information in any academic exercise. The college considers academic dishonesty to include forgery of academic documents, intentionally impeding or damaging the academic work of others or assisting other students in acts of dishonesty. It is the student's responsibility to know what constitutes academic dishonesty. If a student is unclear whether a particular act constitutes academic dishonesty, he or she should consult with the instructor of the class involved.

Any act of academic dishonesty will result in disciplinary action by the college. The maximum penalty under the provisions of this policy is permanent expulsion from the college. Disciplinary action will be determined according to the severity of the infraction as recommended by the faculty member and sanctioned by the college administration.

Disciplinary Procedure

1. All acts of academic dishonesty, based on the instructor's determination of probable cause*, must be reviewed with the appropriate academic dean. After the review, the dean will notify the vice president of student and information services, and the faculty member will submit the Academic Dishonesty Report Form to the vice president of student and information services, the student and the dean. Upon receipt of notification, the vice president of student and information services will place an academic hold on the student record. The hold will prevent the student from withdrawing during the review.

   After the student acknowledges receipt of the Academic Dishonesty Report Form (by signature, returned e-mail, registered mail receipt), he/she will have 10 days to respond to the charge and recommended penalty. In the event the student fails to respond, and if the vice president of student and information services accepts the recommended disciplinary action, the student waives the right to an appeal.

2. The faculty member reporting an act of academic dishonesty may recommend expulsion from the college or program, or a lesser disciplinary action such as a failing grade on the test, paper, project, etc., or a failing grade in the course. In all cases of academic dishonesty, the proportionality of the sanction is to be considered relative to the incident. Sanctions less than expulsion should be based on a preponderance of the evidence**, whereas expulsion from the college or a program should be based on clear and convincing evidence***.

3. The vice president of student and information services shall make available an opportunity for consultation with both parties. Following consultation (if desired by either or both parties), the vice president shall inform, in writing, the faculty member and student of his/her acceptance, rejection or modification of the disciplinary recommendation within seven days of receipt of the deadline to appeal.

4. The vice president shall inform both parties of the appeal/due process available.

5. The vice president shall maintain a record of all acts of academic dishonesty.

6. Once the faculty member recommends disciplinary action, the student shall not be permitted to withdraw from the course until the review process is completed. If the charge of academic dishonesty is set aside, the student may withdraw from the course, following the withdrawal procedures for the time period of the initial incident.

7. Procedural timelines may be waived by the vice president in the interest of facilitating due process and fairness.

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Appeals Procedure

1. A student subject to disciplinary action for academic dishonesty or the faculty member who reported the act of academic dishonesty, may appeal the decision of the vice president of student and information services as to whether academic dishonesty did or did not take place. Neither the student nor the faculty member can appeal the disciplinary action or sanction as rendered by the vice president. The appeal must be made to the vice president's office within seven days of notice of the vice president's decision.

2. The vice president shall appoint an appeals committee composed of two students, two faculty members and an administrator to hear the appeals. The appointed administrator shall chair the committee. The vice president and the faculty member making the charge shall not serve on the committee.

3. If it is the vice president's decision that academic dishonesty has occurred and the student appeals, the committee shall determine whether the student has committed academic dishonesty. If the committee determines the student has not committed academic dishonesty, all disciplinary action shall be rescinded. If the committee determines the student has committed academic dishonesty, the vice president's disciplinary action shall stand. The committee's determination shall be final and binding.

4. If the vice president determines that the charge of academic dishonesty has not been proven, the faculty member may appeal the decision. If the appeals committee (see item 2) determines that an act or acts of academic dishonesty has been proven, the committee shall, by majority vote, determine the appropriate sanction. The committee's determination shall be final and binding.

   * *Probable cause: reason to believe, based on reliable information, that academic dishonesty has occurred and that a particular student has committed an act of academic dishonesty.*

 ** *Preponderance of the evidence: burden of proof has been established by evidence which outweighs the evidence against.*

*** *Clear and convincing evidence: the evidence must satisfy that the proposition has been established with a high degree of probability.*

■ Academic Programs

Programs of study are designed to provide the educational outcomes and competencies necessary for students to obtain immediate employment or to further their education.

Programs lead to an associate degree or certificate in the field of study.

■ **Transfer Options**

■ **Programs of Study**

Academic Programs

MACRAO AGREEMENT

The MACRAO Agreement is an agreement between Monroe County Community College and many Michigan four-year institutions. Depending upon the institution and the program, satisfying the requirements of this agreement could allow a student greater flexibility in meeting general education requirements at the four-year institution.

6 semester hours of English composition

8 semester hours of humanities (courses must be taken in more than one discipline and must not include English composition)

8 semester hours of social science (courses must be taken in more than one discipline)

8 semester hours of natural science: 1) At least one science must have a lab, 2) One of the sciences may be math (151 or above) and 3) Science courses must be from more than one discipline

Courses which are not transferable (i.e., technical, vocational or developmental) are not part of the agreement. For additional information, or to request a MACRAO agreement evaluation, please contact the Registrar's Office.

OCCUPATIONAL CERTIFICATE AND DEGREE PROGRAMS OF STUDY

Individuals completing a prescribed course of study in one of the career program areas will receive an associate of applied science or associate of commerce degree. See the instructional programs listing for a detailed description of the programs offered.

Individuals who wish to upgrade their knowledge and skills or prepare for new areas of employment may choose from a wide variety of course offerings. Special sequences of courses may be designed to meet these objectives. Students should consult with an appropriate faculty member, administrator or counselor.

Described in detail in the instructional program listing, the following is a list of career/occupational degree and certificate programs available.

Program	Degree	Certif.
Accounting	•	•
Administrative Office Assistant		•
Administrative Office Specialist		•
Administrative Professional	•	

Program	Degree	Certif.
Application Software Specialist	•	•
Automotive Engineering Technology	•	•
Business Management	•	
Chemistry	•	
Computer Information Systems:		
Accounting/CIS	•	
Computer Programming	•	
Application Development		•
Database Application Development		•
Computer Science	•	
End User Support Specialist	•	
Help Desk Specialist		•
Internet Professional	•	
Web Design		•
Web Development		•
Network Software -		
Administration Specialist		•
Network Specialist	•	
PC Support Technician	•	•
Construction Management Technology	•	•
Criminal Justice/Law Enforcement	•	
Culinary Skills and Management	•	•
Early Childhood Development	•	•
Electrocardiography (ECG) Technician		•
Electronics and Computer Technology	•	
Fine Arts	•	
General Technology	•	
Gerontology		•
Graphic Design	•	
Digital Media		•
Illustration		•
Industrial Electricity/Electronics Technology	•	
Industrial Management		
Office or Plant	•	
Manufacturing Technology	•	•
Mechanical Design Technology	•	•
Mechanical Engineering Technology	•	
Medical Office Coordinator	•	
Metrology Technology	•	•
Nursing, Practical		•
Nursing, Registered	•	
Nursing, RN from LPN/LVN (on-line)	•	
Phlebotomy Technician		•
Quality Systems Technology	•	•
Basic Quality Technician		•
Respiratory Therapy	•	
Teacher Paraprofessional	•	
Welding Technology	•	
Basic Welding		•
Advanced Welding		•

CERTIFICATE PROGRAMS

A certificate of completion will be granted upon completion of certain specialized certificate programs. Certificate programs are listed in the career program listing.

TRANSFER AND PRE-PROFESSIONAL OPTIONS

The university parallel and pre-professional programs are designed for the students who will eventually finish their education at a four-year college or university. Typical programs are discussed in the Transfer Options section of this catalog (pages 47-50). Credits earned in the parallel or pre-professional programs are generally transferable to four-year colleges and universities if the credits meet the following criteria:

1. Satisfactory grades. Grades of "C" or better are necessary for a student to transfer the course to most colleges or universities.

2. Proper selection of courses. A student must select courses designed for college transfer which are consistent with the requirements of the school to which the student plans to transfer. Since no two schools have identical requirements, students should consult with their faculty advisor or counselor to discuss any questions regarding specific programs.

Students following a transfer guide provided by a particular four-year college can complete the first two years of a baccalaureate program at MCCC. In addition, students fulfilling appropriate graduation requirements of Monroe County Community College will be eligible to receive an associate degree.

BACHELOR'S DEGREE COMPLETION AGREEMENTS

2 + 2 Agreements

Monroe County Community College has developed articulation agreements with a number of four-year colleges and universities. These agreements (sometimes called 2 + 2 or bachelor's degree completion agreements) provide students who are pursuing one of Monroe County Community College's specific two-year associate's degree programs an opportunity to continue their studies and complete the requirements for a baccalaureate degree. Those agreements provide that the student will be able to transfer 60 semester credit hours from one of Monroe County Community College's associate degree programs toward selected bachelor's

degree programs at the four-year institution. At the time this catalog was printed the following colleges and universities have 2 + 2 articulation agreements with Monroe County Community College (the MCCC programs are in parenthesis):

Central Michigan University
B.A.A. - Administration
B.S. - Administration
B.S. - Community Development
(A.S. - Pre-Business)

Eastern Michigan University
Applied Technology
(most technology programs)
Construction Management
(Construction Management Technology)

Ferris State University
Allied Health Sciences
(Business Leadership and Quality Management, Nursing and Respiratory Therapy)
Technology Programs
(most technology programs)

Lourdes College
B.B.A.
(A.C. - Accounting, Business Management, and Banking Management)
B.A. - Human Resource Management
(A.C. - Business Management)
B.A. - Criminal Justice
(A.S. or A.A. - Pre-Criminal Justice)
B.A. - Sociology
(A.S. or A.A. - Pre-Criminal Justice)
B.S. - Nursing
(A.A.S. - Nursing)

Madonna University
B.S.N
(A.A.S. - Nursing)

Marygrove College
B.S.W.
(A.S. - Early Childhood Development)

Saint Leo University
B.A. - Accounting
B.A. - Business Administration
B.S. - Computer Information Systems
(A.A., A.S. or A.C..degree - This is a completely on-line Bachelor's completion program.)

Siena Heights University at MCCC
B.A. - Accounting
B.A. - Business Administration
B.A. - General Studies
B.A. - Psychology
B.A.S. - Technology or Allied Health
(any associate degree or 60-90 credits earned at MCCC.)

Spring Arbor University
B.A. - Business
B.A. - Management and Organizational Development
B.A. - Family Life Education
(associate degree with MACRAO endorsement)
B.S. - Nursing

University of Findlay
B.A. - Criminal Justice
(A.S. - Pre-Criminal Justice)

University of Michigan - Dearborn
Bachelor of General Studies
(any associate degree)
B.S. - Computer and Information Science
(A.S. - Pre-Computer Science)

University of Toledo
B.B.A.
(A.A. or A.S. Degree)
B.E.T. - Electronics Engineering Technology
(A.A.S. - Electronics Technology)
B.E.T. - Mechanical Engineering Technology
(A.A.S. - Manufacturing Technology)

3 + 1 Agreements

In addition to the number of bachelor's degree completion agreements MCCC has with many four-year colleges and universities, MCCC also has articulation agreements with Siena Heights University, Eastern Michigan University and Madonna University that give students the opportunity to transfer more than 60 credits of MCCC coursework for specified degree programs at both of these universities. Eastern Michigan University's "3 + 1" agreements with MCCC apply to EMU's bachelor's degree programs in construction management and applied technology. The agreements with Siena Heights University create the added benefit of taking all or most courses at MCCC's main campus for bachelor's degree programs in business administration, accounting, applied science, psychology and general studies. The agreement with Madonna University leads to a bachelor's degree in criminal justice.

Students interested in obtaining specific information regarding any of the special programs should contact a counselor in the Monroe County Community College Admissions and Guidance Office.

Cooperative Agreements

Monroe County Community College has cooperative agreements allowing students to complete components of certain programs at the college and the remainder of these programs at participating community colleges. Such agreements exist in the following areas: General Sonography – Jackson Community College; Cardiac Sonography – Jackson Community College; Vascular Sonography – Jackson Community College, and Radiography – Washtenaw Community College.

Students interested in obtaining specific information regarding any of the above programs should contact the Health Sciences Division office at MCCC.

Qualified students may enroll in a state-approved police academy through Schoolcraft College while earning an associate of applied science degree in criminal justice from MCCC. (See page 70 for details.) For additional information, contact the dean of humanities/social sciences.

■ Transfer Options

At Monroe County Community College, students can earn the first two years of a bachelor's degree by selecting courses that transfer to four-year institutions.

MCCC works with four-year colleges and universities to develop curricular guides which explain what courses must be taken at MCCC. These curricular guides (available in the Career Center located in the Admissions and Guidance Office and on-line at www.monroeccc.edu) vary depending on the specific four-year college or university the student plans to attend. To ensure the transferability of credits to a specific four-year college or university and program, it is essential that the transfer student identify the college or university and curriculum as soon as possible, consult with a faculty advisor and follow the appropriate transfer curriculum guide.

Transfer Options

GENERAL EDUCATION TRANSFER DISTRIBUTION REQUIREMENTS

Four-year colleges and universities have university-wide requirements called "general education core curriculum." Usually, colleges and universities expect most of these requirements to be met during the first two years of a four-year program of study. Colleges within a university may also have general education requirements beyond the university-wide requirements. Usually, these requirements can be met at Monroe County Community College.

Students who attend MCCC prior to transferring to a four-year college or university will be taking courses at MCCC recommended by the specific four-year college where they intend to receive a bachelor's degree (four-year degree).

PRE-PROFESSIONAL PROGRAMS

The majority of the courses offered by the Humanities/Social Science and Science/Mathematics Divisions can be transferred to a four-year college or university. These courses and sequences can be used to meet specific program requirements in areas such as pre-professional programs in architecture, biology, chiropractic, computer science, education (elementary, secondary and special), chemistry, criminal justice, engineering, journalism, law, mathematics, medicine, mortuary science, nursing, occupational therapy, optometry, pharmacy, physics, psychology, social work and veterinary medicine. These courses and sequences are also used to fulfill general education distribution requirements at four-year colleges and universities. Some of the courses and sequences offered by the Business, Health Sciences and Industrial Technology Divisions may also transfer to specialized programs at four-year colleges and universities in accounting, business administration, engineering technology and nursing.

First- and second-year college level courses and sequences in the following disciplines are frequently taken for transfer credit: accounting, art, astronomy, biology, business administration, business law, business management, chemistry, computer information systems, drama, earth science, economics, engineering drawing, English composition, foreign language, geography, history, humanities, journalism, literature, mathematics, music, philosophy, physics, physical science, political science, psychology, sociology and social work.

PRE-EDUCATION PROGRAMS

One of the transfer programs at MCCC leads to a degree in education. Students interested in elementary education are able to transfer a large number of introductory courses such as English composition, history, mathematics, political science, science and speech. This program also contains art, literature, mathematics and music courses, which are specifically geared to students planning a degree in elementary education at a four-year institution.

Those interested in teaching at the secondary level also have many classes available for transfer. Classes in art, English composition, dramatic arts, history, literature, mathematics, philosophy, political science, psychology, science, sociology and speech are frequently taken for transfer credit.

Students interested in special education may take transfer classes whether they are interested in a secondary education endorsement or an elementary education endorsement. Students may also specialize in health education and may take courses here that transfer for health education. MCCC also offers a class (EDUC 151, Exploring Teaching) which fulfills the pre-teaching requirement of many four-year institutions.

PRE-ENGINEERING PROGRAMS

The recommended engineering transfer program should enable the student to transfer to any of the engineering colleges in the state with a very favorable situation for transfer credit and choice of specific engineering program. It is advisable for an engineering student to make a choice of an engineering college and a specific curriculum as soon as possible, consult with their faculty advisor and follow transfer guides available in the Career Center.

The recommended engineering transfer program includes:

- 4 or 5 semesters of mathematics through MATH 273
- 2 semesters of calculus-based physics
- 2 semesters of chemistry (4 semesters for chemical engineering majors)
- 2 semesters of English (composition and literature)
- 2 semesters of humanities (art, communication, journalism, music, philosophy, speech)
- 2 semesters of social science (anthropology, history, economics, geography, political science, psychology, sociology and social work)

Many engineering programs have a specific requirement of Microeconomics (ECON 252).

Coursework may also be required in the following areas depending upon the college and engineering degree program the student chooses: drafting, computer aided design, structured programming, linear algebra, statistics, biological sciences and business administration.

CHEMISTRY PROGRAM

This associate of science degree with specialization in chemistry is designed to provide the first two years of study for students who intend to continue their education in chemistry or other natural sciences. This degree (with careful selection of electives) will also be useful for students in the pre-professional study of medicine and related fields, as well as students who seek careers as laboratory technicians after completing an associate degree. Students transferring to another college should obtain information early from the college concerning specific degree requirements.

HUMANITIES/SOCIAL SCIENCE PROGRAMS

In addition to fulfilling the humanities and social science general education distribution requirements at four-year colleges and universities, humanities and social science courses can be transferred as components of a baccalaureate degree program in fields such as anthropology, art, communication, education, English language and literature, foreign language, history, journalism, police administration/law enforcement, political science, pre-law, psychology, social work and sociology.

Humanities and social science classes which are most frequently taken for transfer credit are courses in English composition, history, literature, political science, psychology, sociology and speech. Depending on the student's program and the requirements of the four-year college or university, courses in art, anthropology, dance, dramatic arts, foreign language, geography, journalism, philosophy and social work are also offered for transfer credit.

CRIMINAL JUSTICE PROGRAM

This program prepares MCCC graduates for positions in law enforcement which require an associate of applied science degree. Check with your advisor and planned transfer schools for more details about transferring.

PRE-HEALTH PROFESSIONS

Students desiring to enter professional health careers such as chiropractic, dentistry, medicine, pharmacy and veterinary medicine typically can transfer coursework in the following areas to four-year colleges and universities:

- 4 semesters of chemistry (general and organic, including laboratory)
- 2 semesters of biology
- 2 semesters of physics
- 2 semesters of mathematics
- 2 semesters of English language and literature
- 2 semesters of humanities (art, communication, journalism, music, philosophy, speech)
- 2 semesters of social science (anthropology, history, economics, geography, political science, psychology, sociology and social work)

HEALTH OCCUPATIONS PROGRAMS

Students interested in health occupations may select a health program of study at MCCC or take preparatory work here that will transfer to four-year colleges or universities.

Students who complete an associate degree in nursing or respiratory therapy may also wish to pursue a bachelor's degree. As a registered nurse, for example, students have several options for bachelor of science in nursing completion programs available in Southeast Michigan and Northwest Ohio. Students should talk to a faculty advisor for details.

PRE-BUSINESS ADMINISTRATION PROGRAMS

Students who wish to pursue four-year degrees in business administration may begin their education at MCCC. Transfer students may choose a variety of options for completing their first two years of study toward a bachelor of business administration degree. When pursuing any of these options, students should consult with an MCCC counselor or advisor and the institution they intend to transfer to when deciding which courses to take. The suggested options for transfer students include:

- Pursue an associate of science degree and include business and pre-business electives
- Pursue an associate of arts degree and include business and pre-business electives
- Pursue an associate of applied science degree in the business management program (see page 57 for details)

- Pursue a bachelor's degree with Siena Heights University taking up to 90 credits at MCCC
- Select and complete classes that transfer to the four-year college or university of choice (do not pursue an associate's degree)

All students who wish to earn an associate degree must complete the general requirements for graduation and meet specific degree requirements beginning on page 35.

TYPICAL BUSINESS/PRE-BUSINESS ELECTIVES (These courses may also be required for some programs.)

BUSAD 151	Introduction to Business
CIS 130	Introduction to Computer Information Systems
ACCTG 151	Accounting Principles
ACCTG 152	Accounting Principles
ACCTG 252	Cost Accounting
BMGT 201	Principles of Management
BSLW 251	Business Law
ECON 251	Principles of Macroeconomics
ECON 252	Principles of Microeconomics
MATH 162	Introduction to Statistics
MATH 171	Calculus I
MCOM 201	Principles of Marketing

Other MCCC accounting, business and management courses may transfer to some four-year institutions. Students should contact their prospective four-year institutions before registering for elective classes at MCCC.

COMPUTER SCIENCE

Students interested in pursuing a bachelor's degree in computer science may earn an associate degree at MCCC and then transfer to a four-year institution. Students have the opportunity to take courses leading to an associate of science degree which could include various computer science courses or they may take courses leading to the associate of applied science in CIS. Either of these will prepare the student to transfer to a four-year institution. MCCC has a signed transfer agreement with the University of Michigan, Dearborn which indicates specific MCCC courses that transfer directly into the bachelor of science in computer science program. Students should seek assistance from a counselor or an academic advisor in the CIS program.

INDUSTRIAL TECHNOLOGY PROGRAMS

Although industrial technology programs are designed as career programs for entry into jobs after the completion of a certificate or associate degree, Monroe County Community College has transfer agreements with several universities. The University of Toledo, Wayne State University, Eastern Michigan University, Ferris State University and Siena Heights University allow direct transfer of several of MCCC's two-year industrial technology programs.

Many MCCC graduates earn a bachelor of engineering technology degree after receiving an associate of applied science degree from MCCC. Some students use their technical credits earned at MCCC as their area major in teacher education programs.

APPRENTICESHIP TRAINING

In conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training, apprenticeship training is available in such trades as electrician, machine repair, machinist, millwright, diemaker and welder. All of these programs can be tailored to meet the needs of individual companies. College representatives, in discussion with local employers, can design unique programs of study to suit a particular industry.

STUDY ABROAD

Monroe County Community College offers students the chance to expand their horizons while completing coursework by visiting and living in other countries and cultures. Program course content and location varies from year to year. Study abroad programs take place during the spring semester; announcements regarding the program are made during the prior spring or fall semesters. Student exchange opportunities also exist in a variety of countries. For more information, contact the Humanities/Social Sciences Division.

■ Programs of Study

Programs of study are designed to lead to degrees/certificates in particular areas of study. Students may enter the workplace following completion of the degree or certificate and/or continue their education.

While the career programs are occupationally oriented and have a high degree of specialization, many are transferable to four-year colleges for completion of bachelor's degree programs such as education, career and technical education, general studies, etc. Careful course selection is important and should be done with a Monroe County Community College counselor and, to the extent possible, with an advisor of the four-year college to which transfer is planned.

Accounting

Career Pathways

The associate of applied science degree with specialization in accounting is designed to provide practical and theoretical preparation for positions leading to supervisory and administrative assignments. In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses. This curriculum provides for careers in business and industrial accounting departments as:

- Accounting clerks
- Junior accountants
- Accounting and management trainees

	Credits
Required General Education Courses	**18**
ENGL 151 (English Composition I)	3
MATH	3
POLSC 151 (Introduction to Political Science)	3
[1] Social Science/Humanities Elective	3
[2] Science Elective	4
[3] Computer Skills Elective	2

Required Core Courses	**39**
1st Semester	
ACCTG 151 (Accounting Principles)	4
BUSAD 151 (Introduction to Business)	4
2nd Semester	
ACCTG 152 (Accounting Principles)	4
† CIS 109 (Spreadsheet Software)	3
3rd Semester	
ACCTG 251 (Intermediate Accounting I)	4
ACCTG 255 (Introduction to Taxation)	3
ACCTG 201 (Microcomputer Accounting I)	3
ACCTG 220 (Payroll Accounting)	3
4th Semester	
ACCTG 254 (Intermediate Accounting II)	4
ACCTG 252 (Cost Accounting)	4
ACCTG 205 (Microcomputer Accounting II)	3

Suggested General Electives	**3**
(to complete degree requirements, not limited to those courses listed)	
BMGT 201 (Principles of Management)	3
BMGT 220 (International Business)	3
BSLW 251 (Business Law)	4
† CIS 130 (Introduction to Computer Information Systems)	3
ECON 251 (Principles of Macroeconomics)	3
ECON 252 (Principles of Microeconomics)	3
PSYCH 151 (General Psychology)	3

Total Degree Requirements	**60**

Certificate Program: Accounting

The Accounting Certificate prepares students for careers in business and industrial accounting departments as accounting clerks, junior accountants, or accounting and management trainees. The courses taken under the certificate are applicable to the degree program. Students should check course prerequisites when planning their semester schedules.

	Credits
Required Core Courses	**39**
ACCTG 151 (Accounting Principles)	4
ACCTG 152 (Accounting Principles)	4
ACCTG 201 (Microcomputer Accounting I)	3
ACCTG 205 (Microcomputer Accounting II)	3
ACCTG 220 (Payroll Accounting)	3
ACCTG 251 (Intermediate Accounting I)	4
ACCTG 252 (Cost Accounting)	4
ACCTG 254 (Intermediate Accounting II)	4
ACCTG 255 (Introduction to Taxation)	3
BUSAD 151 (Introduction to Business)	4
† CIS 109 (Spreadsheet Software)	3

† Tech Prep course. See page 14.

[1] See the social science/humanities alternatives listed on page 36.

[2] See the science alternatives listed on page 37.

[3] See the computer skills alternatives listed on page 37.

Administrative Office Specialist

Business • Management • Marketing • Technology

One-year Certificate Program: Administrative Office Specialist

In addition to the administrative professional associate degree program, Monroe County Community College offers certificate programs in administrative office specialist and administrative office assistant. The college recognizes that many employers place value on a certificate which authenticates specialized preparation. Courses taken under the certificate programs are applicable to the associate degree.

Graduates of these certificate programs will be prepared for entry-level employment as receptionists and office assistants.

Required Core Courses for Administrative Office Specialist Certificate

ADMN 106 (Numeric Keypad)	1
† CIS 109 (Spreadsheet Software)	3
† CIS 118 (Windows Operating System)	1
CIS 188 (InDesign™ Desktop Publishing)	3
ENGL 151 (English Composition I)	3
ADMN 101 (Introduction to Today's Office)	1
ADMN 119 (Machine Transcription)	3
ADMN 135 (Intermediate Keyboarding)	3
† WPR 102 (Word Processing I)	3
CIS 123 (PowerPoint Presentation Software)	3
† CIS 112 (Database Software)	3
ADMN 201 (Integrated Office Software)	4
WPR 103 (Advanced Word Processing)	3

Total Certificate Requirements: Administrative Office Specialist   **34**

One-semester Certificate Program: Administrative Office Assistant

Required Core Courses for Administrative Office Assistant Certificate

ADMN 106 (Numeric Keypad)	1
† CIS 109 (Spreadsheet Software)	3
† CIS 118 (Windows Operating System)	1
ENGL 151 (English Composition I)	3
ADMN 101 (Introduction to Today's Office)	1
ADMN 131 (Beginning Keyboarding)	3
† WPR 102 (Word Processing I)	3

Total Required Core Courses   **15**

Total Certificate Requirements: Administrative Office Assistant   **15**

† Tech Prep course. See page 14.

Administrative Professional

The associate of applied science degree with specialization as an administrative assistant is designed to provide comprehensive preparation for office employment. The curriculum offers administrative, medical and legal options and emphasizes communication skills as well as office applications software usage.

Graduates of this program will be prepared for entry-level employment in corporate offices, law firms, medical offices and administrative departments of state or local governments.

Suggested General Electives
Administrative Option
(to complete degree requirements)

ACCTG 201 (Microcomputer Accounting I)	3
BUSAD 151 (Introduction to Business)	4
CIS 173 (FrontPage Web Design)	3
CIS 182 (Illustrator Graphics)	3
CIS 184 (Photoshop Graphics)	3
ECON 251 (Principles of Macroeconomics)	3
ADMN 131B (Keyboarding Skills Enhancement)	1
PSYCH 101 (Social Psychology) or PSYCH 151 (General Psychology)	3

	Credits
Required General Education Courses	**19**

ENGL 151 (English Composition I)	3
ENGL 152 (English Composition II)	3
† BSMTH 101 (Business Mathematics)	3
POLSC 151 (Introduction to Political Science)	3
¹ Science Elective	4
† WPR 102 (Word Processing I)	3

Additional Required Core Courses for Legal Option	**10**
BSLW 251 (Business Law)	4
POLSC 154 (Introduction to Law Enforcement) or POLSC 156 (Fundamentals of Criminal Investigation)	3
ADMN 104 (Legal Specialty)	3

Required Core Courses (Administrative or Legal Option)	**37-38**

1st Semester

ADMN 106 (Numeric Keypad)	1
ADMN 101 (Introduction to Today's Office)	1
† CIS 118 (Windows Operating System)	1
SPCH 151 (Communication Fundamentals)	3

2nd Semester

† CIS 109 (Spreadsheet Software)	3
ADMN 135 (Intermediate Keyboarding)	3
WPR 103 (Advanced Word Processing)	3

3rd Semester

BMGT 201 (Principles of Management)	3
CIS 188 (InDesign™ Desktop Publishing)	3
CIS 123 (PowerPoint Presentation Software)	3
† CIS 112 (Database Software)	3

4th Semester

ACCTG 110 (Applied Office Accounting) or ACCTG 151 (Accounting Principles)	3-4
ADMN 119 (Machine Transcription)	3
ADMN 201 (Integrated Office Software)	4

Additional Required Core Courses for Medical Option	**9**
BIOL 152 (Biological Science)	4
HLTSC 110 (Medical Terminology)	2
ADMN 105 (Medical Specialty)	3

Total Degree Requirements:	
Administrative Option	**60**
Legal Option	**66**
Medical Option	**65**

† Tech Prep course. See page 14.

¹ See the science alternatives listed on page 37.

Application Software Specialist

Career Pathways

The associate of applied science degree with a concentration in application software is designed to provide comprehensive preparation in the computer support area.

Job opportunities include:
- Information technology support specialist
- Software application specialist

Required General Education Courses: **19**

    ENGL 151 (English Composition I) or
        ENGL 101 (Written & Oral Communication)..............3
    ENGL 152 (English Composition II) or
        ENGL 102 (Business Writing) 3
 [1] Math..3
    POLSC 151 (Introduction to Political Science)..............3
 [2] Science Elective..4
 † CIS 130 (Introduction to Computer
        Information Systems)..3

Required Core Courses: **41**

 † CIS 118 (Windows Operating System) 1
 † CIS 171 (Using the Internet) 1
 † ADMN 102 (Keyboarding) 1
 † WPR 102 (Word Processing I).....................................3
    WPR 103 (Advanced Word Processing) 3
 † CIS 109 (Spreadsheet Software) 3
 † CIS 112 (Database Software).......................................3
    CIS 123 (PowerPoint Presentation Software)................3
    CIS 188 (InDesign™ Desktop Publishing).....................3
    ADMN 201 (Integrated Software) 4
Additional CIS Required Electives 8
General Electives 8

Total Degree Requirements   **60**

Application Software Specialist Certificate:

This certificate program focuses on office application software for today's administrative assistant. Successful completion of these courses helps to prepare students for the certification exams.

Required Courses
 † ADMN 102 (Keyboarding) 1
 † CIS 109 (Spreadsheet Software) 3
 † CIS 112 (Database Software).......................................3
 † CIS 118 (Windows Operating System) 1
    CIS 123 (PowerPoint Presentation Software)................3
 † CIS 130 (Introduction to Computer
        Information Systems)..3
 † CIS 171 (Using the Internet) 1
 † WPR 102 (Word Processing I)......................................3
    WPR 103 (Advanced Word Processing) 3
    ADMN 201 (Integrated Office Software) 4

Total Certificate Requirements   **25**

 † Tech Prep course. See page 14.
 [1]† BSMTH 101 (Business Mathematics), † MATH 121 (Technical Mathematics), MATH 150 or higher. It is suggested that math be taken in the first semester.
 [2] See the science alternatives listed on page 37.

Automotive Engineering Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in automotive engineering technology is structured to provide the technical knowledge and mechanical abilities necessary to work in today's growing automotive research and development industry.

Automotive engineering technicians assist engineers in design and development work. They help determine the practicality of a proposed product design change and plan and carry out tests on experimental test devices and equipment for performance, durability and efficiency. As part of the testing procedure, they record data, make computations, plot graphs, analyze results, write reports and often make recommendations for improvements to meet performance requirements. The automotive engineering technician makes use of various mechanical and electrical test instruments and gauges, including engine and chassis dynamometers, road simulators, flow benches and computer controlled data gathering devices. The curriculum is planned to prepare the graduate to perform duties concerned with design, testing and development activities in direct support of the automotive engineer. Graduates of this program will be prepared for entry-level employment in the following areas:

- Automotive engineering technician
- Engineering technician
- Factory technical representative
- Research and development technician
- Research technician
- Sales engineer

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses — 19
ENGL 101 (Written and Oral Communications) or
   ENGL 151 (English Composition I) 3
[1] MATH 6
POLSC 151 (Introduction to Political Science) 3
[2] PHY 101, 151, or
   CHEM 150 or 151 4
[3] Social Science/Humanities Elective 3

Required Core Courses — 36
1st Semester
† ELEC 125 (Fundamentals of Electricity) 3
AUTO 101 (Internal Combustion Engines) 4
2nd Semester
† AUTO 102 (Auto Electricity and Electronics) 4
AUTO 103 (Fuel and Emission Control Systems) 4

Winter or Spring Semester
AUTO 201 (Automotive Digital Electronics) 3
[4] MDTC 160 (Mechanical Drafting and CAD I) 4
3rd Semester
AUTO 104 (Automotive Ignition Systems) 3
AUTO 107 (Automotive Chassis Units) 4
4th Semester
AUTO 105 (Automotive Transmissions) 3
AUTO 114 (Automotive Instrumentation
   and Testing) 4

Additional Technology Electives — 6-7
(All recommended for better employment opportunities.)
AUTO 109 (Welding for Automotive Technicians) 3
MATL 101 (Industrial Materials) 3
MECH 102 (Manufacturing Processes) 4
† MECH 103 (Basic Machine Tools) 4
MECH 111 (Introduction to Fluid Power) 3

Total Degree Requirements — 61-62

Certificate Program
Automotive Engineering Technology

In addition to the two-year associate's degree program, Monroe County Community College offers a certificate program in automotive engineering technology. We recognize that many employers place value on a certificate which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

† ELEC 125 (Fundamentals of Electricity) 3
AUTO 101 (Internal Combustion Engines) 4
† AUTO 102 (Automotive Electricity and Electronics) 4
AUTO 103 (Fuel and Emission Control Systems) 4
AUTO 104 (Automotive Ignition Systems) 3
AUTO 105 (Automotive Transmissions) 3
AUTO 107 (Automotive Chassis Units) 4
AUTO 114 (Automotive Instrumentation and Testing).... 4
AUTO 201 (Automotive Digital Electronics) 3
MATH (Mathematics) 4

Certificate Requirements — 36

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] Automotive engineering technology students are strongly encouraged to take PHY 101.

[3] See the social science/humanities alternatives listed on page 36.

[4] Meets computer skills requirement.

Business Management

Business • Management • Marketing • Technology

This associate of applied science degree has been developed to provide the student with a general background in business and an awareness of the organizational and environmental changes that continually challenge management.

Graduates of this program will potentially be prepared for entry-level employment as:

- Retail managers
- Sales managers
- Customer service representatives
- Business analysts
- Office managers
- Human resource managers
- General business managers

Although this program is a two-year occupational program designed to prepare students for employment, many four-year colleges and universities will accept much of this curriculum in transfer. See an MCCC counselor for details.

Credits

Required General Education Courses   19

ENGL 151 (English Composition I) 3
ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective 4
† CIS 130 (Introduction to Computer
        Information Systems) 3

Required Core Courses   35

1st Semester
BUSAD 151 (Introduction to Business) 4
ECON 251 (Principles of Macroeconomics) 3
2nd Semester
BMGT 201 (Principles of Management) 3
MCOM 201 (Principles of Marketing) 3
ACCTG 151 (Accounting Principles) 4
3rd Semester
ACCTG 152 (Accounting Principles) 4
QSTC 111 (Quality Management) 3
4th Semester
BMGT 220 (International Business) 3
BMGT 251 (Human Resource Management) 4
ACCTG 252 (Cost Accounting) 4

Suggested General Electives   6
(to complete degree requirements; not limited to those courses listed)
BSLW 251 (Business Law) 4
† CIS 109 (Spreadsheet Software) 3
† CIS 112 (Database Software) 3
CIS 123 (PowerPoint Presentation Software) 3
ECON 252 (Principles of Microeconomics) 3
MATH 162 (Introduction to Statistics) 3
PSYCH 151 (General Psychology) 3
PSYCH 255 (Psychology of
        Nonverbal Communication) 3
SPCH 151 (Communication Fundamentals) 3
SPCH 152 (Public Speaking) 3
† WPR 102 (Word Processing I) 3

Total Degree Requirements   60

† Tech Prep course. See page 14.
[1]† BSMTH 101 (Business Mathematics), or MATH 151 (Intermediate Algebra) or higher.
[2] See the science alternatives listed on page 37.

Chemistry

This associate of science degree with specialization in chemistry is designed to provide the first two years of study for students who intend to continue their education in chemistry or other natural sciences. This degree (with careful selection of electives) will also be useful for students in the pre-professional study of medicine and related fields, as well as students who seek careers as laboratory technicians after completing an associate's degree. Students transferring to another college should obtain information early from that college concerning specific degree requirements.

Students take chemistry courses that emphasize significant laboratory work including instrumentation, traditional wet chemical methods and microscale techniques.

	Credits
Required General Education Courses	**20**
ENGL 151 (English Composition I)	3
ENGL 152 (English Composition II)	3
POLSC 151 (Introduction to Political Science)	3
Social Sciences Elective	6
Humanities Elective	3
[1] Computer Skills Elective	2

Required Core Courses   **32**

1st Semester
CHEM 151 (General College Chemistry I)	4
MATH 171 (Calculus I)	4

2nd Semester
CHEM 152 (General College Chemistry II)	4
MATH 172 (Calculus II)	4

3rd Semester
CHEM 251 (Organic Chemistry I)	4
[2] PHY 151 (General Physics I)	4

4th Semester
CHEM 252 (Organic Chemistry II)	4
[2] PHY 152 (General Physics II)	4

Suggested Elective Courses   **8-10**
MATH 251 (Introduction to Linear Algebra)	3
MATH 271 (Calculus III)	4
MATH 273 (Introduction to Differential Equations)	3

Total Degree Requirements   **60**

[1] See the computer skills alternatives listed on page 36.

[2] May substitute PHY 251 for PHY 151 and PHY 252 for PHY 152.

Computer Information Systems
Accounting/CIS

Business • Management • Marketing • Technology

Career Pathways

The associate of applied science degree with specialization in Accounting/CIS has a dual focus in combining accounting and computer courses. Students completing this program of study will have entry-level skills in both career areas.

Job opportunities include:
- Entry-level accounting clerk
- Junior accountant
- Cost estimator
- Small business accountant
- Entry-level programmer
- CIS entry-level positions

	Credits
Required General Education Courses	**19**

ENGL 151 (English Composition I) or
   ENGL 101 (Written & Oral Communication).............. 3
ENGL 152 (English Composition II) or
   ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science).............. 3
[2] Science Elective 4
† CIS 130 (Introduction to Computer
   Information Systems) 3

Required Courses	**44**

1st Semester
ACCTG 151 (Accounting Principles) 4
† CIS 109 (Spreadsheet Software) 3
† ADMN 102 (Keyboarding) 1
† CIS 132 (Introduction to Computer Programming) 2
2nd Semester
ACCTG 152 (Accounting Principles)............................. 4
† CIS 112 (Database Software)....................................... 3
CIS 150 (Computer Science I) 3

3rd Semester
ACCTG 201 (Microcomputer Accounting I) 3
ACCTG 251 (Intermediate Accounting I) 4
CIS 152 (Visual Basic Programming)............................ 3
CIS 205 (Systems Analysis & Design) 3
4th Semester
ACCTG 205 (Microcomputer Accounting II)................. 3
ACCTG 252 (Cost Accounting)..................................... 4
ACCTG 254 (Intermediate Accounting II) 4

Additional Required Courses	**6**

ACCTG 220 (Payroll Accounting) 3
CIS elective. Must be numbered
   higher than CIS 152 3

Total Degree Requirements	**69**

† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics), †MATH 121 (Technical Mathematics), MATH 150 or higher. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Computer Information Systems
Computer Programming

Business • Management • Marketing • Technology

Career Pathways

The associate of applied science degree in computer programming is designed to train students as programmers. Students completing this program of study should be able to write and update programs in a variety of languages.

Job opportunities include:
- Entry-level programming positions in C++, Java and Visual Basic
- Entry-level Systems Analysis

Credits

Required General Education Courses   **19**

ENGL 151 (English Composition I) or
    ENGL 101 (Written & Oral Communication).............. 3
ENGL 152 (English Composition II) or
    ENGL 102 (Business Writing) 3
[1] MATH.. 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective.. 4
† CIS 130 (Introduction to Computer
    Information Systems) 3

Required Courses   **37-39**

1st Semester
† ADMN 102 (Keyboarding) 1
† CIS 132 (Introduction to Computer Programming) 2
† CIS 112 (Database Software)....................................... 3
CIS 177 (Markup Languages) 3

2nd Semester
CIS 150 (Computer Science I) 3
CIS 152 (Visual Basic Programming) 3
BUSAD 151 (Introduction to Business)........................... 4

3rd Semester
CIS 205 (Systems Analysis & Design)............................. 3
CIS 175 (Java Programming).. 3
CIS 155 (Database Management Systems)...................... 3
CIS 272 (Database Web Development)........................... 3

Additional Required CIS Courses

(Choose 2 of the following)
CIS 179 (Web Script Programming) 3
CIS 250 (Computer Science II) 3
CIS 252 (Advanced Visual Basic Programming).............. 4
CIS 255 (Microsoft SQL) 4
CIS 266 (Windows Programming in C++) 3
CIS 267 (Beginning Game Programming) 3
CIS 268 (Assembly Language and
    Computer Architecture) 4
CIS 274 (Advanced Database Web
    Development (with ASP.NET) 3
CIS 275 (Advanced Java Programming) 3

General Elective Courses (As required to complete 60 hours)

Total Degree Requirements   **60**

Take CIS 255 and CIS 274 from the list of additional required CIS courses to earn the database application development certificate in addition to the AAS in computer programming.

Take CIS 179 and CIS 274 from the list of additional required CIS courses to earn the web development certificate in addition to the AAS in computer programming.

Certificate Programs:
Database Application Development

This certificate program focuses on database systems and database development concepts.

Required Courses

† ADMN 102 (Keyboarding) 1
† CIS 112 (Database Software)....................................... 3
† CIS 130 (Introduction to Computer
    Information Systems) 3
† CIS 132 (Introduction to Computer Programming) 2
CIS 150 (Computer Science I) 3
CIS 152 (Visual Basic Programming)............................. 3
CIS 155 (Database Management Systems) 3
CIS 177 (Markup Languages) 3
CIS 255 (Microsoft SQL)... 4
CIS 272 (Database Web Development) 3
CIS 274 (Advanced Database Web
    Development (with ASP.NET)................................... 3

Total Certificate Requirements   **31**

Application Development

This certificate program focuses on computer programming and systems analyst skills.

Required Courses

† ADMN 102 (Keyboarding) 1
† CIS 112 (Database Software)....................................... 3
† CIS 130 (Introduction to Computer
    Information Systems) 3
† CIS 132 (Introduction to Computer Programming) 2
CIS 150 (Computer Science I) 3
CIS 152 (Visual Basic Programming)........................... 3
CIS 205 (Systems Analysis and Design)........................ 3

(*Choose any 2 of the following*)
CIS 175 (Java Programming) 3
CIS 250 (Computer Science II).................................... 3
CIS 252 (Advanced Visual Basic Programming) 4
CIS 266 (Windows Programming in C++) 3
CIS 267 (Beginning Game Programming) 3
CIS 268 (Assembly Language and
    Computer Architecture)... 4
CIS 275 (Advanced Java Programming)....................... 3

Total Certificate Requirements   24

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† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics), †MATH 121 (Technical Mathematics), MATH 150 or higher. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Students interested in pursuing a baccalaureate degree should see the notes on the computer science program.

Computer Information Systems
Computer Science

Business • Management • Marketing • Technology

The associate of applied science degree with specialization in computer science is designed to train students for the area of computer programming in an engineering/science environment.

Job opportunities include:

- Entry-level programming positions in C++, Java or Visual Basic.
- Entry-level systems analyst

Also, this program will prepare students well for transfer opportunities in the area of Computer Science.

For information on transfer options and requirements refer to the MCCC Web site at: http://www.monroeccc.edu/academicadv-transfer/2+2agreement/baccalau.htm

MCCC has a signed transfer agreement with The University of Michigan-Dearborn which allows students to transfer directly into the bachelor of science in computer and information science or software engineering programs. Refer to the above Web site for specific transfer courses and requirements.

	Credits
Required General Education Courses:	**20**
ENGL 151 (English Composition I)	3
ENGL 152 (English Composition II)	3
POLSC 151 (Introduction to Political Science)	3
[1] MATH	4
[2] Science Elective	4
† CIS 130 (Introduction to Computer Information Systems)	3

	Credits
Required Core Courses:	**34**
1st Semester	
† ADMN 102 (Keyboarding)	1
† CIS 112 (Database Software)	3
CIS 132 (Introduction to Computer Programming)	2
2nd Semester	
CIS 150 (Computer Science I)	3
CIS 152 (Visual Basic Programming)	3
3rd Semester	
CIS 155 (Database Management Systems)	3
CIS 175 (Java Programming)	3
CIS 205 (Systems Analysis and Design)	3
CIS 250 (Computer Science II)	3
4th Semester	
[1] CIS 167 (Discrete Structures)	3
CIS 268 (Assembly Language and Computer Architecture)	4
CIS 266 (Advanced C++) or CIS 267 (Beginning Game Programming) or CIS 275 (Advanced Java Programming)	3

General Elective Courses	**6**

Total Degree Requirements	**60**

† Tech Prep course. See page 14.

[1] CIS 167 (Discrete Structures) has a prerequisite of MATH 171 (Calculus I). See page 135 for the prerequisite for MATH 171 (Calculus I) which will vary based upon current math skills.

[2] See the science alternatives listed on page 37.

Computer Information Systems
End User Support Specialist

Business • Management • Marketing • Technology

Career Pathways

The associate of applied science – computer information systems with a program designation of end user support specialist is designed to provide an opportunity for students to acquire skills needed for an entry-level position supporting computer end-users in a business environment. The degree and accompanying certificate focus on the software side of end user support with the opportunity to further enhance skills by choosing other computer classes as electives.

Job opportunities include:

- End user support specialist
- Help desk specialist
- Software support specialist

	Credits
Required General Education Courses:	**19**

ENGL 151 (English Composition I) or
    ENGL 101 (Written & Oral Communication) 3
ENGL 152 (English Composition II) or
    ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective... 4
† CIS 130 (Introduction to Computer
    Information Systems) 3

Required Core Courses:	**28**

1st Semester
† ADMN 102 (Keyboarding) 1
CIS 140 (Help Desk Concepts) 3
2nd Semester
† CIS 109 (Spreadsheet Software) 3
CIS 142 (Help Desk Troubleshooting).......................... 3
CIS 208 (PC Operating Systems) 3
† WPR 102 (Word Processing I)..................................... 3
3rd Semester
CIS 123 (PowerPoint Presentation Software)................. 3
CIS 209 (Network Concepts) 3
WPR 103 (Advanced Word Processing) 3
4th Semester
† CIS 112 (Database Software)...................................... 3

Additional CIS Required Electives	**8**
(Recommended: P.C. Support or Network Specialist Courses)	

General Electives	**5**

Total Credit Hours Required	**60**

Certificate Program:
Help Desk Specialist

This certificate program focuses on office application software and help desk skills that are essential for today's help desk and computer end user support professionals.

Required Courses:
† ADMN 102 (Keyboarding) 1
† CIS 109 (Spreadsheet Software) 3
† CIS 112 (Database Software)....................................... 3
CIS 123 (PowerPoint Presentation Software)................. 3
† CIS 130 (Introduction to Computer
    Information Systems) 3
CIS 140 (Help Desk Concepts) 3
CIS 142 (Help Desk Troubleshooting).......................... 3
CIS 208 (PC Operating Systems) 3
CIS 209 (Network Concepts) 3
† WPR 102 (Word Processing I)..................................... 3
WPR 103 (Advanced Word Processing) 3

Total Certificate Requirements	**31**

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*To earn the PC support technician certificate in addition to the AAS in end user support specialist, take CIS 132 and CIS 220 as additional CIS required electives.

*To earn the network software administration specialist certificate in addition to the AAS in end user support specialist, take CIS 132, CIS 150 or CIS 152, CIS 216, CIS 228, CIS 230, CIS 234 and CIS 276 as electives.

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† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics), †MATH 121 (Technical Mathematics), MATH 150 or higher. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Computer Information Systems
Internet Professional

Business • Management • Marketing • Technology

Career Pathways

This associate of applied science degree offers the ability to select a concentration in one of two specialties: Web design or Web development.

Job opportunities include:

- Web design
- Web programmer/developer

	Credits
Required General Education Courses:	**19**

ENGL 151 (English Composition I) or
   ENGL 101 (Written & Oral Communication) 3
ENGL 152 (English Composition II) or
   ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective.. 4
† CIS 130 (Introduction to Computer
   Information Systems) 3

Required Core Courses:	**4**

† ADMN 102 (Keyboarding) 1
CIS 177 (Markup Languages) 3

Web Design Concentration:	**37**

CIS 172 (Web Design Concepts) 3
CIS 174 (Dreamweaver Web Design) 3
CIS 176 (Web Animation - Flash)................................. 3
CIS 182 (Illustrator Graphics) 3
CIS 184 (PhotoShop Graphics).................................... 3
CIS 185 (Web Graphics) 3
CIS 186 (Multimedia Development-Adobe
   After Effects) 3
CIS 187 (Digital Video Editing) or
   CIS 189 (3D Animation-Maya) 3
† WPR 102 (Word Processing I) 3
Additional CIS Required Electives*   **5**
General Electives (suggested art elective)*   **5**

*To earn Graphic Design Digital Media Certificate with this AAS take CIS 180, CIS 188 and two from ART 151, ART 160 and ART 165.

*To earn Web Development Certificate with this AAS take CIS 112, CIS 132, CIS 152, CIS 179, CIS 272, CIS 274 and two from CIS 150, CIS 175, CIS 155 or CIS 255.

OR

Web Development Concentration:	**37**

† CIS 112 (Database Software).. 3
† CIS 132 (Intro to Computer Programming) 2
CIS 152 (Visual Basic Programming)........................... 3
CIS 179 (Web Script Programming)............................. 3
CIS 272 (Database Web Development) 3
CIS 274 (Advanced Database Web Development
   with ASP.NET) 3

Choose 6 or 7 hours from the list below	**6/7**

CIS 150 (Computer Science I) 3
CIS 155 (Database Management Systems) 3
CIS 175 (Java Programming) 3
CIS 255 (Microsoft SQL)... 4
Additional Required CIS electives   **8 or 9**
General Electives   **5 or 6**

Total Degree Requirements   **60**

Certificate Programs:
Web Design

This certificate program focuses on knowledge and skills for today's Web design professionals.

Required Courses

† ADMN 102 (Keyboarding) 1
† CIS 130 (Introduction to Computer
   Information Systems) 3
CIS 172 (Web Design Concepts) 3
CIS 174 (Dreamweaver Web Design)........................... 3
CIS 176 (Web Animation – Flash)................................ 3
CIS 177 (Markup Languages) 3
CIS 182 (Illustrator Graphics) 3
CIS 184 (PhotoShop Graphics).................................... 3
CIS 185 (Web Graphics) 3
CIS 186 (Multimedia Development-Adobe
   After Effects) 3
CIS 187 (Digital Video Editing) or
   CIS 189 (3D Animation – Maya) 3

Total Certificate Requirements   **31**

† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics) or †MATH 121 (Technical Mathematics I) or MATH 150 or higher. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Web Development

This certificate program focuses on Web development and Web programming knowledge and skills needed for today's Web developers.

Required Courses

† ADMN 102 (Keyboarding) 1
† CIS 130 (Introduction to Computer
    Information Systems) 3
† CIS 112 (Database Software) 3
† CIS 132 (Introduction to Computer Programming) 2
CIS 152 (Visual Basic Programming) 3
CIS 177 (Markup Languages) 3
CIS 179 (Web Script Programming) 3
CIS 272 (Database Web Development) 3
CIS 274 (Advanced Database Web Development
    with ASP.NET) 3

Choose 6 or 7 credits from the following:

CIS 150 (Computer Science I) 3
CIS 155 (Database Management Systems) 3
CIS 175 (Java Programming) 3
CIS 255 (Microsoft SQL) 4

Total Certificate Requirements   31

† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics) or †MATH 121 (Technical Mathematics I) or MATH 150 or higher. It is suggested that Math be taken in the first semester.

[2] See the science alternatives listed on page 37.

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*To earn computer programming database application development certificate with the Web development AAS, take CIS 150, CIS 155 and CIS 255 as your electives.

*To earn computer programming application development certificate with the Web development AAS, take CIS 150, CIS 205, any two of the following programming courses: CIS 175, CIS 250, CIS 252, CIS 266, CIS 267, CIS 268 or CIS 275 as your electives.

*To earn Web design certificate with the Web development AAS, take CIS 172, CIS 174, CIS 176, CIS 184, CIS 186 and either CIS 187 or CIS 189 as your electives.

Computer Information Systems
Network Specialist

Career Pathways

The associate of applied science degree with specialization as a network specialist is designed to train students in LAN Windows Server networking, hardware maintenance, data communication concepts, various PC operating systems and Web administration fundamentals.

Job opportunities include:
- Network operating systems specialist
- Network administration specialist

	Credits
Required General Education Courses:	**19**

ENGL 151 (English Composition I) or
   ENGL 101 (Written & Oral Communication) 3
ENGL 152 (English Composition II) or
   ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science).............. 3
[2] Science Elective.. 4
† CIS 130 (Introduction to Computer
   Information Systems).. 3

	Credits
Required Courses:	**39**

1st Semester
† ADMN 102 (Keyboarding) 1
† CIS 132 (Introduction to Computer Programming) 2
CIS 140 (Help Desk Concepts) 3

2nd Semester
CIS 150 (Computer Science I) or
CIS 152 (Visual Basic Programming)............................ 3
CIS 208 (PC Operating Systems) 3
CIS 209 (Network Concepts) 3

3rd Semester
CIS 205 (Systems Analysis & Design) 3
CIS 228 (Linux Administration) 3
CIS 230 (Windows Server) 3

4th Semester
CIS 216 (Introduction to Computer Security) 4
CIS 220 (Hardware Maintenance) 4
CIS 234 (Advanced Windows Server)........................... 4
CIS 276 (Web Administration) 3
General Elective Courses (as required to complete 60 hours)

Total Degree Requirements	**60**

Certificate Program:

Network Software Administration Specialist

This certificate program focuses on knowledge and skills that are essential for those specializing in Network Software.

Required Courses
† ADMN 102 (Keyboarding) 1
† CIS 130 (Introduction to Computer
   Information Systems).. 3
† CIS 132 (Introduction to Computer Programming) 2
CIS 208 (PC Operating Systems) 3
CIS 209 (Network Concepts) 3
CIS 216 (Introduction to Computer Security) 4
CIS 228 (Linux Administration) 3
CIS 230 (Windows Server) 3
CIS 234 (Advanced Windows Server)........................... 4
CIS 276 (Web Administration) 3

Total Certificate Requirements	**29**

† Tech Prep course. See page 14.

[1]† MATH 121 (Technical Mathematics), MATH 150 (Beginning Algebra) or a math course numbered higher than 150. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

*To earn the PC support technician certificate along with an AAS network specialist program designation, you need to only take CIS 142.

*To earn the AAS PC support technician program designation along with an AAS network specialist program designation, you need to only take CIS 142, CIS 109 and ELEC 125. This means taking only two additional courses to earn both the AAS PC support technician program designation and the AAS network specialist program designation.

Computer Information Systems
PC Support Technician

Business • Management • Marketing • Technology

The associate of applied science degree with specialization as a PC support technician is designed to train students in PC hardware maintenance and various PC operating systems.

Job opportunities include:
- PC technician
- Hardware support specialist

	Credits
Required General Education Courses:	**19**

ENGL 151 (English Composition I) or
    ENGL 101 (Written & Oral Communication) 3
ENGL 152 (English Composition II) or
    ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective 4
† CIS 130 (Introduction to Computer
    Information Systems) 3

	Credits
Required Courses:	**31**

1st Semester
† ADMN 102 (Keyboarding) 1
† CIS 132 (Introduction to Computer Programming) 2
CIS 140 (Help Desk Concepts) 3
2nd Semester
† CIS 109 (Spreadsheet Software) 3
CIS 142 (Help Desk Troubleshooting) 3
CIS 150 (Computer Science I) or
    CIS 152 (Visual Basic Programming) 3
CIS 209 (Network Concepts) 3
3rd Semester
CIS 205 (Systems Analysis & Design) 3
CIS 208 (PC Operating Systems) 3
† ELEC 125 (Fundamentals of Electricity) 3
4th Semester
CIS 220 (Hardware Maintenance) 4

Additional Required CIS Electives	**8**

General Elective Courses (As required to complete 60 hours)

Total Degree Requirements	**60**

Certificate Program:
PC Support Technician:

This certificate program focuses on knowledge and skills that are essential for today's computer technicians.

Required Courses
† ADMN 102 (Keyboarding) 1
† CIS 130 (Introduction to Computer
    Information Systems) 3
† CIS 132 (Introduction to Computer Programming) 2
CIS 140 (Help Desk Concepts) 3
CIS 142 (Help Desk Troubleshooting) 3
CIS 208 (PC Operating Systems) 3
CIS 209 (Network Concepts) 3
CIS 220 (Hardware Maintenance) 4

Total Certificate Requirements	**22**

† Tech Prep course. See page 14.

[1]† MATH 121 (Technical Mathematics), MATH 150 (Beginning Algebra) or a math course numbered higher than 150. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Construction Management Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in construction management technology is designed to provide individuals with a sound background for rewarding careers in the construction industry.

The program is structured to provide training in both the technical and business components of this industry. Technical courses examine the materials, processes and systems used in construction. The business courses teach basic business practices and computer skills.

This program will be valuable for students seeking entry-level positions as well as individuals who are currently in the construction field seeking to enhance their employment opportunities. Graduates of the program will have sufficient knowledge of the construction process to make a valuable contribution in both the field and office environment. They will be prepared for entry-level employment in the following areas:

- Assistant construction superintendent
- Construction inspector
- Quality control technician
- Estimator
- Land planning technician
- Architectural drafter
- Materials sales engineer
- Specifications writer trainee
- Structural engineering technician
- Construction supervisor

It should be noted that classes are offered on a rotating basis, but due to schedule conflicts may not be offered to allow a student to complete the program within two calendar years. Check with the Industrial Technology Division Office for further information.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Note: Construction management students who wish to pursue the 3 + 1 transfer program to Eastern Michigan University must meet with MCCC program faculty for alternate course selections before registering for classes.

Credits

Required General Education Courses   22

   ENGL 101 (Written and Oral Communication) or
   ENGL 151 (English Composition I) 3
[1] MATH 6
   POLSC 151 (Introduction to Political Science).............. 3
[2] Social Science/Humanities Elective 3
   PHY 101, 151 or CHEM 150 or 151 4
† CIS 130 (Introduction to Computer
    Information Systems) 3

Required Core Courses   35/36

1st Semester
   CONM 100 (Introduction to Design
    and Construction).. 3
   CONM 101 (Materials of Construction)........................ 3
2nd Semester
   CONM 103 (Residence Drafting) 4
   CONM 110 (Construction Blueprint Reading)............... 3
Spring
   CONM 107 (Surveying) 3
3rd Semester
   CONM 102 (Construction Practices)............................ 3
   CONM 120 (Introduction to AutoCAD
    for Architecture) or.. 3
† MDTC 160 (Mechanical Drafting and CAD I) 4
   CONM 202 (Construction Safety)................................ 3
4th Semester
   CONM 105 (Mechanical Building Systems)................... 4
   ACCTG 110 (Applied Office Accounting)...................... 3
   METC 208 (Strength of Materials).............................. 3

Additional Business and Technology Requirements   6

† ELEC 125 (Fundamentals of Electricity) 3
   BMGT 201 (Principles of Management) 3

Total Degree Requirements   63/64

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

Certificate Program:
Construction Management Technology

In addition to the two-year associate degree program, Monroe County Community College offers a certificate program in construction management technology. We recognize that many employers place value on a certificate, which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

CONM 100 (Introduction to Design
 and Construction).. 3
CONM 101 (Materials of Construction)......................... 3
CONM 102 (Construction Practices)............................. 3
CONM 103 (Residence Drafting) 4
CONM 105 (Mechanical Building Systems)................... 4
CONM 107 (Surveying) 3
CONM 110 (Construction Blueprint Reading)............... 3
CONM 120 (Introduction to AutoCAD
 for Architecture) 3
CONM 202 (Construction Safety)................................. 3
MATH (Mathematics) 4
METC 208 (Strength of Materials)............................... 3

Total Certificate Requirements   36

Criminal Justice/ Law Enforcement

Criminal Justice

This associate of applied science program prepares students for employment in criminal justice positions that require an associate degree or for transfer to baccalaureate programs in criminal justice. Students planning to transfer should consult both their MCCC advisor and the transfer school for assistance in selecting appropriate electives.

Law Enforcement

This associate of applied science program prepares students for employment in law enforcement positions requiring both an associate degree and Michigan Commission on Law Enforcement Standards (MCOLES) certification. Monroe County Community College students may take the Police Academy at the Schoolcraft College, Radcliff Campus in Garden City.

The following steps will need to be completed:

1. Students must apply and be admitted to Schoolcraft College.
2. Students must have their official transcript sent to Schoolcraft College.
3. Students are required to contact Schoolcraft College's Radcliff Campus Police Academy Office for application materials before the end of the second semester at Monroe County Community College.
4. Students must complete the general education and required core courses at Monroe County Community College with a minimum 2.0 cumulative GPA prior to entering the Police Academy.
5. Schoolcraft College Police Academy is a qualifying admission program. Applicants must meet the requirement in order to be accepted.
6. Applicants must successfully pass the MCOLES pre-enrollment reading and writing test and the pre-enrollment physical agility test.
7. After meeting these requirements, along with a successful interview, criminal history check and driving record check, qualified students will be admitted into the course.

	Credits
Required General Education Courses	**16-17**
ENGL 151 (English Composition I)	3
POLSC 151 (Introduction to Political Science)	3
Math (MATH 151 or higher)	3-4
Science (with lab)	4
CIS 130	3

Required Core Courses	**30**

1st Semester

POLSC 154 (Introduction to Law Enforcement)	3
SOC 151 (Introduction to Sociology)	3
SPCH 151 (Communication Fundamentals)	3

2nd Semester

ENGL 155 (Technical Writing)	3
PSYCH 151 (General Psychology)	3
SOC 170 (Introduction to Corrections)	3

3rd Semester

POLSC 251 (Criminal Law)	3
POLSC 255 (Police Organization and Administration)	3
SOC 252 (Juvenile Delinquency)	3
PSYCH 152 (Psychology of Personality & Adjustment)	3

Criminal Justice Option

4th Semester

SOC 251 (Modern Social Problems)	3
PSYCH 153 (Social Psychology)	3
SPCH 155 (Interpersonal Communication)	3
*Elective	3
*Elective	3
Total	**15**

Total Degree Requirements	**61-62**

*Elective courses should be selected in consultation with an advisor.

Law Enforcement Option

4th Semester

Police Academy (CJ 286 at Schoolcraft College)	21

Total Degree Requirements	**68**

Culinary Skills and Management

Business • Management • Marketing • Technology

Career Pathways

The associate of applied science degree with specialization in culinary skills and management and the culinary skills and management certificate program are designed to prepare students for careers in the food service industry. Labor market projections indicate that opportunities for trained cooks and chefs are expected to increase in the years ahead.

Students in the culinary skills and management program take college courses to gain knowledge and skills in cooking and restaurant operation. They receive hands-on experience operating the Cuisine 1300 Restaurant located on the MCCC campus and also gain experience in banquet operations, catering and kitchen management.

Graduates of this program are prepared to accept jobs as cooks and chefs in hotels, fine dining restaurants, resorts and institutions. The work is demanding and the hours are long; however, job security, promotions and good salaries reward the energetic worker.

Students are required to purchase their own uniforms, knives, tools and books. It is recommended that students have food service experience prior to enrollment in the program at MCCC.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses. Students are required to take the CSM courses in the order listed; however, the remaining courses required for the degree may be selected in accordance with the college schedule and advisor recommendations.

Students are reminded that CSM 111 (Food Sanitation) must be completed successfully before they may enroll in CSM 101A-D. CSM 111 is offered in the six-week summer session immediately preceding fall semester.

Credits

Required General Education Courses — 19

ENGL 151 (English Composition I) or ENGL 101 (Written and Oral Communication)	3
† BSMTH 101 (Business Math)	3
POLSC 151 (Introduction to Political Science)	3
[1] Social Science/Humanities Elective	3
[2] Science Elective	4
† CIS 130 (Introduction to Computer Information Systems)	3

Required Core Courses — 44

Pre-1st Semester
[3] CSM 111 (Food Sanitation) 2

1st Semester
CSM 101 (Food Preparation I)
CSM 101A (Introduction to Culinary Arts) 4
CSM 101B (Basic Restaurant Production) 2
CSM 101C (Baking I) 2
CSM 101D (Soups, Stocks, Sauce Production) 2

2nd Semester
CSM 116 (Food Preparation II)
CSM 116A (Introduction to Buffet Preparation) 4
CSM 116B (Beginning Pastries) 2
CSM 116C (Baking II) 2
CSM 116D (Institutional Food Preparation) 2

Spring Semester
CSM 114 (Nutrition) 2

3rd Semester
CSM 201 (Advanced Food Preparation I)
CSM 201A (Introduction to Hospitality Industry) 2
CSM 201B (Dining Room Procedures) 1
CSM 201C (Menu Planning) 1
CSM 201D (Purchasing and Receiving) 1
CSM 201E (a la Carte Food Preparation) 3

4th Semester
CSM 216 (Advanced Food Preparation II)
CSM 216A (Garde Manger) 2
CSM 216B (Menu Planning) 1
CSM 216C (Ice Carving) 2
CSM 216D (Advanced Buffet Preparation) 3
CSM 119 (Bar Management) 1
CSM 207 (Restaurant Management and Supervision) 3

Total Degree Requirements — 63

† Tech Prep course. See page 14.
[1] See the social science/humanities alternatives listed on page 36.
[2] See the science alternatives listed on page 37.
[3] CSM 111 is offered during the summer session and must be completed successfully before the student enrolls in CSM 101A-D.

Certificate Program
Culinary Skills and Management

Monroe County Community College offers certificate programs, recognizing that many employers place value on a certificate which authenticates specialized educational preparation. Certificate programs are designed to develop specific skills. Each program concentrates on specialty courses with skill development and job upgrading being the primary objective. The courses taken under the certificate plan are applicable to the associate degree.

Job opportunities include:
- Airlines
- Catering
- Clubs
- Hospitals and institutions
- Resorts
- Restaurants and hotels
- Vending
- Fine dining cooks

[1] CSM 111 (Food Sanitation) 2
CSM 101 (Food Preparation I)
   CSM 101A (Introduction to Culinary Arts) 4
   CSM 101B (Basic Restaurant Production) 2
   CSM 101C (Baking I) 2
   CSM 101D (Soups, Stocks, Sauce Production) 2
CSM 116 (Food Preparation II)
   CSM 116A (Introduction to Buffet Preparation) 4
   CSM 116B (Beginning Pastries) 2
   CSM 116C (Baking II) 2
   CSM 116D (Institutional Food Preparation) 2
   CSM 114 (Nutrition) 2
CSM 201 (Advanced Food Preparation I)
   CSM 201A (Introduction to Hospitality Industry) 2
   CSM 201B (Dining Room Procedures) 1
   CSM 201C (Menu Planning) 1
   CSM 201D (Purchasing and Receiving) 1
   CSM 201E (a la Carte Food Preparation) 3
CSM 216 (Advanced Food Preparation II)
   CSM 216A (Garde Manger) 2
   CSM 216B (Menu Planning) 1
   CSM 216C (Ice Carving) 2
   CSM 216D (Advanced Buffet Preparation) 3
   CSM 119 (Bar Management) 1
   CSM 207 (Restaurant Management and Supervision) 3

Total   **44**

[1] CSM 111 is offered during the summer session. This course must be completed successfully before the student enrolls in CSM 101A-D.

For a student to be considered for the culinary skills and management program, the Business Division of Monroe County Community College requires:

1. High school graduation or successful completion of the General Education Development (GED) test.
2. Completed Monroe County Community College Application for Admission form.
3. Official transcripts from high school and all post-secondary schools (if applicable.)
4. Two letters of personal reference (references from food service employers or instructors preferred).
5. One of the following:
   - ACT scores of 18 or higher in math, reading and English;
   - COMPASS scores meeting currently accepted levels for satisfaction of general education graduation requirements, or placement above 090 course levels;
   - Completion of mandated 090 courses.
6. Recent employment record. (The Culinary Skills and Management Admissions Committee is interested in a student's exposure to and experience with the food service industry; therefore, such experience is preferred.)
7. It is mandatory that applicant complete these steps for candidacy and have a completed folder on file in the Admissions Office no later than May 1 of the year the applicant wishes to enter the program.
8. When all of the above steps have been completed, the applicant must contact the Culinary Skills and Management Office to set up an interview appointment. An admission interview is required for entry to the program.

The culinary skills and management program at Monroe County Community College emphasizes food preparation, restaurant management and food service operations. Applicants to the program should be in good general health; be able to stand for prolonged periods at work stations such as stove tops, prep tables and sinks; move swiftly between work areas within a busy and very active setting, and safely lift and handle up to 30 pounds. The student is regularly required to talk, hear, view and effectively perform in a variety of culinary kitchen/restaurant situations. Keen senses of sight, taste and smell are also vital to a student's success in this program. The student is frequently required to stand, walk, stoop or kneel. The student is exposed to heat generated from the use of kitchen equipment. To insure personal safety of the individual student and fellow class members, all students must be able to hear and understand verbal instructions, follow procedures, be able to multitask, work under stressful situations and meet deadlines.

Early Childhood Development

The Monroe County Community College program in early childhood development is committed to the training and professional development of students dedicated to the care and education of young children. Through experiential learning, students plan and implement activities appropriate to the developing child, from birth through age eight. Students also demonstrate knowledge in creating and administering a safe, healthy environment which uses developmentally appropriate curriculum practices. A primary goal of this program is to develop attitudes and values in students that are indicative of caring, competent and committed early childhood professionals. It provides a theoretical base in the growth and development of young children and early childhood curricula and activities. The externship experiences with young children facilitate the development of skills needed to implement a curriculum that fosters the motor, cognitive, social and emotional development of the child.

The early childhood development associate of applied science degree program prepares the student to work in a variety of early childhood settings. The associate degree program prepares individuals for staff placement in:

- Child care centers
- Family daycare
- Head start centers
- Nursery schools
- Public schools' Latchkey programs
- Other programs involved in the care and guidance of children and their families.

Graduates of the associate degree program meet the educational requirements for child care center program directors as specified by the State of Michigan Child Day Care Center Licensing Regulations.

Required General Education Courses 27

	Credits
ENGL 101 (Written & Oral Communication) or ENGL 151 (English Composition I)	3
[1] MATH	3
POLSC 151 (Introduction to Political Science)	3
PSYCH 151 (General Psychology)	3
PSYCH 251 (Child Psychology)	3
[2] Science Elective	4
[3] Computer Skills Elective	2
Two of the following courses	6

    ART 158 (Art for Elementary Teachers - 3 credit hours)
    ENGL 256 (Children's Literature - 3 credit hours)
    MUSIC 165 (Music for Classroom Teachers - 3 credit hours)

Required Core Courses 32

Fall Semester (First Year)

	Credits
ECDV 105 (Child Growth and Development)	3
ECDV 150 (Nutrition, Health & Safety for Early Childhood Education)	3

Winter Semester (First Year)

ECDV 106 (Observing & Recording Child Behavior)	3
† ECDV 107 (Programs for Young Children - Birth to Age 5)	5
HPE 151 (First Aid and Safety)	2

Fall Semester (Second Year)

ECDV 207 (Methods & Materials for Early Childhood Education)	5
PSYCH 156 (The Exceptional Person)	3

Winter Semester (Second Year)

ECDV 210 (Administration of Child Care Programs)	3
ECDV 218 (Early Childhood Development Externship)	5

Elective Courses 1
(If needed to complete required total credit hours)

Suggested Elective Courses

ENGL 102 (Business Writing)	3
ENGL 152 (English Composition II)	3
PSYCH 254 (Life Span Psychology)	3
SOC 152 (Marriage and the Family)	3
SPCH 151 (Communication Fundamentals)	3
SWK 106 (Child Welfare)	3
SWK 151 (Introduction to Social Services)	3

Total Degree Requirements 60

† Tech Prep course. See page 14.

[1]† BSMTH 101 (Business Mathematics), †MATH 121 (Technical Mathematics) or MATH 150 (Beginning Algebra) or higher.

[2] See science alternatives listed on page 37.

[3] See computer skills alternatives listed on page 37.

Certificate Program: Early Childhood Development

The early childhood development certificate program is designed for students who will work with and teach young children. Students may use this curriculum to meet state licensing requirements to provide child care in homes, centers and other facilities or for positions as assistant teachers in child care programs. A minimum of 30 credit hours is required for the early childhood development certificate. Courses for the certificate can be applied toward the associate degree.

ECDV 105 (Child Growth and Development)	3
ECDV 106 (Observing & Recording Child Behavior)	3
† ECDV 107 (Programs for Young Children - Birth to Age 5)	5
ECDV 150 (Nutrition, Health & Safety for Early Childhood Education)	3
ECDV 207 (Methods & Materials for Early Childhood Education)	5
HPE 151 (First Aid and Safety)	2
PSYCH 156 (The Exceptional Person)	3
PSYCH 251 (Child Psychology)	3
One of the following courses	3
ART 158 (Art for Elementary Teachers)	
ENGL 256 (Children's Literature)	
MUSIC 165 (Music for Classroom Teachers)	

Total Certificate Requirements   30

† Tech Prep course. See page 14.

Child Development Associate (CDA)

Students may pursue formal child care education toward the Child Development Associate (CDA) credential by completing a program of training, experience and assessment outlined by the Council for Early Childhood Professional Recognition. It is the council's goal to credential qualified caregivers who work with children ages birth to five nationwide.

The training consists of 120 clock hours of instruction addressing the competency goals in the functional areas identified by the council. At Monroe County Community College, this training can be obtained by completing two courses: ECDV 102 and ECVD 103. ECDV 102 – CDA Training Part 1 demonstrates how to plan a safe, healthy learning environment, advance children's physical and intellectual development, provide positive ways to support children's social and emotional development and establish productive relationships with families. ECDV 103 – CDA Training Part 2 demonstrates how to manage an effective program operation, maintain a commitment to professionalism, observe and record children's behavior and apply principles of child growth and development.

Once the candidate has documented 120 hours of formal training and 480 hours of experience working with children of the appropriate age within the past five years – as well as developed a Document of Competence – the Council for Early Childhood Professional Recognition evaluates the candidate's materials and makes the final decision on whether to award the credential. Monroe County Community College cannot award the CDA credential.

Students who have completed the CDA training may also apply for training in the two-year associate degree program (60 credit hours). For students who possess the CDA credential, the ECDV 107 and ECDV 218 course requirements for the associate degree will be waived.

Electrocardiography (ECG) Technician

Certificate Program:

The Electrocardiography technician performs diagnostic tests related to the heart, recording the heart's electrical impulses onto a paper strip. The pattern of the signals can tell the physician whether the heart is normal, experiencing electrical problems, under strain or damaged. The ECG technician will administer and document various types of ECG monitoring, and will provide appropriate care of the equipment. The ECG technician works in physicians' offices, clinics, hospitals and diagnostic centers. Other office skills will aid employment. Salary averages in Michigan are over $24,000.

Both classes (HLTSC 136 and HLTSC 137) will be offered in the summer session, and must be completed for the certificate. To enter the clinical portion, students must be at least 18 years old and able to document good physical and mental health. A physical examination and immunizations are required for students, at their expense, to verify capabilities and general health status. The exam must be completed before clinical placement in HLTSC 137. Cardiopulmonary resuscitation certification from the American Red Cross or American Heart Association and criminal background/drug screen checks may also be required by some clinical agencies at the student's expense. In addition to college rules, ECG technician students are required to adhere to policies and procedures outlined in the ECG Technician Student Handbook.

HLTSC 136 (ECG Basics) uses classroom instruction, on-line computer instruction and skills laboratory experience.

HLTSC 137 (ECG II) is a clinical externship in hospitals and clinics. Some clinical work may be in the evening. Students are required to work up to 40 hours per week for the externship period to complete this course of study.

Students who wish to review or enhance ECG skills may elect to take HLTSC 136 (ECG Basics) and not HLTSC 137 (ECG II), but a certificate will not be awarded.

	Credits
HLTSC 136 (ECG Basics) 3	
HLTSC 137 (ECG II) 2	

Total Certificate Requirements   5

NOTE: A minimum of 10 students is required for this class to run.

Electronics and Computer Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

Associate of applied science degree graduates with specialization in electronics technology typically find employment as engineering aides, laboratory technicians and field service representatives. Many graduates transfer to nearby universities that offer a B.E.T. (bachelor of engineering technology) or B.A.S. (bachelor of applied science) degree on a "2 + 2" basis – two years at the community college and two years at the university. These graduates generally obtain engineering positions and often advance into management.

The program provides a solid foundation in general electronics in the first three semesters and moves into some currently and regionally important specialized areas in the fourth semester. Throughout, the program maintains a commitment of "hands-on" laboratory applications to support and reinforce theoretical discussions of circuits. To this end, the Electronics II course includes the construction of a finished electronic instrument, which students may keep at their option. Graduates of this program will be prepared for entry-level employment in the following areas:

- Computer maintenance technician
- Electrical designer
- Electromechanical technician
- Electronic systems-test technician
- Electronics technician
- Engineering aide
- Field service technician

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses — 19

ENGL 101 (Written and Oral Communication) or
ENGL 151 (English Composition I) 3
[1] MATH 6
POLSC 151 (Introduction to Political Science) 3
[2] PHY 101, 151, or
CHEM 150 or 151 4
[3] Social Science/Humanities Elective 3

Required Core Courses — 41

1st Semester
† ELEC 125 (Fundamentals of Electricity) 3
[4] MDTC 160 (Mechanical Drafting and CAD I) 4

2nd Semester
† ELEC 132 (Electronics I) 4
† ELEC 135 (Digital Electronic Logic) 4
ELEC 141 (Industrial Automation and
Process Control) 3

3rd Semester
ELEC 133 (Circuit Analysis) 4
ELEC 134 (Electronics II) 4
ELEC 137 (Microprocessors) 4

4th Semester
ELEC 130 (Introduction to Programmable
Logic Controllers) 2
ELEC 136 (Instrumentation) 3
ELEC 138 (Machinery and Power Control) 4
ELEC 144 (PC-Based Data Acquisition and Control) 2

Total Degree Requirements — 60

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] Electronics and computer technology students are strongly encouraged to take PHY 101 or 151.

[3] See the social science/humanities alternatives listed on page 36.

[4] Meets computer skills requirement.

Fine Arts

The associate of fine arts degree with specialization in fine arts is designed to provide the student with an excellent foundation upon which to build a profession or an avocation. In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses   15-16

 ENGL 151 (English Composition I) 3
[1] MATH 3
 POLSC 151 (Introduction to Political Science) 3
[2] Science (with Lab) 4
[3] Computer Skills Elective 2-3

Required Core Courses   45

1st Semester

 ART 151 (Art Fundamentals) 3
 ART 180 (Drawing I) 3
 ART 280 (Art History: Prehistoric to Gothic) or
   ART 281 (Art History: Renaissance to Baroque) or
   ART 282 (Art History: Neo-classic to Modern) 3
[4] Social Science Elective 3

2nd Semester

 ART 160 (2-D Design) 3
 ART 181 (Drawing II) 3
 ENGL 152 (English Composition II) 3
 HUMAN 152 (Exploring Creativity) 3

3rd Semester

 ART 165 (Illustration Techniques) 3
 ART 270 (Ceramics I) 3
 ART 190 (Painting I) or
   ART 250 (Watercolor Painting I) 3
 ART 170 (Life Drawing) 3

4th Semester

 ART 271 (Ceramics II) 3
 ART 191 (Painting II) or
   ART 251 (Watercolor Painting II) 3
 ART 280 (Art History: Prehistoric to Gothic) or
   ART 281 (Art History: Renaissance to Baroque), or
   ART 282 (Art History: Neo-classic to Modern) 3

Total Degree Requirements   60-61

[1] See the mathematics alternatives listed on page 37.

[2] See the science alternatives listed on page 37.

[3] See the computer skills alternatives listed on page 37.

[4] Suggested social science electives: PSYCH 151 (General Psychology), SOC 151 (Principles of Sociology).

General Technology

Engineering • Manufacturing • Industrial Technology

The associate of applied science degree with specialization in general technology is designed to provide students with an educational opportunity to earn an associate of applied science degree that can be molded to fit individual needs and interests. Examples include those who have been in an apprenticeship program, individuals working in an industry who want to design a degree that supports their job-related responsibilities or those who want to prepare themselves for a technical career that does not follow one of the college's existing programs.

A basic core of technical courses is recommended. However, if the student's needs or interests are better served by other technical subjects, the core can be customized. Students must, however, complete a basic core of 12 credit hours in a defined program area (manufacturing, welding, etc.). This area will be selected by the student.

The program provides wide latitude under the technical electives. Students may choose from management courses, computer information systems courses or any technical course offered through the Division of Industrial Technology.

A maximum of 32 credits for apprentice training completion may be awarded toward required course-work for the general technology associate degree. Total hours awarded are at the discretion of the dean of industrial technology. Students interested in applying apprentice training toward credit for this degree need to produce documentation of successful completion of the apprenticeship training through the following: 1) Authenticated or official copies of completion certificate, *and* 2) Transcripts of courses completed toward fulfilment of the apprentice training that clearly show course names and titles, where available. If the required documentation is not available, the prospective student needs to authenticate unavailability from place of work or governmental regulation body (Department of Labor, etc.) or respective local apprentice trade representative, as applicable.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required specialized courses.

Credits

Required General Education Courses — 21

ENGL 101 (Written and Oral Communication) or
   ENGL 151 (English Composition I) 3
[1] MATH 6
POLSC 151 (Introduction to Political Science) 3
[2] Social Science/Humanities Elective 3
PHY 101, 151, or
   CHEM 150 or 151 4
[3] Computer Skills Elective 2

Required Technical and Specialty Courses — 32

This program is also applicable to the student enrolled in one of the other industrial technology programs, but because of scheduling conflicts and work schedules has not been able to complete the entire program sequence. Often, these students can apply for an associate of applied science degree in general technology. When they complete the courses in one of the other programs at the college, an additional program designation can be added to their transcript.

Required General Electives — 7

Total Degree Requirements — 60

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

[3] See the computer skills alternatives listed on page 37.

Gerontology

Certificate Program:

The gerontology certificate provides background in the concepts of aging from the various disciplines of biology, psychology, sociology, social work, health sciences and education. Students may supplement other courses of study, like nursing or social work, with this certificate or complete the certificate by itself. The certificate is not designed for career preparation and is theoretical in nature.

Credits

Required Core Courses
HLTSC 160 (Perspectives of Aging) 3
BIOL 160 (Biology of Aging) 3
SOC 160 (Social Gerontology) 3

9

Choose an additional 6 credits or more from this list:
BUSAD 151 (Introduction to Business) OR BMGT 201
   (Principles of Management)
HPE 151 (First Aid and Safety)
HPE 152 (Community Health)
HPE 153 (Mental Health)
HLTSC 151 (Principles of Nutrition and Diet Therapy)
SWK 151 (Introduction to Social Services)
   or HPE 210 (Foundations in Health Education)
SOC 161 (Death, Loss, and Grief)
SOC 251 (Modern Social Problems)*
PSYCH 152 (Psychology of Personality and Adjustment)*

* Other prerequisites are required for these courses.

Total Certificate Requirements   **15**

Graphic Design

Business • Management • Marketing • Technology

Career Pathways

This associate of applied science degree has two concentrations: digital media and illustration.

Job opportunities include:
- Graphic designer
- Illustration designer

	Credits
Required General Education Courses:	**19**

ENGL 151 (English Composition I) or
   ENGL 101 (Written & Oral Communication) 3
ENGL 152 (English Composition II) or
   ENGL 102 (Business Writing) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
[2] Science Elective 4
† CIS 130 (Introduction to Computer
   Information Systems) 3

Required Core Courses: **16**

† ADMN 102 (Keyboarding) 1
ART 151 (Art Fundamentals) or
   ART 160 (Two Dimensional Design) or
   ART 165 (Illustration Techniques) 6
CIS 180 (Graphic Design Concepts) 3
CIS 182 (Illustrator Graphics) 3
CIS 184 (Photoshop Graphics) 3

Digital Media Concentration: **25**
CIS 185 (Web Graphics) 3
CIS 186 (Multimedia Development-Adobe
   After Affects) 3
CIS 187 (Digital Video Editing) 3
CIS 188 (InDesign™ Desktop Publishing) 3
CIS 189 (3D Animation-Maya) 3

General Electives
(Additional ART, CIS Web Courses, HUMAN 152,
or MCOM 201 recommended)   10

OR

Illustration Concentration   **25**
ART 151 or ART 160 or ART 165 (not
   previously taken) 3
ART 170 (Life Drawing) 3
ART 180 (Drawing I) 3
ART 280 (Art History: Prehistoric to Gothic) or
   ART 281 (Art History: Renaissance to Baroque) or
   ART 282 (Art History: Neo-Classical
   to Early Modern) 3
HUMAN 152 (Exploring Creativity) 3

General CIS/MCOM/ART Required Electives
(Choose from ART 181, CIS 185, CIS 186, CIS 187,
CIS 188, CIS 189 and MCOM 201)   10

Total Degree Requirements   **60**

80

Certificate Programs:
Graphic Design-Digital Media

Required Courses
† ADMN 102 (Keyboarding) 1
ART 151 (Art Fundamentals) or
   ART 160 (Two-Dimensional Design) or
   ART 165 (Illustrative Techniques) 6
† CIS 130 (Introduction to Computer
   Information Systems) 3
CIS 180 (Graphic Design Concepts) 3
CIS 182 (Illustrator Graphics) 3
CIS 184 (PhotoShop Graphics) 3
CIS 188 (InDesign™ Desktop Publishing) 3
Select any three of the following four courses:
CIS 185 (Web Graphics) 3
CIS 186 (Multimedia Development-Adobe
   After Affects) 3
CIS 187 (Digital Video Editing) 3
CIS 189 (3D Animation-Maya) 3

Total Certificate Requirements   **31**

Graphic Design-Illustration

Required Courses
† ADMN 102 (Keyboarding) 1
ART 151 (Art Fundamentals) 3
ART 160 (Two-Dimensional Design) or
   ART 165 (Illustrative Techniques) or
   ART 170 (Life Drawing) 6
ART 180 (Drawing I) 3
† CIS 130 (Introduction to Computer
   Information Systems) 3
CIS 180 (Graphic Design Concepts) 3
CIS 182 (Illustrator Graphics) 3
CIS 184 (PhotoShop Graphics) 3
HUMAN 152 (Exploring Creativity) 3

Total Certificate Requirements   **28**

To earn the Internet professional Web design certificate in addition to the AAS in graphic design-digital media, take CIS 172, CIS 174, CIS 176 and CIS 177 as general electives.

To earn the graphic design-illustration certificate in addition to the AAS in graphic design-digital media, take ART 180 and HUMAN 152 and take an additional ART class from ART 151, ART 160, ART 165 or ART 170 (not already taken as General Electives).

To earn the graphic design-digital media certificate in addition to the AAS in graphic design-illustration, take CIS 188 and any three of the following: CIS 185, CIS 186, CIS 187 or CIS 189 as General Electives.

† Tech Prep course. See page 14.

† [1]BSMTH 101 (Business Mathematics), †MATH 121 (Technical Mathematics), MATH 150 or higher. It is suggested that math be taken in the first semester.

[2] See the science alternatives listed on page 37.

Industrial Electricity/Electronics Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in industrial electricity/electronics technology is designed to provide the theory and application of principles, procedures and components that technicians encounter in modern industrial environments. Subject matter ranges from fundamental electrical, electronic and digital theory to process control of automated systems. The program also stresses effective oral and written communication as well as related mathematics and science.

The program is supported by application of theoretical concepts via laboratory exercises in modern, well-equipped facilities. The emphasis of the program is to provide students with the knowledge and skills needed to function effectively in the increasingly technical environment of modern industry.

Electrical apprentices will find this program to be an attractive way to utilize the credits they have earned while pursing their journeyman status to complete an associate of applied science degree. Other individuals who are working in industrial-electrical/electronics environments will also find it to be a meaningful path to an associate of applied science degree. Graduates of this program will be prepared for entry-level employment in the following areas:

- Industrial electrician
- Electromechanical technician
- Industrial sales technician
- Field service technician
- Automated systems technician

It should be noted that many of the specialty courses from the program are available only in the evening. They are offered on a sequential basis, which will make completion of the program exceed two calendar years. Check with the Industrial Technology Division Office for further information.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses · 21

ENGL 101 (Written and Oral Communication) or
    ENGL 151 (English Composition I)...........................3
[1] MATH 6
POLSC 151 (Introduction to Political Science)...............3
[2] SPCH 151 or Social Science/Humanities Elective 3
[3] PHY 101, 151, or
    CHEM 150 or 151...4
[4] Computer Skills Elective 2

Required Core Courses · 42

1st Semester
† ELEC 125 (Fundamentals of Electricity) 3
† MECH 131 (Introduction to Automated
    Manufacturing) 3

2nd Semester
† ELEC 132 (Electronics I) 4
† ELEC 135 (Digital Electronic Logic) 4
ELEC 141 (Industrial Automation
    and Process Control)..3
    (even-numbered years)

3rd Semester
ELEC 126 (DC Motors and Controls) 2
ELEC 130 (Introduction to Programmable
    Logic Controllers) 2
ELEC 133 (Circuit Analysis) 4
ELEC 137 (Microprocessors) 4

4th Semester
ELEC 144 (PC-Based Data Acquisition and Control) 2
ELEC 214 (National Electrical Code) 2
ELEC 211 (Medium Voltage Power
    Distribution Systems)...3
ELEC 136 (Instrumentation).......................................3
ELEC 128 (AC Motors and Controls) 3
    (odd-numbered years)

Total Degree Requirements · 63

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

[3] Industrial electricity/electronics students are strongly encouraged to take PHY 101 or 151.

[4] See the computer skills alternatives listed on page 37. Students who pass the computer skills assessment test may substitute CIS 208 (PC Operating Systems - 3 credit hours).

Industrial Management

The industrial management programs at Monroe County Community Collage are designed to prepare students for careers in entry-level to middle management. Successful graduates will qualify for positions as foremen, supervisors and office managers.

Job responsibilities may include coordinating activities of departments, such as production, distribution, engineering, design, data processing, maintenance, human resources, sales and accounting. Duties might include planning and developing human resource programs or review of existing programs in such areas as inventory control, scheduling, purchasing, billing, cost, budgeting and/or research and development.

To receive the associate of applied science degree with an industrial management office or plant designation, students must complete the required general education courses as well as the required core and business (or technology) courses for the specific program.

Industrial Management - Office

Graduates of this program will be prepared for entry-level employment in the following areas:

- Supervision
- Production control supervision
- Human resources or industrial relations.

	Credits
Required General Education Courses	**19**

ENGL 151 (English Composition I) or
   ENGL 101 (Written and Oral Communication) 3
MATH 162 (Introduction to Statistics) 3
POLSC 151 (Introduction to Political Science) 3
PSYCH 151 (General Psychology)................................ 3
[1] Science Elective.. 4
† CIS 130 (Introduction to Computer
   Information Systems).. 3

Required Core Courses	**11**

BMGT 201 (Principles of Management) 3
QSTC 111 (Quality Management) 3
ECON 256 (Labor Problems) 3
ECON 257 (Contract Administration) 2

Additional Required Business Courses	**22**

(Choose from courses with the following prefixes.)

ACCTG	BUS	MCOM
BMGT	BUSAD	QSTC
BSLW	CIS	

Suggested General Electives	**8**

(to complete degree requirements)

ACCTG 151 (Accounting Principles) 4
ACCTG 152 (Accounting Principles)............................. 4
ACCTG 201 (Microcomputer Accounting I) 3
ACCTG 205 (Microcomputer Accounting II)................. 3
ACCTG 251 (Intermediate Accounting I)...................... 4
ACCTG 252 (Cost Accounting).................................... 4
ACCTG 254 (Intermediate Accounting II) 4
BMGT 201 (Principles of Management) 3
BMGT 251 (Human Resource Management) 3
BSLW 251 (Business Law) 4
BUSAD 151 (Introduction to Business) 4
† CIS 109 (Spreadsheet Software) 3
† CIS 112 (Database Software)...................................... 3
† CIS 118 (Windows Operating System) 1
CIS 150 (Computer Science I) 3
ECON 251 (Principles of Macroeconomics).................. 3
ENGL 102 (Business Writing) 3
MCOM 201 (Principles of Marketing) 3
PSYCH 255 (Psychology of Nonverbal
  Communication) 3
QSTC 111 (Quality Management) 3

Total Degree Requirements	**60**

Industrial Management - Plant

Graduates of this program will be prepared for entry-level employment in the following areas:

- Estimator
- Sales
- Supervisor
- Production control supervisor
- Personnel or industrial relations

	Credits
Required General Education Courses	**21**

ENGL 151 (English Composition I) or
   ENGL 101 (Written and Oral Communication) 3
[2] MATH 6
POLSC 151 (Introduction to Political Science) 3
[3] Social Science/Humanities Elective............................ 3
PHY 101, 151, or
   CHEM 150 or 151... 4
[4] Computer Skills Elective 2

Required Core Courses	**11**

BMGT 201 (Principles of Management) 3
QSTC 111 (Quality Management) 3
ECON 256 (Labor Problems) 3
ECON 257 (Contract Administration) 2

Additional Required Technology Courses   32
(Select from technology electives listed below)
 † ELEC 125 (Fundamentals of Electricity) 3
   MATL 101 (Industrial Materials) 3
   MDTC 109 (Mechanical Blueprint Reading) 2
[4]† MDTC 160 (Mechanical Drafting and CAD I) 4
   MDTC 161 (Mechanical Drafting and CAD II) 4
   MDTC 226 (Geometric Dimensioning
      & Tolerancing) 3
   MECH 102 (Manufacturing Processes) 4
 † MECH 103 (Basic Machine Tools) 4
   MECH 111 (Introduction to Fluid Power) 3
 † MECH 131 (Introduction to Automated
    Manufacturing) 3
   METC 208 (Strength of Materials) 3
   QSTC 120 (Introduction to Quality Systems) 3
   WELD 100 (Introduction to Welding Processes) 4
 † WELD 102 (Advanced SMAW) 6
   WELD 216 (Basic Pipefitting) 4
     or other electives approved by the division dean

Total Degree Requirements   64

† Tech Prep course. See page 14.

[1] See the science alternatives listed on page 37.

[2] See page 36 for specific Industrial Technology Division
   mathematics requirements for the associate of applied science
   degree.

[3] See the social science/humanities alternatives listed on page 36.

[4] Meets computer skills requirement. If MDTC 160 is not taken,
   see the computer skills alternatives listed on page 37.

Manufacturing Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in manufacturing technology is designed to prepare students for a career in the intermediate levels of the production, operation and control phases of industry. Included in the curriculum is the use of computer-aided drafting and computer numerical control of machine tools. Emphasis is placed on the use of industrial materials and methods of machine operation. Students will be trained for employment in such industrial areas as milling, lathe, wire EDM, machine set-up and operation, CAD/CAM operation, quality control and CNC machine tool programming and operation. Graduates of this program will be prepared for entry-level employment in the following areas:

- Basic machinist
- Basic mechanical drafter
- Engineering technician
- Estimation and specifications technician
- Industrial product salesperson
- CNC operator
- CAD/CAM technician
- Machinist
- Production control technician
- Quality control technician
- Research and development technician
- Sales engineer

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

	Credits
Required General Education Courses	**19**

ENGL 101 (Written and Oral Communication) or
   ENGL 151 (English Composition I) 3
[1] MATH 6
POLSC 151 (Introduction to Political Science) 3
[2] Social Science/Humanities Elective 3
PHY 101, 151, or
   CHEM 150 or 151 4

Required Core Courses	**44**

1st Semester
MATL 101 (Industrial Materials) 3
† MECH 103 (Basic Machine Tools) 4
[3]† MDTC 160 (Mechanical Drafting and CAD I) 4
† ELEC 125 (Fundamentals of Electricity) 3

2nd Semester
† MECH 104 (Machine Tool Operations) 4

Spring Semester
[4] MECH 201 (Introduction to CAD/CAM) 3

3rd Semester
MECH 105 (Advanced Machine Tools) 4
MECH 111 (Introduction to Fluid Power) 3
MECH 102 (Manufacturing Processes) 4
MDTC 226 (Geometric Dimensioning and Tolerancing) . 3

4th Semester
† MECH 131 (Introduction to Automated
   Manufacturing) 3
METC 208 (Strength of Materials) 3
QSTC 111 (Quality Management) 3

Total Degree Requirements	**63**

Certificate Program: Manufacturing Technology

In addition to the two-year associate degree program, Monroe County Community College offers a certificate program in manufacturing technology. We recognize that many employers place value on a certificate which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

† MECH 103 (Basic Machine Tools) 4
† MECH 104 (Machine Tool Operations) 4
MECH 105 (Advanced Machine Tools) 4
MECH 102 (Manufacturing Processes) 4
† MDTC 160 (Mechanical Drafting and CAD I) 4
MATH (Mathematics) 4
MATL 101 (Industrial Materials) 3

Total Certificate Requirements	**27**

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

[3] Meets computer skills requirement.

[4] Students may take this course during their first or second spring semester.

Mechanical Design Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in mechanical design technology is designed to equip students with one of the most sought-after technical skills in this area – mechanical drafting and CAD. This program is representative of the highly technological demands of business and industry and maintains its leading edge with assistance from qualified representatives of industry, on current mechanical design practices and future trends. Course work within the program includes manufacturing processes, strength of materials, computer-aided drafting, computer-aided manufacturing, geometric dimensioning and tolerancing and tool and die design.

Students will gain the knowledge and ability to determine part specifications, dimensioning techniques, manufacturing processes and strength of materials through vigorous application-based projects. The students will achieve a thorough understanding of drafting fundamentals and proceed to computer-aided drafting and computer-aided manufacturing.

Mechanical design technologists may work in many areas, including product design and development and manufacturing and production for organizations ranging from large multi-national corporations to small local shops. The demand for qualified CAD operators has exploded as companies take advantage of this progressive technology. Graduates of this program will be prepared for entry-level employment in the following areas:

- CAD operator/designer
- Tool and die drafter
- Layout drafter
- Product drafter
- Detailer
- Engineering technician
- Basic machinist
- CAD/CAM operator
- Research and development technician
- Technical sales representative

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses   19

ENGL 101 (Written and Oral Communication) or
ENGL 151 (English Composition I) 3
[1] MATH.. 6
POLSC 151 (Introduction to Political Science)............... 3
[2] Social Science/Humanities Elective............................. 3
[3] PHY 101 or 151, or
    CHEM 150 or 151.. 4

Required Core Courses   44

1st Semester
[4]† MDTC 160 (Mechanical Drafting and CAD I) 4
 † MECH 103 (Basic Machine Tools) 4

2nd Semester
MDTC 161 (Mechanical Drafting and CAD II) 4
MDTC 152 (Descriptive Geometry) 4
MECH 134 (Machine Tool Theory)............................... 2

Winter or Spring Semester
MECH 201 (Introduction to CAD/CAM) 3

3rd Semester
MDTC 224 (CAD Applications – Mechanical) 3
MDTC 226 (Geometric Dimensioning
    and Tolerancing)... 3
METC 170 (Introduction to Parametric
    CAD/CATIA) 3
MATL 101 (Industrial Materials) 3

4th Semester
MDTC 240 (Tool and Die Design)................................ 4
METC 208 (Strength of Materials) 3
MECH 102 (Manufacturing Processes) 4

Total Degree Requirements   63

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

[3] Mechanical Design Technology students are strongly encouraged to take PHY 101 or 151.

[4] Meets computer skills requirement.

Certificate Program:
Mechanical Design Technology

In addition to the two-year associate degree program, Monroe County Community College offers a certificate program in mechanical design technology. We recognize that many employers place value on a certificate which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

MATH (Mathematics)	4
MDTC 152 (Descriptive Geometry)	4
† MDTC 160 (Mechanical Drafting and CAD I)	4
MDTC 161 (Mechanical Drafting and CAD II)	4
MDTC 224 (CAD Applications – Mechanical)	3
MDTC 226 (Geometric Dimensioning and Tolerancing)	3
† MECH 103 (Basic Machine Tools)	4

Total Certificate Requirements   26

† Tech Prep course. See page 14.

Mechanical Engineering Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in mechanical engineering technology offers individuals the opportunity to prepare for rewarding and responsible careers in support of technical and engineering activities in business and industry.

The mechanical engineering technology curriculum is based on engineering theory, but emphasis is placed on application, implementation skills and computer modeling. The mechanical engineering technologist is responsible for the application and implementation of engineering design methods and analysis techniques for the improvement of products, processes and systems.

Course work within the program includes manufacturing processes, strength of materials, computer-aided drafting, computer-aided manufacturing and computer applications in machine design and features based 3D CAD with surfacing. The rapid increase in complexity of manufacturing technology and operations has caused the education of most engineers to become increasingly theoretical. This has produced a demand for manufacturing professionals who have applied technical skills. Our graduates, who are educated in mechanical engineering technology, help to meet that demand.

Graduates of this program meet the minimum requirements for placement at the junior level of bachelor of engineering technology programs at many four-year institutions or may seek immediate employment in industry. Students planning to transfer to a four-year program should consult with that institution in order to insure the maximum number of courses transfer. Graduates of this program will be prepared for entry-level employment in the following areas:

- Mechanical engineering technician
- CAD operator/designer
- Product designer
- Field technician
- Lab technician
- Basic machinist
- CAD/CAM operator
- Research and development technician
- Technical sales representative

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses   19

   ENGL 151 (English Composition)................................. 3
   ENGL 155 (Technical Writing) 3
   POLSC 151 (Introduction to Political Science) 3
   MATH 160 (Math Applications in
     Engineering Technology) 2
[1] MATH 164 (Precalculus) 4
   PHY 151 (General Physics I) 4

Required Core Courses   49

1st Semester
[2]† MDTC 160 (Mechanical Drafting and CAD I) 4
   MECH 102 (Manufacturing Processes) 4
† MECH 103 (Basic Machine Tools) 4

2nd Semester
   MDTC 152 (Descriptive Geometry) 4
   MDTC 161 (Mechanical Drafting and CAD II) 4
   MECH 134 (Machine Tool Theory)............................... 2
   METC 170 (Introduction to Parametric CAD/CATIA) 3

Winter or Spring Semester
   MECH 201 (Introduction to CAD/CAM) 3

3rd Semester
   MDTC 224 (CAD Applications – Mechanical) 3
   MDTC 226 (Geometric Dimensioning
     and Tolerancing)... 3
   METC 180 (Statics) 1
   METC 208 (Strength of Materials) 3

4th Semester
   MATL 101 (Industrial Materials) 3
   METC 210 (Computer Applications in Machine Design) or
     MDTC 240 (Tool and Die Design)............................. 4
   PHY 152 (General Physics II) or
     CHEM 151 (General College Chemistry I) 4

Total Degree Requirements   68

† Tech Prep course. See page 14.

[1] Students may also take MATH 157 and MATH 159 in place of MATH 164.

[2] Meets computer skills requirement.

> While the above math and physics courses provide adequate preparation for technician-level work, students who intend to transfer into a bachelor of science degree program in mechanical engineering technology should consider taking the calculus (MATH 171, 172) sequence and engineering physics (PHY 251, 252) sequence.

Medical Office Coordinator

The associate of applied science degree with specialization as a medical office coordinator is designed to provide comprehensive preparation for employment in the administrative areas of modern health care facilities. The curriculum emphasizes communication skills, computer applications and a solid background in medical terminology, transcription, insurance billing and office procedures. This program is for students who would like to work in the health care field but prefer to specialize in administrative skills.

Graduates will be prepared for entry-level employment in doctors' offices, clinics, hospitals, public health departments and other health care facilities.

Credits

Required General Education Courses   19
    ENGL 151 (English Composition I) 3
    ENGL 152 (English Composition II) 3
    † BSMTH 101 (Business Mathematics) 3
    POLSC 151 (Introduction to Political Science) 3
    BIOL 155 (Allied Health Anatomy and Physiology) 4
    † WPR 102 (Word Processing I) 3

Required Core Courses   33/34
1st Semester
    ADMN 101 (Introduction to Today's Office) 1
    † CIS 118 (Windows Operating System) 1
    † CIS 130 (Introduction to Computer
        Information Systems) 3
2nd Semester
    ACCTG 110 (Applied Office Accounting) or
        ACCTG 151 (Accounting Principles) 3/4
    ADMN 106 (Numeric Keypad) 1
    HLTSC 110 (Medical Terminology) 2
    ADMN 135 (Intermediate Keyboarding) 3
3rd Semester
    ADMN 119 (Machine Transcription)............................. 3
    MOAD 104 (Medical Office Administration I)............... 4
    WPR 103 (Advanced Word Processing) 3
4th Semester
    ADMN 105 (Medical Specialty) 3
    MOAD 204 (Medical Office Administration II) 3
    MOAD 206 (Medical Insurance Coding and Billing) 3
Additional Required Core Courses   8
    BMGT 201 (Principles of Management) 3
    HPE 151 (First Aid and Safety) 2
    SPCH 151 (Communication Fundamentals) 3

Total Degree Requirements   60 or 61

  † Tech Prep course. See page 14.

Metrology Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in metrology technology (precision measurement) is designed to meet the precision measurement needs of industry by preparing graduates through both theoretical and hands-on laboratory work to successfully enter the work force. Metrology is used throughout the world in such areas as telecommunications, manufacturing, electrical power, aerospace, transportation, medicine, pharmaceuticals, food production, packaging, construction, national defense, atmospheric research and environmental protection. The metrology technology program at MCCC emphasizes dimensional metrology for the manufacturing industry. Individuals with dimensional metrology skills, especially coordinate measuring machine (CMM) operators, are in high demand. MCCC is one of only a handful of colleges offering a program in dimensional metrology technology (one of only two in Michigan).

Graduates of this program will be prepared for employment in the following areas:

- Field service technician
- Inspection
- Lab technician
- Layout inspector
- Metrologist
- Metrology technician
- Quality assurance
- Quality control
- Testing technician

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses   **22**

ENGL 101 (Written and Oral Communication) or
   ENGL 151 (English Composition 1) 3
[1] MATH 6
POLSC 151 (Introduction to Political Science) 3
[2] Social Science/Humanities Elective............................ 3
PHY 101, 151 or
   CHEM 150 or 151 4
† CIS 130 (Introduction to Computer
   Information Systems) 3

Required Core Courses   **39**

1st Semester
MATL 101 (Industrial Materials) 3
† MECH 103 (Basic Machine Tools) 4
† MDTC 160 (Mechanical Drafting and CAD I) 4

2nd Semester
MDTC 226 (Geometric Dimensioning
   and Tolerancing).. 3
MECH 102 (Manufacturing Processes) 4
QSTC 111 (Quality Management) 3

3rd Semester
METC 208 (Strength of Materials) 3
QSTC 150 (Introduction to Metrology) 3

4th Semester
† ELEC 125 (Fundamentals of Electricity) 3
ENGL 155 (Technical Writing) 3
QSTC 210 (Advanced Metrology) 3
QSTC 220 (Calibration and Gage R & R) 3

Total Degree Requirements   **61**

Certificate Program: Metrology Technology

In addition to the two-year associate degree program, Monroe County Community College offers a certificate program in metrology technology. We recognize that many employers place value on a certificate, which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

MATL 101 (Industrial Materials) 3
† MDTC 160 (Mechanical Drafting and CAD I) 4
MDTC 226 (Geometric Dimensioning
   and Tolerancing).. 3
MECH 102 (Manufacturing Processes) 4
† MECH 103 (Basic Machine Tools) 4
MATH (Mathematics) 4
QSTC 150 (Introduction to Metrology) 3
QSTC 210 (Advanced Metrology) 3
QSTC 220 (Calibration and Gage R & R) 3

Total Certificate Requirements   **31**

† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

Nursing, Practical

Certificate Program

A practical nurse certificate prepares students to function as beginning licensed practical nurses and members of the health team – under the supervision of the registered nurse, physician or dentist – in the care of individuals with acute and chronic common illnesses. Licensed practical nurses provide basic bedside nursing care and are qualified for employment in structured practice settings, including acute care hospitals, extended care facilities, nursing homes, clinics and physicians' offices. With experience, nurses may also function in providing nursing care in specialized areas, including pediatric and obstetric units and home health and hospice settings. Employment in all of these practice settings of health care is available, and nurses are in demand due to the present nursing shortage. Salary for licensed practical nurses in Michigan starts at approximately $40,000 per year with full benefits. Practical nursing is an excellent entry level career choice, and graduates may qualify to complete advanced degrees in nursing with more education. A total of 38 credits is required to complete the program, with a possible two credits given to certified nursing assistants who qualify for the program.

Upon program completion, and the Michigan State Board of Nursing eligibility determination, students will be prepared to take the licensure exam to become a licensed practical nurse.

Required Courses and Sequence:

Winter Semester
PNUR 120 (Fundamentals of Practical Nursing
    for Certified Nursing Assistants) 7
                    OR
PNUR 121 (Fundamentals of Practical Nursing) 9
PNUR 123 (Mental Health Concepts for
    Practical Nursing) 2
HLTSC 120 (Pharmacology) 2
BIOL 158 (Anatomy and Physiology II) 4
Spring/ Summer Semester (12 weeks)
First Rotation:
PNUR 123 (Practical Nursing Care of Adults I) 6
Second Rotation:
PNUR 125 (Practical Nursing Care of
    Pediatric Clients) 3
Fall Semester
PNUR 128 (Issues in Practical Nursing) 2
First Rotation:
PNUR 126 (Practical Nursing Care of
    Obstetrical Clients) 3
Second Rotation:
PNUR 127 (Practical Nursing Care of Adults II) 4
Third Rotation:
PNUR 129 (Management Concepts for the
    Practical Nurse) 3

Total: **36-38 credits**

Practical Nursing Admission Criteria

The practical nursing program is a selective admission program which involves three steps:

1. Admission to the college;
2. Completion of prerequisites as indicated in a folder in the Admissions and Guidance Office which confirms that the minimum standards listed below have been met by the deadline date of October 1; and
3. Selection of practical nursing applicants will be made using the date on which completion of program application is verified by the Admissions and Guidance Office. The applicant is responsible for notifying the Admissions and Guidance Office upon completion of application requirements.

   Enrollment in the practical nursing program is limited. In the case the program is full, the names of qualified applicants will be ranked by the verification date described above. Names on this list will be chronologically selected to fill future seats in the program.

   The following tie breakers will be used in case of a tie.
   a. County resident over non-county resident
   b. Higher G.P.A. over lower G.P.A. in the following courses: ENGL 151, PSYCH 151 and BIOL 157
   c. Completed BIOL 158

Practical Nurse Criteria for Admission

Develop a folder in the Admissions area consisting of the following:

1. Evidence of high school graduation (official high school transcripts or GED).
2. Official transcripts from all post-secondary schools must be submitted for evaluation.
3. Accumulative grade point average of 2.5 (on a 4.0 scale) from most recent academic institution attended.
4. Completion of the following course work at a "C" or better:
   a. ENGL 151 (Composition I)
   b. PSYCH 151 (General Psychology)
   c. BIOL 157 (Anatomy & Physiology I)*
   d. Successful completion of MCCC's mathematics graduation requirement (either by a passing score on the college competency test or a math class above the 090 level of mathematics).

e. Successful completion of MCCC's computer skills graduation requirement (either by a passing score on the college competency test or by taking a course which meets the requirement). CIS 130 is recommended.

Meeting minimum requirements does not guarantee acceptance into the practical nursing program.

Applications are accepted beginning June 1, 2007.

* Strongly recommend completing BIOL 158 (Anatomy and Physiology II) prior to admission as well, but not required.

General Information

1. A physical examination and immunizations are required of students selected for the program at the student's expense which verify capabilities and general health status.

2. Applicants should be aware that any previous or current conviction of a crime and/or treatment for substance abuse may result in ineligibility to be licensed as a practical nurse. The determination of (in)eligibility is made by the Michigan State Board of Nursing. Any questions or concerns about the licensing should be directed to the State Board of Nursing at www.michigan.gov/healthlicense.

3. Students admitted to the practical nursing program must consent to security checks that consist of criminal background checks and drug screening. In order to comply with Michigan Compiled Laws, no student will be admitted to the program if convicted of a felony or attempt/conspiracy to commit a felony within 15 years preceding the date of admission; or a misdemeanor conviction involving abuse, neglect, assault, battery, or criminal sexual conduct or fraud or theft (or similar misdemeanor in state or federal law) against a vulnerable adult within 10 years of the date of admission. No student will be admitted with a positive drug screen for illegal substances. Other positive background checks, either criminal or drug screening, may also be grounds for prohibiting admission, but will be considered case-by-case. Positive security checks that typically prohibit clinical placement for students are usually enough to prohibit admission to the program. Any cost incurred with the security checks is the student's responsibility.

4. Practical nursing involves the provision of direct care for individuals and is characterized by the application of verified knowledge in the skillful performance of practical nursing functions. Therefore, in order to be considered for admission or to be retained in the program, all applicants should possess:

    a. Sufficient visual acuity and color distinctions, such as needed in the accurate preparation and administration of medications and for observation necessary for patient assessment and nursing care;

    b. Sufficient auditory perception to receive verbal communication from patients and members of the health team and to assess health needs of people through the use of monitoring devices such as a cardiac monitor, stethoscope, I.V. infusion pumps, Doptone, fire alarms, etc.;

    c. Sufficient gross and fine motor coordination to respond promptly and to implement the skills, including the manipulation of equipment, required in meeting health needs;

    d. Sufficient communication skills (speech, reading, writing) to interact with individuals and to communicate their needs promptly and effectively as may be necessary in the individual's interest;

    e. Sufficient intellectual and emotional functions to plan and implement care for individuals;

    f. Psychological stability, allowing the student to perform at the required levels in the clinical portions of the program;

    g. The capability to concentrate for long periods of time in selecting correct techniques, equipment and safety measures to assure maximum care and safety of the patient. Therefore, the applicant must be able to exercise independent judgments under both routine and emergency conditions. A person under the habitual influence of alcohol or consciousness-altering drugs could not meet the above criteria; and

    h. The ability to tolerate and function safely in environmental conditions, such as exposure to a variety of substances (such as latex products) and conditions within the laboratory and clinical environment: temperature fluctuations; electromagnetic radiation; hazardous waste materials including chemicals, poisonous substances, blood, body tissue or fluids; loud or unpleasant noises; high humidity and inhalants such as dust or latex particles.

5. Applicants should have reasonable expectations that they can complete the program of study and meet the educational objectives. Accommodations are unreasonable if they essentially impair or change the curriculum. Questions should be directed to the special populations coordinator in the Learning Assistance Laboratory.

6. Students who successfully complete at least one nursing class must complete the practical nursing portion of the program within two years of initial entry into the program. Failure to meet the time framework necessitates reapplication to the practical nursing program.

7. All practical nursing courses utilize Internet services and resources to supplement instruction. It is recommended that students have access to a reliable computer with an Internet connection. MCCC offers open access computer laboratories, but students should also be familiar with community resources for computer access, such as public libraries. A personal computer is helpful.

8. In addition to the general college rules, practical nursing students are required to adhere to policies and procedures outlined in the Practical Nursing Program Student Handbook.

Nursing, Registered

The associate of applied science degree with specialization in nursing prepares graduates to function as beginning registered nurse practitioners and members of the health care team in the care of acutely and chronically ill individuals with common illnesses. Registered nurses are qualified for employment in structured practice settings, including acute care hospitals, extended care facilities, nursing homes, clinics and physicians' offices. With experience, nurses may also participate in providing skilled care in more specialized areas, including psychiatric units, emergency departments, pediatric and obstetric units, critical care units and home health settings. Jobs in all areas of nursing are plentiful. Job pay is exceptional, starting at $47,000 in Michigan with full benefits. Nursing is a flexible and mobile career choice. A total of 72 credits are required to complete the program.

Upon program completion and the Michigan State Board of Nursing eligibility determination, graduates will be prepared to take the licensure exam to become a registered nurse.

This nursing program is accredited by the National League for Nursing Accrediting Commission (NLNAC) and is approved by the Michigan Board of Nursing. Graduates may transfer all or part of the credit earned at MCCC to several colleges and universities to pursue a Bachelor of Science in Nursing (BSN) degree.

> NLNAC
> 61 Broadway -33rd Floor
> New York City, NY 10006
> 212-363-5555
> 1-800-669-1656, extension 153
> nlnac@nlnac.org

Required Courses and Sequence   72

Summer Session (First Year)
[1] ENGL 151 (English Composition I) 3
[1] PSYCH 151 (General Psychology).................................. 3
Fall Semester (First Year)
NURS 103 (Adapt Throughout Life Cycle) 9
[1] BIOL 157 (Anatomy & Physiology I) 4
Winter Semester (First Year)
NURS 104 (Adapting to Common Stressors I:
   Psychiatric Nursing)... 4
NURS 105 (Adapting to Common Stressors II:
   Medical-Surgical Nursing) 5
[1] BIOL 158 (Anatomy & Physiology II) 4
Spring Session (First Year)
[1] BIOL 260 (Microbiology)... 4
HLTSC 120 (Pharmacology).. 2
Summer Session (Second Year)
[1] SOC 151 (Principles of Sociology) 3
[1] POLSC 151 (Introduction to Political Science).............. 3

Fall Semester (Second Year)
NURS 204 (The Family Adapting I:
   Obstetrical Nursing).. 4.5
NURS 205 (The Family Adapting II:
   Pediatric Nursing).. 4.5
[1] ENGL or PHIL (English or Philosophy) 3
(English 152, 251, 252, 253, 254, 255, 260
   or Philosophy 151, 152, 253)
Winter Semester (Second Year)
NURS 209A (Adapting to Multiple Stressors I) 10
NURS 210 (Seminar) 3
Spring Session (Second Year)
NURS 209B (Adapting to Multiple Stressors II) 3

Total Degree Requirements   72

[2] Suggested Additional General Electives
BIOL 259 (Pathophysiology) 4
CHEM 160 (Fundamentals of Health-Science
   Chemistry) 4
[†] CIS 130 (Introduction to Computer
   Information Systems) 3
HLTSC 110 (Medical Terminology) 2
HLTSC 151 (Principles of Nutrition and
   Diet Therapy) 3
HLTSC 136 (ECG Basics) 3
HLTSC 156 (Phlebotomy Basics)................................. 6
HLTSC 160 (Perspectives of Aging) 3
Higher Level Humanities Course................................. 3
MATH 162 (Introduction to Statistics) 3
PSYCH 251 (Child Psychology) 3
PSYCH 254 (Life Span Psychology)............................. 3
SPCH 151, 152 (Speech) 3

Students' clinical assignments are determined by the concurrent classroom theory. Clinical instruction and guidance in medical-surgical, obstetric, pediatric and psychiatric units will be provided in surrounding area facilities: Mercy Memorial Hospital, Monroe; Mercy Memorial Nursing Center, Monroe; Oakwood Hospital-Southshore Medical Center, Trenton; Henry Ford-Wyandotte Hospital, Wyandotte; Oakwood Hospital-Heritage Center, Taylor; Lutheran Home, Monroe; HomeCare Connection, Monroe; Children's Hospital of Michigan, Detroit; University of Michigan Medical Center/ Women's and C.S. Mott Children's Hospital, Ann Arbor; St. Joseph's Hospital, Ann Arbor; Oakwood Hospital and Medical Center, Dearborn; Flower Hospital, Sylvania, Ohio, and Toledo Hospital, Toledo, Ohio.

[†] Tech Prep course. See page 14.

[1] Courses may be taken prior to entry into the nursing program.

[2] Not required for degree. Some may assist in completion of bachelor's degree.

Nursing Admission Criteria

The registered nursing program is a selective admission program which involves three steps:

1. Admission to the college;
2. Completion of prerequisites as indicated in a folder in the Admissions area which confirms that the minimum standards listed below have been met by the deadline date of May 10;
3. Selection of qualified nursing applicants by use of the numerical process.

The potential nursing applicant needs to be aware that meeting the standards at the minimum level does not insure admission to the nursing program. The applicants for the nursing program tend to be well qualified and only the top 40 candidates are selected each year.

Nursing program admission requirements are separate from general admission to the college and are subject to change. To be accepted into the nursing program, a student must meet the requirements in effect for the class and year of admission.

Specific Criteria for Step Two

Developing a folder in the Admissions area consists of the following:

1. Evidence of high school graduation must be submitted (diploma or G.E.D.). Transcripts must be sent which confirm this requirement for those with no prior college or university degree. High school students may apply, but acceptance is contingent upon high school and prerequisite completion;
2. Official transcripts from all post-secondary schools must be submitted for evaluation, including L.P.N. and R.N. programs, if applicable;
3. An accumulative grade point average of 2.5 (on a 4.0 scale) is required from the most recent academic institution attended, whether high school or college. High school grade point averages are based on five academic areas of study: English, mathematics, foreign language, social sciences and natural sciences. The measuring point for the accumulative grade point average will be the end of winter term for college students or the most recent grading period for high school students;

4. High school-level chemistry must be completed (two semesters), or CHEM 150, Fundamental Principles of Chemistry (one semester), or CHEM 151 General College Chemistry I (one semester), with a grade of "C" or better. The chemistry class must be within the past 10 years. Completion of BIOL 157, 158 and 260 within 5 years of nursing admission may waive the 10-year requirement for chemistry and biology.
5. High school-level biology must be completed (two semesters), or BIOL 152, Biological Science (one semester), with a grade of "C" or better. The biology class must be within the past 10 years. Completion of BIOL 157, 158 and 260 within 5 years of nursing admission may waive the 10-year requirement for chemistry and biology.
6. The American College Test (ACT) is required of all applicants. The minimum composite score to be considered as an applicant is a 17 on the Enhanced Test or 14 if tested prior to 1989;
7. Successful completion of MCCC's mathematics graduation requirement (either a passing score on the college competency test or a math class above the 090 level of mathematics);
8. Successful completion of MCCC's computer skills graduation requirement (either a passing score on the college competency test or by taking a course which meets the requirement). CIS 130 is recommended;
9. MELAB (80 percentile) or TOEFL (550) tests may be required to show proof of English language proficiency for those whose native language is not English.

These are minimum requirements for consideration. Meeting the minimum requirements does not guarantee admission into the nursing program.

Specific Criteria for Step Three

Once minimum standards have been met, the applicants will be evaluated to determine admission status. Criteria for this evaluation may be obtained from the Admissions and Guidance Office.

General Information

1. The class of 40 will be selected from among the pool of applicants by use of the numerical process.

2. A physical examination and immunizations are required of students selected for the program at the student's expense which verify capabilities and general health status.

3. Applicants should be aware that any previous or current conviction of a crime and/or treatment for substance abuse may result in ineligibility to be licensed as a registered nurse. The determination of (in)eligibility is made by the Michigan State Board of Nursing. Any questions or concerns about the licensing should be directed to the State Board of Nursing at www.michigan.gov/healthlicense.

4. Students admitted to the nursing program must consent to security checks that consist of criminal background checks and drug screening. In order to comply with Michigan Compiled Laws, no student will be admitted to the program if convicted of a felony or attempt/conspiracy to commit a felony within 15 years preceding the date of admission or a misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct or fraud or theft (or similar misdemeanor in state or federal law) against a vulnerable adult within 10 years of the date of admission. No student will be admitted with a positive drug screen for illegal substances. Other positive background checks, either criminal or drug screening, may also be grounds for prohibiting admission, but will be considered case-by-case. Positive security checks that typically prohibit clinical placement for students is usually enough to prohibit admission to the program. Any cost incurred with the security checks is the student's responsibility.

5. Registered nursing at the associate-degree level involves the provision of direct care for individuals and is characterized by the application of verified knowledge in the skillful performance of nursing functions. Therefore, in order to be considered for admission or to be retained in the program, all applicants should possess:

   a. sufficient visual acuity, such as needed in the accurate preparation and administration of medications and for observation, necessary for patient assessment and nursing care;

   b. sufficient auditory perception to receive verbal communication from patients and members of the health team and to assess health needs of people through the use of monitoring devices such as cardiac monitor, stethoscope, I.V. infusion pumps, Doptone, fire alarms, etc.;

   c. sufficient gross and fine motor coordination to respond promptly and to implement the skills, including the manipulation of equipment required in meeting health needs;

   d. sufficient communication skills (speech, reading, writing) to interact with individuals and to communicate their needs promptly and effectively as may be necessary in the individual's interest;

   e. sufficient intellectual and emotional functions to plan and implement care for individuals;

   f. psychological stability, allowing the student to perform at the required levels in the clinical portions of the program;

   g. the capability to concentrate for long periods of time in selecting correct techniques, equipment and safety measures to assure maximum care and safety of the patient. Therefore, the applicant must be able to exercise independent judgments under both routine and emergency conditions. A person under the habitual influence of alcohol or consciousness-altering drugs could not meet the above criteria;

   h. the ability to tolerate and function safely in environmental conditions, such as exposure to a variety of substances (such as latex products) and conditions within the laboratory and clinical environment: temperature fluctuations; electromagnetic radiation; hazardous waste materials including chemicals, poisonous substances, blood, body tissue or fluids; loud or unpleasant noises; high humidity; inhalants such as dust, or latex particles.

Applicants should have reasonable expectations that they can complete the program of study and meet the educational objectives. Accommodations are unreasonable if they essentially impair or change the curriculum. Questions should be directed to the Special Populations Coordinator in the Learning Assistance Laboratory.

6. Students who successfully complete at least one nursing class must complete the nursing portion of the program within four years of initial entry into the program. Failure to meet the time framework necessitates re-application to the nursing program.

7. The nursing courses utilize Internet services and resources to supplement instruction. It is recommended that students have access to a reliable computer with Internet connection. MCCC offers open access computer laboratories, but students should also be familiar with community resources for computer access, such as public libraries. A personal computer is helpful.

8. In addition to the general College rules, nursing students are required to adhere to policies and procedures outlined in the Nursing Program Student Handbook.

Nurse Aide Training

This curriculum is packaged into one course, HSP 100, to prepare individuals to fulfill the role of direct caregiver/nursing aide. It emphasizes the skills and behaviors that are significant to employers of nurse aides, including cardiopulmonary resuscitation. The content includes classroom activities, skills practice time in the laboratory and supervised clinical practice at a long-term care facility. Upon completion of the course students will be eligible to take the clinical and written exams required for certification as a nurse aide.

Nursing: RN from LPN/LVN
On-line Program

Licensed practical nurses may choose to complete the associate degree of applied science in nursing by enrolling in the on-line nursing program available to Michigan and Northeast Ohio residents only. This program is a cooperatively run program by Monroe County Community College, Kirtland Community College and Kalamazoo Valley Community College. One of these schools must serve as the "home school," which is ideally the school located closest geographically and the degree granting institution. This is an intensive on-line program. The workload is heavy each week, with frequent assignment deadlines. Working knowledge of computers and on-line computer use is required. Also, access to a more recent computer system with Internet connection is imperative.

Successful completion of the full program and the AAS degree will allow graduates to be eligible to take the NCLEX-RN CAT, the licensing examination to practice as a registered nurse. The Michigan State Board of Nursing determines eligibility for licensure, not MCCC.

To be admitted to this program:

1. You must have a current, unrestricted, and valid license as an LPN/LVN, and at least 2080 hours of current nursing practice in an acute care facility or long-term care facility. The license and work verification will be completed before admission.

2. You must be admitted to a Michigan community college (your home school), and then start a second admission process for the on-line program. To receive information about the on-line program, including registration forms, go to: www.mccvlc.org. Information will be found under the "on-line programs" link, then the "RN from LPN On-line Program" link. Note: The application process must be completed in an on-line format and submitted after December 1 to the home school.

3. There is prerequisite work required before admission to the program. Prerequisite work includes all general education courses, anatomy and physiology (at Monroe, BIOL 157 and 158) and Nursing 180: Nursing Application of Pharmacology. This pharmacology course is only offered on-line through Kalamazoo Valley Community College and the MCCVLC. Prerequisite course work must be completed at a "C" or better (2.0 on a 4.0 scale). Note: Other pharmacology courses may meet the requirement but must be evaluated for equivalency. However, all students must complete a credit college level course that was in an on-line format before the application deadline.

4. The deadline for meeting all admission requirements is May 1 of the year admission is desired. Any open spots in the program will be filled before August 1. Students completing all admission requirements by August 1 may be considered at that time. Date of application to the program will be used to determine order of admission for qualified applicants.

5. Each home school also has different general education courses required for graduation. It is required that the general education courses be completed before starting the on-line program to ease the work load. General education course work may be taken on-line (if available) or face-to-face.

6. Clinical experiences will require actual duty in health care settings. The last semester of the program will focus on clinical experiences. See the Web site for more detail. Agencies may require negative drug screens for clinical placement. Many agencies will also refuse students who have criminal convictions in their background. Students must have an active unencumbered practical nurse licensure, active health insurance and current BLS C.P.R. Certification throughout the program.

For those students who choose Monroe County Community College as their home/degree granting school:

Required Course Work: (all pre-requisites)

General Education Courses:

ENGL 151 (English Composition I) 3
ENGL 152 (English Composition II) 3
PSYCH 151 (General Psychology)................................ 3
POLSC 151 (Introduction to Political Science).............. 3
PSYCH 254 (Life Span Psychology)............................. 3
* BIOL 157 and 158 (Anatomy and Physiology) 8
* Meet the mathematics competency requirements for MCCC
    (If course needed, recommend Math 125 or Math 151,
    available on-line)
* Meet the computer skills competency for MCCC
    (If course is needed, CIS 130 is recommended.)

Advanced Placement as a Licensed Practical Nurse....... 7

Required Core Courses:

* NURS 180 W (Pharmacology)
    (only offered by KVCC)... 3
NURS 220 (Nursing Assessment)
    (only offered by Kirtland)....................................... 3
NURS 260 (Nursing Care of Adults) (I, II)** 8
NURS 290 (Nursing Leadership)
    (only offered by Monroe) 3
NURS 272 (Nursing Care of Special Populations:
    Obstetrics) 2
NURS 274 (Nursing Care of Special Populations:
    Pediatrics) 2
NURS 276 (Nursing Care of Special Populations:
    Mental Health) 4
NURS 280 (Clinical Application of
    Nursing Care)** 8

63

(Plus math and computer course work, if required.)

  * Prerequisite to admission.
  ** Offered by all schools, but at different times.

Please see the Student Handbook on-line for other requirements for program admission and completion. All students must meet health, immunization and other requirements noted in the Student Handbook to be admitted. Also refer to www.monroeccc.edu Nursing: RN from LPN program information for further Monroe information.

Phlebotomy Technician

Certificate Program

A phlebotomy technician performs venipuncture techniques to collect blood specimens necessary in the diagnosis and treatment of a client, as well as related procedures, such as point of entry testing/dermal punctures, specimen transport and processing and infection control. Legal, ethical and professional concepts related to the role of the phlebotomist will also be studied.

The program includes classroom and skills laboratory experiences, followed by a clinical externship. Some clinical work may be in the evening. To enter the clinical portion, students must be at least 18 years old and able to document good physical and mental health. A physical examination and immunizations are required for students at their expense to verify capabilities and general health status. The exam must be completed before clinical placement in HLTSC 157. Cardiopulmonary resuscitation certification from the American Red Cross or American Heart Association and criminal background/drug screen checks may also be required by some clinical agencies at the student's expense. In addition to college rules, phlebotomy technician students are required to adhere to policies and procedures outlined in the Phlebotomy Technician Student Handbook. Students must be available at least 20 hours per week for the classroom portion and are required to work up to 40 hours per week for the externship period to complete this course of study in a CLIA-regulated, accredited laboratory.

Both classes (HLTSC 156 and HLTSC 157) must be completed for the certificate.

Phlebotomists work in free standing laboratories, hospitals, clinics, home care areas and physicians' offices. Phlebotomists are often cross-trained as patient care technicians. Starting pay is about $22,000.

Students who wish to review or enhance phlebotomy skills may elect to take HLTSC 156 (Phlebotomy Basics) and not HLTSC 157 (Phlebotomy II), but a certificate will not be awarded.

	Credits
HLTSC 156 (Phlebotomy Basics)	6
HLTSC 157 (Phlebotomy II)	3
Total Certificate Requirements	**9**

NOTE: A minimum of ten (10) students is required for this class to run.

Quality Systems Technology

Engineering • Manufacturing • Industrial Technology

Career Pathways

The associate of applied science degree with specialization in quality systems technology is designed to prepare students to assume responsibilities in a wide variety of technical and management support roles. The program combines quality tools to monitor production and management practices to develop the environment that is most conducive to establishing quality systems in organizations. In today's business and industrial environments, "quality" is an integral part of the way companies are organized and managed to produce quality products and services.

Graduates of this program will be prepared for employment in the following areas:

- Inspector
- Lab technician
- Quality engineer
- Quality auditor
- Quality control technician
- Quality manager
- Quality technician
- Testing technician

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

	Credits
Required General Education Courses	**22**

ENGL 101 (Written and Oral Communication) or
   ENGL 151 (English Composition 1) 3
MATH 162 (Introduction to Statistics) 3
[1] MATH 3
POLSC 151 (Introduction to Political Science) 3
PHY 101, 151 or CHEM 150 or 151 4
[2] Social Science/Humanities Elective 3
† CIS 130 (Introduction to Computer
   Information Systems) 3

Required Core Courses   **38**

1st Semester
MATL 101 (Industrial Materials) 3
† CIS 109 (Spreadsheet Software) 3
Technical Electives 5

2nd Semester
MDTC 109 (Mechanical Blueprint Reading) 2
MECH 102 (Manufacturing Processes) 4
QSTC 111 (Quality Management) 3

3rd Semester
ENGL 102 (Business Writing) or 3
   SPCH 151 (Communication Fundamentals)
QSTC 115 (Statistical Process Control) 3
QSTC 150 (Introduction to Metrology) 3
QSTC 160 (Team Problem Solving) 3

4th Semester
† CIS 112 (Database Software) 3
QSTC 230 (Documentation and Audit Preparation) 3

Total Degree Requirements   **60**

Certificate Program: Quality Systems Technology

In addition to the two-year associate degree program, Monroe County Community College offers a certificate program in quality systems technology. We recognize that many employers place value on a certificate which authenticates specialized educational preparation. The program concentrates upon basic core courses with skill development and job upgrading being the primary objectives. All courses taken in the certificate program are applicable toward the associate of applied science degree.

QSTC 111 (Quality Management) 3
QSTC 115 (Statistical Process Control) 3
QSTC 150 (Introduction to Metrology) 3
QSTC 160 (Team Problem Solving) 3
QSTC 230 (Documentation and Audit Preparation) 3
† CIS 109 (Spreadsheet Software) 3
MDTC 109 (Mechanical Blueprint Reading) 2
ENGL 102 (Business Writing) or
   SPCH 151 (Communication Fundamentals) 3
† MATH 121 (Technical Mathematics I) 4

Total Certificate Requirements   **27**

Basic Quality Technician Certificate

A certificate is also available for a basic quality technician. This certificate is designed for the entry-level production or quality assurance employee who seeks additional skills for assuming greater responsibility in a production environment.

QSTC 105 (SPC Basics) 1
QSTC 111 (Quality Management) 3
QSTC 150 (Introduction to Metrology) 3
† CIS 109 (Spreadsheet Software) 3
MDTC 109 (Mechanical Blueprint Reading) 2

Total Certificate Requirements   **12**

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† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

Respiratory Therapy

Respiratory therapy, or respiratory care, is an allied health profession specializing in cardiopulmonary disorders and diseases. A respiratory therapist can be instrumental in assisting a physician in the diagnosis, treatment and prevention of a wide spectrum of disorders affecting the heart and lungs.

There are two levels of therapists in respiratory care: certified respiratory therapists and registered respiratory therapists. A certified respiratory therapist is the entry-level position in the field and requires a minimum of an associate degree to be a candidate for the CRT board exam. CRTs typically work with less critically ill patients. A registered respiratory therapist is an advanced-level position in the field and requires a two-, three- or four-year degree program. RRTs typically work in ICUs and are more likely to be in positions of supervision. Monroe County Community College has both CRT and RRT programs at the associate-degree level. Graduates of the CRT program may transfer to a bachelor degree program or elect to continue with the accelerated RRT program for the advanced practitioner. Because area employers prefer the RRT, graduates who complete the accelerated registered therapist program are able to assume positions of advanced practitioners in less time. Graduates of both CRT and RRT programs at MCCC exceed the national averages for success on board exams. Future employment for certified and registered respiratory therapists is considered excellent nationwide as well as in Southeast Michigan and Northwest Ohio.

The Monroe County Community College Respiratory Therapy Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) through the Committee on Accreditation for Respiratory Care (CoARC).

Graduate therapists are prepared to:

- Assume basic or advanced respiratory care positions in hospitals, nursing homes, subacute care centers, rehabilitation facilities, long-term care facilities, home care companies, asthma clinics, sleep disorders laboratories and pulmonary function laboratories;
- Continue higher education, if desired.

Registered Respiratory Therapist (RRT) Program

Credits

Required Courses and Sequence

Spring/Summer Semester (First Year)
[1] PSYCH 151 (General Psychology)................................. 3
[1] ENGL 151 (English Composition I) 3
6

Fall Semester (First Year)
RTH 100 (Respiratory Care Techniques I) 8
RTH 104 (Cardiopulmonary Assessment) 2
[1] BIOL 157 (Anatomy and Physiology I) 4
14

Winter Semester (First Year)
RTH 110 (Respiratory Care Techniques II)..................... 5
RTH 111 (Respiratory Care Clinical Practice I) 5
RTH 116 (Cardiopulmonary Pathophysiology).............. 3
[1] BIOL 158 (Anatomy and Physiology II) 4
17

Spring/Summer Semester (Second Year)
RTH 120 (Respiratory Care Techniques III) 5
RTH 121 (Respiratory Care Clinical Practice II) 2
RTH 220 (Pharmacology for Respiratory Therapists) 2
9

Fall Semester (Second Year)
RTH 211 (Respiratory Care Clinical
   Practice III-Therapist) 5
RTH 212 (Advanced Cardiopulmonary Physiology) 4
RTH 214 (Adult Critical Care) 4
RTH 216 (Perinatal/Pediatric Critical Care) 2
RRT 15

Winter Semester (Second Year)
RTH 221 (Respiratory Care Clinical Practice IV) 5
RTH 222 (Seminar) 2
RTH 226 (Respiratory Care Techniques IV) 3
[1] BIOL 260 (General Microbiology) 4
[1] POLSC 151 (Political Science) 3
17

Completion of RRT Program 78

[2] **Suggested General Electives**
BIOL 259 (Pathophysiology) 4
CHEM 151, 152, 160 (Chemistry)................................. 4
HLTSC 110 (Medical Terminology) 2
Higher Level Humanities Course................................. 3
MATH 151, 152, 162 3
PSYCH 254 (Life Span Psychology)............................. 3
SPCH 151, 152 (Speech)... 3

[1] If desired, these courses may be taken prior to the scheduled sequence as long as prerequisites are met.

[2] Not required for degree. May assist in completion of bachelor's degree.

Certified Respiratory Therapist (CRT) Program

Credits

Required Courses and Sequence

Spring/Summer Semester (First Year)
[1] PSYCH 151 (General Psychology)................................3
[1] ENGL 151 (English Composition I) 3
6

Fall Semester (First Year)
RTH 100 (Respiratory Care Techniques I) 8
RTH 104 (Cardiopulmonary Assessment) 2
[1] BIOL 157 (Anatomy and Physiology I) 4
14

Winter Semester (First Year)
RTH 110 (Respiratory Care Techniques II)....................5
RTH 111 (Respiratory Care Clinical Practice I) 5
RTH 116 (Cardiopulmonary Pathophysiology)...............3
[1] BIOL 158 (Anatomy and Physiology II) 4
17

Spring/Summer Semester (Second Year)
RTH 120 (Respiratory Care Techniques III) 5
RTH 121 (Respiratory Care Clinical Practice II) 2
RTH 220 (Pharmacology for Respiratory Therapists) 2
9

Fall Semester (Second Year)
[1] POLSC 151 (Political Science) 3
RTH 209 (Respiratory Care Specialty Clinic I) 2
   Or RTH 216 (Perinatal/Pediatric Critical Care) 2
RTH 211 (Respiratory Care Clinical
   Practice III-Therapist) 5
RTH 214 (Adult Critical Care) 4
CRT 14
Completion of CRT Program 60

CRT to RRT Program for Returning Students

Fall Semester
RTH 212 (Advanced Cardiopulmonary Physiology) 4
RTH 216 (Perinatal/Pediatric Critical Care)...................2
[1] BIOL 260 (Microbiology)..4
10

Winter Semester
RTH 219 (Respiratory Care Specialty Clinics II).............4
RTH 222 (Seminar)..2
RTH 226 (Respiratory Care Techniques IV)...................3
9

Respiratory Therapy Program Admission Criteria

Admission requirements are subject to change. A student must meet the admission requirements in effect for the class and year students are entering. Both respiratory therapy programs have selective admission.

To be eligible for evaluation and selection, all required information must be included in the student's folder at application deadline, which is May 10 of the year the student wishes to enter the respiratory therapy program. Applications completed after the deadline date will be considered on a space-available basis.

For a student to be considered for either program, the MCCC Division of Health Sciences requires:

1. Graduation from high school or G.E.D. A grade point average of 2.5 or better in high school work and any previously completed college level courses is preferred. High school grade point averages are based on the evaluation of five academic areas of instruction: English, mathematics, foreign language, social sciences and natural sciences;

2. Completion of CHEM 150, Fundamental Principles of Chemistry, or a higher-level college chemistry course. An applicant with one year of high school chemistry can be accepted into the program contingent upon his or her successful completion of CHEM 150 or higher prior to starting Fall Semester respiratory therapy classes. A challenge exam is available for CHEM 150 through the MCCC Credit by Examination process. It is required that chemistry be repeated if it has not been taken within 10 years of the application deadline;

3. Completion of one year of high school-level biology or BIOL 152, Biological Science. A grade of "B" or better in biology is preferred. Unless waived by the respiratory therapy program director, it is required that biology be repeated if it has not been taken within 10 years of the application deadline date;

4. Completion of MATH 150, Beginning Algebra, or a higher-level college mathematics course. An applicant with one year of high school Algebra can be accepted into the program contingent upon his or her successful completion of MATH 150 or higher prior to starting Fall Semester respiratory therapy classes. A challenge exam is available for MATH 150 through the MCCC Credit by Examination process. It is required that Algebra be repeated if it has not been taken within 10 years of the application deadline;

5. Completion of CIS 130, Introduction to Computer Information Systems, or the graduation requirement for computer skills;

6. The American College Test (ACT) examination is required of all applicants who have not completed 25 semester hours of college courses by the application deadline. An ACT composite of 21 or above is preferred for applicants taking the exam after Fall 1989 and 19 or above if taken prior to Fall 1989;

7. Students in the respiratory therapy program must consent to a criminal history check to comply with Michigan Compiled Laws, Section 333.20173. No student will be admitted to the program if convicted of a felony or attempt/conspiracy to commit a felony within 15 years preceding the date of admission or a misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct or fraud or theft (or similar misdemeanor in state or federal law) against a vulnerable adult within 10 years of the date of admission. Any cost incurred with the criminal check is the student's responsibility.

8. At least two references from a non-relative (forms available from the Admissions and Guidance Office):

    a. If you have taken college course work, you may include a reference from an instructor or professor who can evaluate your academic potential;

    b. If you have been employed within the last two years, you may include one reference from an immediate supervisor;

    c. If you have had any health care experience, volunteer or other, you may include one reference from someone in a position to evaluate your potential as a health student;

    d. If you are under 21, you may include one reference from a high school counselor, teacher or principal.

9. Official transcripts from high school (if needed to verify algebra, chemistry, or biology) and all colleges or universities, if transfer credit is desired;

10. Attendance at a respiratory therapy program information session or hospital tour offered at various times throughout the year.

People whose native language is not English may be required to submit proof of English language proficiency via MELAB or TOEFL tests.

Selection of respiratory therapy class members is determined by the total consideration and evaluation of the applicant's standing in relation to all the previously listed criteria.

A physical examination and immunizations are required of students selected for the program at the student's expense that verify capabilities and general health status.

The position of a certified or registered respiratory therapist involves providing direct care to individuals. As such, it is characterized by the application of verified knowledge in the skillful performance of respiratory care modalities. Therefore, in order to be considered for admission or to be retained in the program, all applicants should possess:

    a. sufficient visual acuity, such as needed in the accurate interpretation of gauges, preparation and administration of medications and observation necessary for patient assessment and care;

    b. sufficient auditory perception to receive verbal communication from patients and members of the health team and to assess health needs of people through the use of monitoring devices such as cardiac monitors, stethoscopes, pulse oximeters, mechanical ventilators, fire alarms, etc.;

    c. sufficient gross and fine motor coordination to respond promptly and to implement skills, including the manipulation of equipment required in meeting health needs;

    d. sufficient communication skills (speech, reading, writing) to interact with individuals and to communicate their needs promptly and effectively as may be necessary in the individual's interest;

    e. sufficient intellectual and emotional functions to plan and implement care for individuals;

    f. psychological stability allowing the student to perform at the required levels in the clinical portions of the program;

g. the capability to concentrate for long periods of time in selecting correct techniques, equipment and safety measures to assure maximum care and safety of the patient. Therefore, the applicant must be able to exercise independent judgments under both routine and emergency conditions. A person under the habitual influence of alcohol or consciousness-altering drugs could not meet the above criteria;

h. the ability to tolerate and function safely in environmental conditions such as exposure to a variety of substances (including latex particles) and conditions within the laboratory and clinical environment: temperature fluctuations; electromagnetic radiation; hazardous waste materials, including chemicals, poisonous substances, blood, body tissue or fluids; loud or unpleasant noises; high humidity, and inhalants such as dust and aerosol mists.

Applicants should have reasonable expectations that they can complete the program of study and meet the educational objectives. Accommodations are unreasonable if they essentially impair or change the curriculum. Questions should be directed to the special populations coordinator in the learning assistance laboratory.

In addition to the general College rules, respiratory therapy students are required to adhere to policies and procedures outlined in the Respiratory Therapy Student Handbook.

Teacher Paraprofessional

This program leads to the associate of applied science degree and will fulfill the requirements of the No Child Left Behind legislation. After completing these program requirements, graduates will be able to apply for teacher paraprofessional positions in K-12 school districts. Also, because many of these courses transfer to four-year institutions, students interested in becoming certified teachers will be able to benefit from this program. Check with your advisor and planned transfer school for more details about transferring.

Credits

Required General Education Courses   **19**

ENGL 151 (English Composition I) 3
ENGL 152 (English Composition II) 3
POLSC 151 (Introduction to Political Science) 3
Science with Lab 4
† CIS 130 (Introduction to Computer
   Information Systems) 3
A mathematics course numbered MATH 150
   or higher 3

Required Core Courses   **26**

ART 158 (Art for Elementary Teachers) 3
EDUC 151 (Exploring Teaching) 3
ENGL 256 (Children's Literature) 3
HPE 151 (First Aid and Safety) 2
HPE 210 (Foundations in Health Education) 3
MUSIC 165 (Music for Classroom Teachers) 3
PSYCH 251 (Child Psychology) 3
PSYCH 156 (The Exceptional Person) 3
SPCH 151 (Communication Fundamentals) 3

Electives   **15**
(must choose from at least two different subjects)
ECDV 105 (Child Growth and Development) 3
ECDV 106 (Observing/Recording Child Behavior) 3
ECDV 150 (Nutrition Health and Safety) 3
ECDV 207 (Methods/Materials Early
   Childhood Education 3
ENGL 261 (Creative Writing) 3
HIST 151 (Western Civilization to 1650) 3
HIST 152 (Western Civilization, 1650 to Present).......... 3
HIST 154 (History of the U.S., 1607-1877) 3
HIST 155 (History of the U.S., 1877 to Present) 3
HIST 255 (History of East Asia) 3
HIST 256 (African-American History) 3
HPE 158 (Effective Coaching for Team Sports).............. 3
HUMAN 151 (Introduction to Humanities) 3
HUMAN 152 (Exploring Creativity).............................. 3
MATH 156 (Math for Elementary Teachers I)................ 3
MATH 166 (Math for Elementary Teachers II).............. 3
PSYCH 151 (General Psychology)................................. 3
SOC 151 (Principles of Sociology) 3
SOC 251 (Modern Social Problems)............................. 3
SOC 252 (Juvenile Delinquency)................................. 3
SWK 106 (Child Welfare) 3

Total Degree Requirements   **60**

† Tech Prep course. See page 14.

Welding Technology

Career Pathways

The associate of applied science degree with specialization in welding technology parallels the highly technological demands of industry. The welding laboratory contains state-of-the-art equipment for shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), gas tungsten arc welding (GTAW), submerged arc welding (SAW), plasma arc cutting (PAC) and oxy-fuel cutting (OFC). Virtually all modern production welding practices are covered.

The subject matter and laboratory experiences in the welding program provide training for the serious welding technologist, with emphasis on welding skill development, welding metallurgy, weldment evaluation and testing and related technical courses. Students are prepared for many welding-related careers, including welding inspection, sales, service, design, maintenance and engineering. The college offers state and American Welding Society (AWS) welder certification testing. Graduates of this program will be prepared for entry-level employment in the following areas:

- Welder/fabricator
- Welding metallurgy technician
- Welding sales/service technician
- Engineering technician
- Pipefitter
- Weld inspector
- Production welder

For Welding courses 102, 104 and 106, it is possible to enroll for specific subdivisions of the courses. As an example, WELD 102, Advanced SMAW, is shown as a single, six-credit hour course. The course can be subdivided into WELD 102A, Multi-Pass Arc Welding – 2 credits; WELD 102B, Code Welding Techniques – 2 credits, and WELD 102C, Multi-Pass Pipe Fillet Welding – 2 credits. This allows greater flexibility in terms of advanced placement for those with prior welding experience/training and also in the amount of time one has to commit to class during any one semester. Similar options exist in GMAW and GTAW Applications. See the division dean or faculty member for more information.

Another important feature of the program is the individual progress, audio-tutorial approach to mastering welding skills. Students may come in and, within certain parameters, progress at their own rate of speed. This allows students to complete course requirements based on their own ability rather than being locked into a set rate of progress for a given class.

Welding majors will be required to purchase related equipment for the program. A list is available from the college.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

Required General Education Courses   21

ENGL 101 (Written and Oral Communication) or
  ENGL 151 (English Composition I)...........................3
[1] MATH 6
POLSC 151 (Introduction to Political Science)...............3
[2] Social Science/Humanities Elective..............................3
PHY 101, 151, or
  CHEM 150 or 151...4
[3] Computer Skills Elective 2

Required Core Courses   40

1st Semester
MATL 101 (Industrial Materials) 3
WELD 100 (Introduction to Welding Processes) 4

2nd Semester
† WELD 110 (Welding Symbols and
  Blueprint Reading)..2
† WELD 114 (GMAW and GTAW Applications) 6

3rd Semester
METC 208 (Strength of Materials) 3
† WELD 102 (Advanced SMAW)......................................6
WELD 103 (Weldment Evaluation and Testing).............3

4th Semester
WELD 105 (Welding Metallurgy) 3
WELD 106 (Basic Pipe Welding) 6

Spring
WELD 216 (Basic Pipefitting) 4

Total Degree Requirements   61

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† Tech Prep course. See page 14.

[1] See page 36 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.

[2] See the social science/humanities alternatives listed on page 36.

[3] See the computer skills alternatives listed on page 37.

Certificate Program: Welding Technology

The college offers two levels of certificate programs in welding. The basic certificate is oriented toward developing those skills required for entry level jobs in the welding field. The advanced certificate program is also a skills-intensive program, but takes students through higher-level skill proficiencies, utilizing additional welding procedures and applications. All courses taken in the certificate program are applicable toward the associate of applied science degree.

Basic Welding Certificate
WELD 100 (Introduction to Welding Processes) 4
† WELD 102 (Advanced SMAW) or
  † WELD 114 (GMAW and GTAW Applications) 6
WELD 103 (Weldment Evaluation and Testing)............. 3
† WELD 110 (Welding Symbols and
    Blueprint Reading)... 2

Basic Certificate Requirements   15

Advanced Welding Certificate

WELD 100 (Introduction to Welding Processes) 4
† WELD 102 (Advanced SMAW) 6
WELD 103 (Weldment Evaluation and Testing)............. 3
WELD 105 (Welding Metallurgy) 3
† WELD 114 (GMAW and GTAW Applications) 6
WELD 216 (Basic Pipefitting) 4
† WELD 110 (Welding Symbols and
    Blueprint Reading)... 2

Advanced Certificate Requirements   28

American Welding Society (AWS) Certification

The college also offers course work to prepare students to qualify for AWS Certification at Entry and Advanced Levels of proficiency. In addition to verification of skill levels to national standards, AWS Certification also includes nationwide registry in the AWS data bank.

† Tech Prep course. See page 14.

Course Descriptions

Course Numbering System

090-099 Developmental courses that carry institutional credit only and do not apply towards graduation.

100-149 Freshman Career

150-199 Freshman University Parallel

200-249 Sophomore Career

250-291 Sophomore University Parallel

295-299 Field Trips, Seminars, Workshops, Independent Study, Co-ops

ACCOUNTING (ACCTG)

110 Applied Office Accounting   3 Credit Hours
Prerequisite: BSMTH 101 or MATH 121 or MATH 150
                                                                F

This introductory course is designed to provide an overview of accounting concepts and principles for non-accounting majors. Two mini-practice sets provide students with real-world experience using the accounting cycle.

151 Accounting Principles   4 Credit Hours
Prerequisite: Completion of, or co-register in BSMTH 101, MATH 150 or higher, or achieve a score on the COMPASS or ACT which satisfies current college general education requirements for graduation.
                                                                F, W

The study of accounting theory and principles is applied to service and merchandising enterprises, including special journals and ledgers, adjusting and closing procedures, preparation of financial statements, promissory notes, inventory control and valuation, depreciation, payroll and an introduction to cash control.

152 Accounting Principles   4 Credit Hours
Prerequisite: ACCTG 151
                                                                F, W

This course is a continuation of Accounting 151. The concepts and principles of partnership and corporate accounting; introduction to manufacturing and cost accounting; management analysis; and interpretation of financial data are covered in this course.

201 Microcomputer Accounting I   3 Credit Hours
Prerequisite: ACCTG 151 and CIS 109
                                                                F

This course is an introduction to computerized accounting emphasizing the application of accounting principles to microcomputers. Microcomputers will be used to maintain general and subsidiary ledgers.

205 Microcomputer Accounting II   3 Credit Hours
Prerequisite: ACCTG 152 and ACCTG 201
                                                                W

This course is a continuation of Microcomputer Accounting I. Using a software package, students will review and apply basic accounting principles, record transactions and generate computer documents for various types of business organizations.

220 Payroll Accounting   3 Credit Hours
Prerequisite: ACCTG 151
This course covers the analysis and recording of payroll transactions and the filing requirements of payroll reports. It will also focus on the various phases of Social Security taxes, federal income taxes, state income taxes and unemployment compensation and the laws relating to them. A payroll project is required, during which students will apply analytical and procedural skills learned in this course.

251 Intermediate Accounting I   4 Credit Hours
Prerequisite: ACCTG 152
                                                                F

This course is a detailed analysis of accounting problems as they relate to the valuation of assets. The course begins with a review of the fundamental accounting process and preparation of financial statements. The concept of present value is then introduced followed by a comprehensive study of the asset section of the balance sheet.

252 Cost Accounting   4 Credit Hours
Prerequisite: ACCTG 152
                                                                W

This course is an introductory course designed to provide practical knowledge of cost accounting systems and procedures. The course begins with an overview of the nature and purpose of cost accounting and follows with the basic concept that cost flow matches work flow. The major areas of cost accounting are covered, including job order cost accounting, process cost accounting, budgeting, standard costs, direct costing and nonmanufacturing costs.

254 Intermediate Accounting II   4 Credit Hours
Prerequisite: ACCTG 251
                                                                W

This course is a continuation of Intermediate Accounting I. The emphasis is on the liabilities and stockholders' equity sections of the balance sheet. Additional topics such as statement of cash flows and analysis and interpretation of financial statements are also covered in detail.

255 Introduction to Taxation   3 Credit Hours
Prerequisite: ACCTG 151
                                                                F

This course deals with the broad concepts of taxation. Topics include a working definition of taxation and tax bases. Tax concepts for both individual and corporate taxation are covered. Since income tax laws are constantly changing, this course is not designed to teach individuals how to be tax accountants or prepare individual income tax returns. The emphasis will be on broad, general concepts and on such topics as gross income deduction, credits and payments, expenses, capital gains and tax planning.

ADMINISTRATIVE PROFESSIONAL (ADMN)

101 Introduction to Today's Office   1 Credit Hour
   (formerly EOS 101)
                                                                F, W

This introductory course provides an overview of the administrative professional program. Content includes communication techniques and use of resources. Proofreading, spelling, grammar and punctuation skills are emphasized.

102 Keyboarding   1 Credit Hour
   (formerly EOS 102)
                                                                F, W

Keyboarding is designed to teach touch operation of the computer keyboard. The purpose of the course is to enable students to input and access information accurately and efficiently. Note: Students who have received credits for ADMN 131, 135, EOS 121, 131, 135, 139, WPR 103 or WPR 104 will not receive credits for this course. This class may not be taken concurrently with any of the above courses.

104 Legal Specialty   3 Credit Hours
   (formerly EOS 104)
Prerequisite: ADMN 119 or EOS 119
                                                                F, W

This course is a comprehensive study of legal procedures and terminology. Content includes basic areas of law. All material is transcribed from recorded media. Legal Specialty is offered through the Regional Computer Technology Center and the Business Learning Lab on a self-paced basis.

105 Medical Specialty   **3 Credit Hours**
(formerly EOS 105)
Prerequisite: EOS 119 or ADMN 119 and HLTSC 110
       F, W

This course is a comprehensive study of medical terminology and transcription of operative reports, discharge summaries, pathology reports, etc. All material is transcribed from recorded media using the computer. The course is offered through the Regional Computer Technology Center and the Business Learning Lab on a self-paced basis using self-instructional materials.

106 Numeric Keypad   **1 Credit Hour**
(formerly BSMCH 106)
       F, W, Sp
Numeric Keypad teaches the touch operation of the computer ten-key pad. This course is designed for the development of speed and accuracy in entering data. Numeric Keypad is offered through the Regional Computer Technology Center and the Business Learning Lab on an individualized self-paced basis.

119 Machine Transcription   **3 Credit Hours**
(formerly EOS 119)
Prerequisite: EOS 135 or ADMN 135
Machine Transcription provides practice in processing communication from verbal to printed form by transcribing from recorded media. Students develop proficiency in the technical skill of transcribing business documents while strengthening punctuation, spelling, grammar, vocabulary, listening, editing and proofreading skills.

131 Beginning Keyboarding   **3 Credit Hours**
(formerly EOS 131)
This course teaches the touch method of computer keyboard operation and provides practice techniques for building speed and accuracy. Content includes keying letters, memos and reports.

131B Keyboarding Skills Enhancement   **1 Credit Hour**
(formerly EOS 131B)
Prerequisite: EOS 102 or ADMN 102 or touch keyboarding skills of 30 wpm
       F, W
This course presents proven techniques for increasing keyboarding speed and accuracy. The student will complete lessons following a routine of focusing on one letter and completing 15-second, 30-second and one- and two-minute timings which enforce that letter. This is a self-paced course in the Regional Computer Technology Center and the Business Learning Lab using a Web site specifically created for skill building.

135 Intermediate Keyboarding   **3 Credit Hours**
(formerly EOS 135)
Prerequisite: Touch keyboarding skills of 40 wpm
       F, W
Intermediate Keyboarding is taught with word processing-like software. The course includes the development of speed and accuracy and the production of business letters, tables and manuscripts.

201 Integrated Office Software   **4 Credit Hours**
(formerly EOS 201)
Prerequisite: CIS 109 and CIS 112 and WPR 102
       W
Integrated Office Software provides instruction in the use of current office suite software packages. The course includes simulation exercises designed to develop proficiency in organizing, sorting, managing and presenting information with word processing, spreadsheet, database and presentation software programs. The course also includes complex hands-on projects that represent day-to-day administrative management activities.

ANTHROPOLOGY (ANTHR)

152 Introduction to Cultural Anthropology   **3 Credit Hours**
       F, Sp

This course provides a foundation of knowledge and appreciation of the range and variety of human life styles on a global basis. It describes and seeks general understanding about human customs or cultural behavior. This course provides the conceptual tools to understand cultural diversity and to help individuals to gain enlarged and enhanced perspectives on their own lives as well as the lives of others.

155 Introduction to Archaeology   **3 Credit Hours**
       F

This course is designed to provide a thorough introduction to the history, methods and theories of archaeology. Emphasis will be on a North American perspective, although examples of archaeological research/reasoning from around the world will be discussed, as appropriate. Case studies will be employed to illustrate major trends or concepts. Lectures, demonstrations, slide shows, hands-on-experiences and exercises will be used to facilitate the learning experience.

165 Eastern North American Archaeology   **3 Credit Hours**
       W, Sp, Su
This course is designed to provide a thorough introduction to the archaeology of eastern North America from the initial Native American occupations to the early Euro American settlement of the area. Case studies will be employed to illustrate major trends or concepts. Lectures, demonstrations, slide shows, hands-on experiences and exercises will be used to facilitate the learning experience.

ART (ART)

151 Art Fundamentals   **3 Credit Hours**
       F, W
This is an introductory course for all art students, especially those who are interested in taking a basic art class. The student will be exposed to the elements of two-dimensional form structure, the principles of organization, art terminology, materials and techniques and forms of artistic expression.

155 Art Appreciation   **3 Credit Hours**
       F, W, Sp
The student will be exposed to the fundamental principles governing art in its various forms. Slide lectures, class discussions, presentations by visiting artists, films and studio projects are designed to meet the needs of general students in understanding and appreciating the fine and applied arts.

158 Art for Elementary Teachers   **3 Credit Hours**
       F, W, Sp
This course is designed for the student who is pursuing a career in elementary education. It will focus on the various strategies that are required to produce a qualitative art program at the primary grade levels. Emphasis will be placed on teaching art production, writing instructional objectives for lesson planning and reviewing the fundamentals of art.

160 Two-Dimensional Design   **3 Credit Hours**
       F, Sp
This course studies the principles of two-dimensional design for an understanding of its nature and expressive possibilities. It allows for the opportunity to develop a creative approach in working with its elements. Emphasis will be placed on developing an awareness of composition and the principles of organization involving creativity and intuition. This course is viewed as a continuation of Art Fundamentals.

165 Illustration Techniques   3 Credit Hours
This course introduces the art student to the many drawing and painting techniques used by professional illustrators. The student will simulate the demands and deadlines faced in the advertising world. The exploration of ideas and images, recognition, media selection, step-by-step work-ups and presentation of final work is of utmost importance and will be developed thoroughly by the student. This course is viewed as a continuation of ART 160.

170 Life Drawing   3 Credit Hours
Prerequisite: ART 151 or ART 180
This is an introductory course in drawing the human figure from a live model. Numerous approaches, including varied media and drawing techniques as well as the examination of human anatomy and its structure, will be discussed and explored. Understanding of the various attitudes of the human form will be emphasized.

180 Drawing I   3 Credit Hours
                                             F, W
This is a comprehensive course covering the mechanics and techniques of drawing. The student will become aware of the various dry media used in drawing. Concentration on expressive line quality, mass, value, proportion and visual awareness will be of primary concern.

181 Drawing II   3 Credit Hours
Prerequisite: ART 180
                                             F, W
In this course, mixed media, self-expression, draftsmanship, composition, content and subject awareness will be emphasized. The student will be placed in a situation where self-discipline, analysis of composition and the development of creative imagery are of the utmost importance. This course is a continuation of ART 180.

190 Painting I   3 Credit Hours
                                       F, W, Sp, Su
This is an introductory course in painting. The selection of subject, composition, investigation of the many techniques (glazing, scumbling, dry brush, wet on wet, impasto, etc.) and preparation of painting surfaces will be explored thoroughly. Acrylic paint will be the media of choice in this class.

191 Painting II   3 Credit Hours
Prerequisite: ART 190
                                       F, W, Sp, Su
Emphasis is placed upon individual problems and the further development of techniques and approaches gained in Painting I. This course is a continuation of ART 190.

250 Watercolor Painting I   3 Credit Hours
                                       F, W, Sp, Su
This is an introductory course designed to familiarize the beginning student with the many technical and creative approaches to watercolor painting. Investigation of papers and watercolor tools, exploration of the medium, demonstrations, slide lectures and critiques will give the student in this class a more than adequate understanding of waterbase media.

251 Watercolor Painting II   3 Credit Hours
Prerequisite: ART 250
                                       F, W, Sp, Su
Emphasis will be on composition and individual expression. This course is a continuation of ART 250.

252 Studio Art   3 Credit Hours
Prerequisite: ART 181 or ART 191 or ART 251
                                       F, W, Sp, Su
Studio Art is a non-transferable course for the student/artist who has completed all the art offerings in a given discipline but still wishes to utilize the studio space, facilities and instructor's expertise to gain further knowledge. This will be done with the permission and under the supervision of an instructor. The student receives "P" or "F" rather than a letter grade for the course since it is not intended to transfer.

270 Ceramics I   3 Credit Hours
                                             F, W
This course introduces the student to the nature of clay and how it can be formed. An emphasis will be placed on hand-building methods; coil and slab methods will also be investigated. The intent of the course is to develop techniques of the artist/craftsman in each student. Fundamentals of design and glazing are also covered.

271 Ceramics II   3 Credit Hours
Prerequisite: ART 270
                                             F, W
This course continues the study of clay and the methods of using it as an art form. The objectives will be to develop one's skill in wheel throwing and to increase the student's awareness of the aesthetic nature of good ceramics. This course is a continuation of ART 270.

272 Ceramics III   3 Credit Hours
Prerequisite: ART 271
                                             F, W
This course continues the study of clay and the methods of using it as an art form. The objectives will be to increase one's skill in wheel throwing, analyze and to make more complicated forms, experiment in combining techniques and increase the student's awareness of the aesthetic nature of good ceramics. This course is a continuation of ART 271.

273 Ceramics IV   3 Credit Hours
Prerequisite: ART 272
                                             F, W
This course emphasizes self-expression, craftsmanship and studio practices. Glaze calculations and kiln firing procedures will also be covered. This course is a continuation of ART 272.

274 Studio Practices Ceramics   3 Credit Hours
Prerequisite: ART 273
                                             F, W
This is a non-transferable course for the artist who has completed all the art offerings in a given field but still wishes to use the studio space and instructor's expertise to gain further knowledge. This will be done with the permission and under the supervision of an instructor. This course is not designed as part of a transfer program. The student receives "P" or "F" rather than a letter grade.

280 Art History: Prehistoric to Gothic   3 Credit Hours
This course examines the art of the ancient western world beginning with pre-historic man and concluding with the Medieval Gothic era. The periods covered include pre-historic, Mesopotamian, Egyptian, Greek, Roman, early Christian, Byzantine and Gothic.

281 Art History: Renaissance to Baroque   3 Credit Hours
This course is an exploration of the artists and ideals which mark the development of early Renaissance art and its subsequent developments in Northern and Southern European art to the eighteenth century. Focus will be placed on the individual artists from the early Renaissance period up to the Baroque.

282 Art History: Neo-Classical/ 3 Credit Hours
Early Modern
This course traces the early movements of modern art, showing the progression of thought and the change of styles from the Neo-Classical period through the early twentieth century. Focus will be placed on specific artists who had leading roles in these developments.

ASTRONOMY (ASTRN)

151 Introduction to Astronomy 4 Credit Hours
A non-mathematical introduction to the principles of the astronomical universe. A general education course designed to be of interest to the individual without a scientific background who wishes to study the interrelation of the parts of the universe. Major areas of study include historical overviews, stars, stellar evolution, galaxies, cosmology and the solar system. Some laboratory work and day/evening outside observing may be required.

AUTOMOTIVE ENGINEERING TECHNOLOGY (AUTO)

101 Internal Combustion Engines 4 Credit Hours
F
This course covers the operating principles and design considerations of internal combustion engines typically encountered in the transportation field. Included will be two and four stroke-cycle gasoline and diesel engines, the Wankel and gas turbine engines. Emphasis will be on four stroke-cycle gasoline engines.

102 Automotive Electricity 4 Credit Hours
Prerequisite: ELEC 125
W
The practical application of electrical principles will be studied and include theory of operation, design and troubleshooting of starting motors, alternators, regulators and the complex electrical accessories found on modern automobiles. Use of automotive electrical test equipment will be stressed.

103 Fuel & Emission Control Systems 4 Credit Hours
W
This course covers the design theory, construction, operation and maintenance of fuel pumps, fuel injection and emission control systems. Principles of fuel distribution, manifolds and carburetors are studied. Students will develop skills in the use of diagnostic equipment to test and calibrate fuel and emission control systems.

104 Automotive Ignition Systems 3 Credit Hours
Prerequisite: ELEC 125
F
This course covers the operating principles of electronic and computer controlled ignition systems. Dynamometers are used to determine ignition timing curves for various operating conditions. Diagnostic procedures and the use of testing equipment will be stressed.

105 Automotive Transmissions 3 Credit Hours
W
This course covers the construction, operation and maintenance of standard and automatic transmissions and overdrive units. Troubleshooting, adjustment and maintenance of the various transmissions is covered in detail.

107 Automotive Chassis Units 4 Credit Hours
F
This course covers the design theory, construction, operation and maintenance of basic chassis components. Differentials, propeller shafts, springs, suspension, alignment and brake systems are studied. Use of road simulators with accelerometers and load cells are used to study vehicle dynamics.

109 Welding for Automotive Technicians 3 Credit Hours
F
This course is an in-depth introduction to the technical concepts pertaining to the more common automotive welding and cutting processes. Machine functions and filler metal chemistry will be emphasized as well as procedure requirements for stainless steel and aluminum. Welding/cutting processes covered (including laboratory applications) include: oxy-fuel cutting (OFC), plasma arc cutting (PAC), gas tungsten arc (GTAW) and gas metal arc (GMAW) welding.

114 Auto Instrumentation and Testing 4 Credit Hours
Prerequisite: AUTO 101, AUTO 103 and AUTO 104
W
This course is designed to further develop students' understanding and ability to set up and conduct laboratory investigations applicable to automotive research and development. Emphasis will be placed on defining the scope of a project, evaluation of investigation procedures, setting up and conducting tests, gathering and analyzing data and the production of final reports. Hardware and procedures will include computerized data collection, application of thermocouples, pressure transducers, strain gauges and similar devices applied to components undergoing tests on chassis and engine dynamometers, flow benches and related equipment.

201 Automotive Digital Electronics 3 Credit Hours
Prerequisite: ELEC 125
W, Sp
An introduction to digital theory, components, circuitry and systems as they relate to automotive applications. Topics covered are: basic microprocessor theory, the address bus, the data bus, control lines, memory, output systems, input systems, inherent instructions, extended instructions and applications.

BIOLOGY (BIOL)

152 Biological Science 4 Credit Hours
Prerequisite: Dissection of preserved animal specimens is required.
This course is designed to cover selected biological topics which should help the student gain an understanding and appreciation of basic life functions, man's relationship to the environment and the application of biological data to effective decision making. Units in modern cell biology, chemistry, metabolism, genetics, ecology and the taxonomy and evolution of major phyla. Course requires laboratory work.

154 Introduction to Environmental 4 Credit Hours
Science
A non-mathematical introduction to ecology and environmental science stressing fundamental concepts and principles of ecology/ecosystems, population dynamics, resources and pollution. Topics include land use, food resources, mineral resources, energy, air, water and the causative interrelationships between human values and socio-economic, political and environmental problems. This course is open to both science and non-science majors.

155 Allied Health Anatomy & Physiology   4 Credit Hours
Prerequisite: CHEM 150 or BIOL 152 or high school
   biology or chemistry. Dissection of preserved animal
   specimens is required.
A one-semester course which surveys the fundamental
concepts of cellular structure and human body
organization. Basic anatomy and physiology of the ten
body systems is integrated with laboratory exercises
using models and microscope slides to illustrate human
anatomy. This course cannot be used to meet the anatomy
and physiology requirements of the nursing or respiratory
therapy associate degree programs. Course requires
laboratory work.

157 Anatomy & Physiology I   4 Credit Hours
Prerequisite: BIOL 152 or CHEM 150 or high school
   biology and chemistry within the last 5 years.
   Dissection of preserved animal specimens is required.
Fundamental concepts of cellular structure and human
body organization. Emphasis on cellular structure and
function and anatomy and physiology of the following
human organ systems: integumentary, skeletal, muscular,
nervous and special senses. Integrated principles of
chemistry, biology and embryology are covered. This
course is required for all students in the Health Sciences
curriculum. Course requires laboratory work.

158 Anatomy & Physiology II   4 Credit Hours
Prerequisite: BIOL 157. Dissection of preserved animal
   specimens is required.
A continuation of Biology 157. This course covers the
anatomy and physiology of the human endocrine,
circulatory, respiratory, digestive, renal and reproductive
systems. This course is required for all students in the
Health Sciences curriculum. Course requires laboratory
work.

160 Biology of Aging   3 Credit Hours
This course presents the essential biological changes which
occur as part of the aging process, in particular, those
pathological conditions which are common in later life. It
includes current theories of biological aging with special
attention to the implications of those changes in serving
the needs of older adults. It is designed to meet the needs
of students preparing for careers in working with older
adults.

251 Elements of Botany   4 Credit Hours
Prerequisite: BIOL 152
                                            W
A detailed study of plant forms from the primitive groups
to the higher seed plants. Morphology and physiology,
taxonomy, evolution, ecology and economics will be
studied. Course requires laboratory work.

252 Elements of Zoology   4 Credit Hours
Prerequisite: BIOL 152. Dissection of preserved animal
   specimens is required.
                                            F
A detailed study of invertebrate and vertebrate animals.
Emphasis is placed on morphology and physiology,
taxonomy, evolution, economics and ecology. Some of the
more important cases under these topics will be discussed
and explored. This course requires field work outside of the
normal laboratory hours throughout the semester.

259 Introduction to Pathophysiology   4 Credit Hours
Prerequisite: BIOL 158 and BIOL 260
A study of the fundamental mechanisms and
manifestations of disease, this course covers basic
principles of human pathophysiology, including infectious
disease, immunopathology, congenital and hereditary
disorders and neoplasia. Disorders of the major organ
systems are emphasized: cardiovascular, respiratory,
nervous, endocrine, renal, urologic and gastrointestinal/
biliary pathophysiology. This course is designed for
students in occupational programs relating to the health
sciences.

260 General Microbiology   4 Credit Hours
Prerequisite: BIOL 152 or CHEM 150 or NURS 105
An introductory course designed to present the basic
concepts, techniques and applications of microbiology. It
will include detailed discussion of the characteristics of
bacteria, fungi, algae, protozoa, helminthes and viruses in
terms of morphology, chemical and biological properties,
control techniques, disease and applications. Course
requires laboratory work.

264 Fundamentals of Genetics   4 Credit Hours
Prerequisite: BIOL 152
This course provides an introduction to the principles
of the transmission of inherited characteristics and the
underlying molecular mechanisms of the regulation of
expression of genetic information. Topics will include:
classical genetics, molecular genetics, biotechnology and
genetic engineering, genetics of cancer and population
genetics.

BUSINESS ADMINISTRATION (BUSAD)

151 Introduction to Business   4 Credit Hours
                                            F, W
This course surveys the field of business, focusing on
problems, practices and procedures. The scope includes
environmental aspects, organization, marketing and sales
promotion, production, personnel, labor relations and
finance. This course is required by most business curricula
and should be taken in the first year. This course is also
highly recommended for any non-business major who
wishes to explore the field of business.

BUSINESS LAW (BSLW)

251 Business Law   4 Credit Hours
                                            F, W
This course addresses various legal principles: law of
contracts, agency, negotiable instruments and banking.
Some of the more important cases under these topics will
be discussed and explored.

BUSINESS MANAGEMENT (BMGT)

201 Principles of Management   3 Credit Hours
                                            F, W, Sp
This course emphasizes the basic principles of
management. The course topics include functions of
management, decision-making, directing, communicating,
controlling, planning, human resources and organizing.
Managerial functions are discussed within the framework
of modern business organizations.

220 International Business   3 Credit Hours
Prerequisite: BMGT 201 and ECON 251
International Business introduces the process of
globalization and its implications for business firms and
their managers. Course content includes the social, political
and economic environments of the multinational firm, with
emphasis on management strategies across cultural and
national boundaries.

251 Human Resource Management   4 Credit Hours
Prerequisite: BUSAD 151 or BMGT 201

                                                          W

The focus of this course is on business organization and
management as they apply to the personnel functions of
recruitment, selection, placement, orientation and training.
Attention is given to job analysis and evaluation, morale
measurement and maintenance, union-management
relationships and employees' economic and physical
security.

BUSINESS MATH (BSMTH)

101 Business Mathematics   3 Credit Hours
                                                       F, W
This course covers practical application of addition,
subtraction, multiplication, division, decimals, fractions,
percentages, discounts, simple interest, compound interest,
present value, discounting notes, interest on installment
loans and amortized mortgage loans to the problems of
everyday business and accounting.

CHEMISTRY (CHEM)

150 Fundamental Principles of Chemistry   4 Credit Hours
An introduction to the fundamental concepts and
applications of general chemistry and description of
chemical compounds. Detailed discussions include:
measurement, atomic structure, nuclear change, the
periodic law, bonding, nomenclature, chemical reactions,
mass relationships, solutions, acids and bases and other
selected topics. The course is designed for majors in health,
elementary education and technical programs, and as an
elective for non-science majors. Course requires laboratory
work.

151 General College Chemistry I   4 Credit Hours
Prerequisite: MATH 151 or equivalent and CHEM 150 or
  one year of high school chemistry

                                                          F

A study of the basic principles of general chemistry
including classification and characterization of chemical
particles, chemical bonding and molecular structure,
chemical reactions, oxidation-reduction processes, reaction
stoichiometry, inorganic nomenclature and the qualitative
behavior of common metals and their cations. Course
requires laboratory work.

152 General College Chemistry II   4 Credit Hours
Prerequisite: CHEM 151

                                                          W

A continuation of Chemistry 151 which includes obtaining
and applying quantitative information in the laboratory
to the basic interrelationships among solution chemistry,
chemical thermodynamics, chemical kinetics, chemical
equilibria and electrochemistry. Course requires laboratory
work.

160 Fundamentals of Health-Science   4 Credit Hours
  Chemistry
Prerequisite: CHEM 150 or CHEM 151 or high school
  chemistry
                                                          W

A study of organic and biochemistry as it applies to the
health sciences. The course is designed for majors in
occupational programs relating to the health sciences that
require a basic understanding of organic and biochemistry.
Course requires laboratory work.

251 Organic Chemistry I   4 Credit Hours
Prerequisite: CHEM 152
                                                          F

The preparation, properties, structures and reactions
of aliphatics, alcohols, ethers, aldehydes, ketones and
carboxylic acids. Laboratory develops basic organic
chemistry techniques as well as instrumental methods
including chromatography and spectroscopy. The course
includes three hours of lecture and three hours of
laboratory each week.

252 Organic Chemistry II   4 Credit Hours
Prerequisite: CHEM 251
                                                          W

A continuation of Chemistry 251 with consideration of
enols, polyenes, amines, heterocyclics, carbohydrates,
amino acids and macromolecular species. Laboratory
develops basic organic chemistry techniques as well as
instrumental methods including chromatography and
spectroscopy. The course includes three hours of lecture
and three hours of laboratory each week.

COMMUNICATION (COMM)

151 Introduction to Radio and TV   3 Credit Hours
                                                          F

This course is designed for students who wish to develop
criteria to evaluate the flood of information presented
by the media. Students will gain insight into the effects
and influence of media in daily application. Also within
this design will be the exploration and implementation of
production methods used in radio and TV programming.
Students will create and design, write, produce, direct and
present material for audience (class) consumption.

250 Radio Programming   3 Credit Hours
Prerequisite: COMM 151

                                                  F, W, Sp, Su
This course is designed to provide students with a broad
understanding of radio production theory and practice. It
combines lectures on radio production techniques, radio
marketing and technology and equipment with studio
practice. Students will produce simulated programs.
Students also learn FCC rules regarding program content
and community service.

251 Television Programming   3 Credit Hours
Prerequisite: COMM 151
                                                          W

This course is designed to provide students with a broad
understanding of television production theory and
practice. It combines lectures on television technology and
production techniques with studio production. Students
will produce simulated programs in the studio laboratory.

260 Advanced Radio I   **2 Credit Hours**
Prerequisite: COMM 250
                                                    F, W, Sp, Su
This course is the first in a series of two radio workshops
that give students on-air experience. Level I students
will learn the basics necessary to produce a weekly
two-hour radio show. Emphasis will be on following the
scheduled programming and learning how to adjust the
scheduled music to hit specific breaks on time. The class
will participate in the planning of a remote broadcast.
This remote broadcast may be scheduled on a weekend.
Students enrolled in this course will be required to record
a brief newscast to be recorded for playback during their
radio show. Students will develop announcing skills
appropriate to specific program content and format. A two-
hour weekly lab section must be arranged at the first class
meeting.

261 Advanced Radio II   **2 Credit Hours**
Prerequisite: COMM 260
                                                    F, W, Sp, Su
A continuation of COMM 260, this course gives students
additional time to develop their on-air delivery while
expanding on topics learned such as remote broadcasting,
promotion and marketing. A detailed emphasis on the
planning and implementing of special programming for
WYDM will be a major portion of the one-hour weekly
meeting. Students continue to develop announcing abilities.
A two-hour weekly lab section must be arranged at the first
class meeting. Students who successfully complete COMM
261 are ready for independent on-air time.

265 Radio Lab I   **1 Credit Hour**
Prerequisite: COMM 261
                                                    F, W, Sp, Su
This is an independent lab that allows students to further
develop both practical skills and their understanding of
how programming, production, news and community
service are all needed to operate a radio station
successfully. Students enrolled in this lab will be assigned
as assistants to programming, production, news or
community affairs work. This may include peer mentoring
for COMM 260 and COMM 261 classes. This lab allows
students the opportunity to apply knowledge gained in
prior coursework. Students will also serve as on-air talent
as needed. Individual emphasis will be on producing
up-to-date audio demo tapes of projects and air-checks of
programs on WYDM.

266 Radio Lab II   **1 Credit Hour**
Prerequisite: COMM 261
                                                    F, W, Sp, Su
This is an independent lab that allows students to further
develop both practical skills and their understanding of
how programming, production, news and community
service are all needed to operate a radio station
successfully. Students enrolled in this lab will be assigned
as assistants to programming, production, news or
community affairs work. This may include peer mentoring
for COMM 260 and COMM 261 classes. This lab allows
students the opportunity to apply knowledge gained in
prior coursework. Students will also serve as on-air talent
as needed. Individual emphasis will be on producing
up-to-date audio demo tapes of projects and air-checks of
programs on WYDM.

267 Radio Lab III   **1 Credit Hour**
Prerequisite: COMM 261
                                                    F, W, Sp, Su
This is an independent lab that allows students to further
develop both practical skills and their understanding of
how programming, production, news and community
service are all needed to operate a radio station
successfully. Students enrolled in this lab will be assigned
as assistants to programming, production, news or
community affairs work. This may include peer mentoring
for COMM 260 and COMM 261 classes. This lab allows
students the opportunity to apply knowledge gained in
prior coursework. Students will also serve as on-air talent
as needed. Individual emphasis will be on producing
up-to-date audio demo tapes of projects and air-checks of
programs on WYDM.

270 Advanced Television I   **2 Credit Hours**
Prerequisite: COMM 251
                                                    F, W, Sp, Su
This course is the first in a series of two television
workshops that give students on-air experience. The class
works as a team to produce thirty-minute community
affairs programs that will air on Monroe Public Access
Cable Television (MPACT). Five shows will be produced
during each semester. Time required may occasionally
exceed the contact hours of the course. A two-hour weekly
lab section must be arranged at the first class meeting.

271 Advanced Television II   **2 Credit Hours**
Prerequisite: COMM 270
                                                    F, W, Sp, Su
A continuation of COMM 270, students in this course
further develop their production skills. The class works as
a team to produce weekly thirty-minute news programs
that will air on Monroe Public Access Cable Television
(MPACT). Emphasis is on developing news, sports,
community events and interview segments. Work includes
planning, interviewing and production of live-to-tape
shows. A weekly lab section must be arranged at the first
class meeting. Time required may exceed the contact hours
of the course.

275 Television Lab I   **1 Credit Hour**
Prerequisite: COMM 271
                                                    F, W, Sp, Su
This is an independent lab that allows students to further
develop both practical skills and their understanding of
how television programs are produced. Students enrolled
in this lab will be assigned as assistants to programming
and production work. This may include peer mentoring
for COMM 270 and COMM 271 classes. This lab allows
students the opportunity to apply knowledge gained in
prior coursework. Specific tasks may include production of
B-roll footage, producing and/or updating the PSA database
and other recordings used by MPACT members. Students
will also assist in the production of special programs
scheduled during the semester for which they are enrolled.

276 Television Lab II   **1 Credit Hour**
Prerequisite: COMM 271
                                                    F, W, Sp, Su
This is an independent lab that allows students to further
develop both practical skills and their understanding of
how television programs are produced. Students enrolled
in this lab will be assigned as assistants to programming
and production work. This may include peer mentoring
for COMM 270 and COMM 271 classes. This lab allows
students the opportunity to apply knowledge gained in
prior coursework. Specific tasks may include production of
B-roll footage, producing and/or updating the PSA database
and other recordings used by MPACT members. Students
will also assist in the production of special programs
scheduled during the semester for which they are enrolled.

277 Television Lab III   **1 Credit Hour**
Prerequisite: COMM 271

F, W, Sp, Su

This is an independent lab that allows students to further develop both practical skills and their understanding of how television programs are produced. Students enrolled in this lab will be assigned as assistants to programming and production work. This may include peer mentoring for COMM 270 and COMM 271 classes. This lab allows students the opportunity to apply knowledge gained in prior coursework. Specific tasks may include production of B-roll footage, producing and/or updating the PSA database and other recordings used by MPACT members. Students will also assist in the production of special programs scheduled during the semester for which they are enrolled.

COMPUTER INFORMATION SYSTEMS (CIS)

109 Spreadsheet Software   **3 Credit Hours**
F, W

This course familiarizes students with electronic spreadsheets, spreadsheet graphics and data management systems. The various applications to business and general management systems will be discussed. Hands-on experience will be provided utilizing a popular spreadsheet software package such as Excel for Windows.

112 Database Software   **3 Credit Hours**
F, W

This course familiarizes students with the basic models and capabilities of standard database management systems. Students will have hands-on experience in creating and using databases on a microcomputer. Skill will be obtained primarily through the use of a common database software package.

118 Windows Operating System   **1 Credit Hour**
F, W

This course will focus on the Windows operating environment. Topics include working with files and folders, customizing the Windows environment, managing programs, using Windows accessories and utility programs, transferring data between applications, managing printing option and performing disk maintenance.

123 PowerPoint Presentation Software   **3 Credit Hours**
W

The student will learn to transform data into professional presentations using a sophisticated PC-based software package. The course will start with simple presentations moving to the more complex projects involving animation and sound. Students will create and design charts, graphs, and other visual elements which will be integrated with text to effectively communicate ideas.

130 Introduction to Computer   **3 Credit Hours**
    Information Systems

F, W, Sp

This course provides students with basic knowledge of computer information systems. This course includes both computer concepts and hands-on use of various computer applications. Computer concepts include computer system basics of hardware, software, files and data storage. The hands-on portion consists of using the operating system, spreadsheets, word processing, databases, presentation software, e-mail and the Internet.

132 Introduction to Computer   **2 Credit Hours**
    Programming

F, W

This course provides an introduction to computer program design and the coding of computer programs. Students will design solutions to computer problems using pseudocode, flow chart symbols and structure charts. These solutions will then be coded, executed and debugged.

140 Help Desk Concepts   **3 Credit Hours**
This course covers help desk technology, tools, techniques and customer service skills that are essential to any effective help desk. In this course students are introduced to the service concepts of "soft skills" and "self-management skills" as well as the operation of a help desk and possible career paths.

142 Help Desk Troubleshooting   **3 Credit Hours**
Prerequisite: CIS 130
This course covers application and operating system troubleshooting and problem-solving techniques. Real-world case studies will be fielded by students to provide them with challenges they can expect to encounter in a day-to-day help desk support situation. In addition, this course will help to prepare students to successfully pass the HDA (Help Desk Analyst) certification exam.

150 Computer Science I   **3 Credit Hours**
Prerequisite: CIS 132

F, W

This course focuses on the design stage of computer program development and coding of programs using the C + + programming language. Students will diagram solutions to a variety of computer problems using ANSI standard flow charting symbols, structure charts and other design methods. Utilizing microcomputers, these solutions will then be coded, executed and debugged.

152 Visual Basic Programming   **3 Credit Hours**
Prerequisite: CIS 132

F, W

This course uses VISUAL BASIC.NET to develop Windows applications. Utilizing microcomputers, students will design, build, run, save, modify and debug VISUAL BASIC. NET applications using VISUAL BASIC.NET interfaces, tools, forms, controls, properties and code.

155 Database Management Systems   **3 Credit Hours**
Prerequisite: CIS 112

F

This course covers the process of database design, development, implementation and management. Topics covered include relational database model, object-oriented database model, structured query language, entity relationships, normalization, database life cycle and distributed database management systems.

167 Discrete Structures   **3 Credit Hours**
Prerequisite: CIS 150 and MATH 171
This course covers mathematical principles and techniques required for analysis, proofs and general understanding of algorithms used in computer science. Topics include: algorithms, combinatorics, sets, functions, mathematical induction and understanding and doing proofs. Also covered are "big oh," omega and theta notations for the growth of functions, graphs, trees and Boolean Algebra.

171 Using the Internet　　　　　**1 Credit Hour**
F, W

This course will teach students how to use the Internet as a resource and research tool. Students will learn various ways of accessing the Internet and communicating with other users via the Internet. In addition, students will learn advanced search tools and other resources to retrieve information. Course coverage will include browsers, search engines, FTP, email and Internet security. Operating system file management skills and basic knowledge of the Internet are required for this course. Students who do not have these skills and knowledge should enroll in CIS 130 prior to this course.

172 Web Design Concepts　　　　**3 Credit Hours**
Prerequisite: CIS 130

This course covers the fundamentals of designing informative, attractive and efficient Web pages. It includes issues of design techniques, browsers and computing platforms, typography, color selection, navigation and storyboarding.

173 FrontPage Web Design　　　　**3 Credit Hours**
Prerequisite: CIS 130

This course will focus on Web page design using FrontPage to produce Web pages and HTML (hypertext mark-up language).

174 Dreamweaver Web Design　　　**3 Credit Hours**
Prerequisite: CIS 130
W

This course covers the use of one of today's most powerful Web design tools, Macromedia Dreamweaver™. Students will cover the Dreamweaver™ topics and skills necessary to build and manage attractive, dynamic professional Web sites.

175 Java Programming　　　　　**3 Credit Hours**
Prerequisite: CIS 150

Java is an object-oriented programming language that can be used to create stand-alone applications and applets. Java applications are platform-independent programs that will run on any computer that supports Java. Java applets are used to enhance World Wide Web pages. By using applets, Web pages can include audio, animation, interactivity, video and even three-dimensional imaging. This course includes coverage of the Java language and Object-Oriented Programming.

176 Web Animation (Flash)　　　**3 Credit Hours**
Prerequisite: CIS 130
F

This course covers the skills and techniques for producing and delivering high-impact Web sites using Macromedia Flash™. Students will be incorporating musical tracks, sound effects and advanced animations to create effects that are viewable across numerous Web platforms with efficient download speeds.

177 Markup Languages　　　　　**3 Credit Hours**

This course covers HTML and introduces XML. Students will be using a case-oriented, problem-solving approach to creating Web pages using these Web development markup languages.

179 Web Script Programming　　　**3 Credit Hours**
Prerequisite: CIS 132 or higher programming language
　　and CIS 177

This course covers the creation of dynamic Web pages using the popular Web scripting languages including Java Script. Students will build applications from the bottom up. Client-side and server-side scripting will be explored. The goal of this course is to create Web pages that have dynamic and interactive content.

180 Graphic Design Concepts　　　**3 Credit Hours**
Prerequisite: CIS 130
F

This course covers print design, layout, typography and related publishing concepts. It contains essentials of print design layout, typographic composition, font selection, scanning techniques and printing professional-looking publications.

182 Illustrator Graphics　　　　**3 Credit Hours**

This course covers the tools and techniques of vector-based drawing software using Adobe Illustrator™.

184 PhotoShop Graphics　　　　**3 Credit Hours**

This course covers the tools and techniques of the image-editing software Adobe PhotoShop™.

185 Web Graphics　　　　　　**3 Credit Hours**
Prerequisite: CIS 130

This course focuses on designing and creating professional looking Web graphics to be incorporated onto Web sites. Included in this course are techniques for creating image maps, rollover effects, icons and buttons for the Web. This course uses Macromedia Fireworks. Knowledge of Adobe Photoshop and/or Adobe Illustrator are recommended for this course.

186 Multimedia Development　　　**3 Credit Hours**
　(Adobe® After Effects®)
Prerequisite: CIS 130
W

This course covers the tools and techniques of the production tool Adobe® After Effects®. This development platform will stress the incorporation of sound, graphics, animation and video that can be deployed on the Web, on DVD and with other multimedia applications.

187 Digital Video Editing　　　　**3 Credit Hours**
Prerequisite: CIS 130
W

This course provides skills and knowledge of digital video basics. Topics will include editing, transitions, audio, adding motion and other multimedia components involving digital video. This course is applicable to Web designers, graphic designers, video production artists or home digital video camera users.

188 InDesign Desktop Publishing　　**3 Credit Hours**

InDesign Desktop Publishing is a comprehensive desktop publishing course which provides instruction in the use of sophisticated page composition software. Class projects range from simple, one-page documents to multi-page documents produced with imported text and graphics. Final class projects involve the conceptualization and creation of a variety of complex publications.

189 3D Animation　　　　　　**3 Credit Hours**
Prerequisite: CIS 130 and CIS 176 or CIS 186
F

This course is an introduction to 3D animation for character animation, visual effect and 3D solid modeling. Software used includes a complete set of tools for drawing and animating 3D models and characters. Students will create objects with a variety of surfacing materials, textures and effects. Students will create and animate digital models/objects.

205 System Analysis and Design   3 Credit Hours
Prerequisite: CIS 130
F

This course is designed to guide the student in developing a system where computer hardware and/or software is to be installed or updated. The student will consider problems of data flow through the system. The student will undertake case studies involving data collection, current system analysis, recommendations, design, development and implementation of a new or updated computer system. Students may be required to design a full or partial system.

208 PC Operating Systems   3 Credit Hours
Prerequisite: CIS 130
F

This course emphasizes the study of operating systems for personal computers. Topics include: Command Line vs Graphical User Interfaces, batch and configuration files, disk utilities, disk operation, installing and uninstalling applications, multitasking, security, configuration and network operating systems. Operating systems discussed in this course will include Windows 9x, 2000, MS-DOS, Linux/Unix and others. This course will enhance students' understanding of PC operations.

209 Network Concepts   3 Credit Hours
Prerequisite: CIS 130
This course provides students with the basic networking concepts needed as an information technology professional. Topics include: networking technologies and topologies on a network, wireless networking, Web-based networks, virus security, broadband/DSL, troubleshooting tools, cabling, switching technologies, equipment and technologies used in LANs and WANs. TCP/IP, along with the OSI communication model, will be discussed in detail. Aside from learning the technologies involved in networking, students will learn the daily tasks involved with managing and troubleshooting a network. Students will have a variety of hands-on and case project assignments that reinforce the concepts covered in each chapter.

216 Introduction to Computer Security   4 Credit Hours
Prerequisite: CIS 208 and CIS 209
W

This course provides students with a fundamental understanding of network security principles and implementation. Students will learn about authentication, types of attacks and malicious code that may be used against your network, threats and countermeasures for email, Web applications, remote access, file and print services. A variety of security topologies are discussed, as well as technologies and concepts used for providing secure communications channels, secure Internet working devices and network medium. Aside from learning the technologies involved in security, students will get to understand the daily tasks involved with managing and troubleshooting those technologies. Students will have a variety of hands-on and case project assignments that reinforce the concepts covered in each chapter.

220 Hardware Maintenance   4 Credit Hours
Prerequisite: CIS 130
W

This course develops a student's knowledge of micro-computer hardware for the purpose of installation and maintenance at the equipment level. Students will learn to install, protect and troubleshoot CPUs, disk drives, memory, circuit boards, video adapters, displays, CD-ROM drives and more. Students will learn how to use the Internet to upgrade and maintain computers. This course will also bring together all the physical components of equipment evaluation for purchase, future maintenance and growth. In addition, this course will help to prepare students to successfully pass the A+ certification exam.

228 Linux Administration   3 Credit Hours
Prerequisite: CIS 208
This course covers installing, configuring and managing a multi-user UNIX/Linux computer system. Topics covered include: file systems, disk management, user management, configuration, remote access, remote desktop, customizing and Kernel Customizing. Students will perform a number of hands-on activities to reinforce classroom discussions.

230 Windows Server   3 Credit Hours
Prerequisite: CIS 209
In this course, students learn to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain Microsoft Windows-based network.

234 Advanced Windows Server   4 Credit Hours
Prerequisite: CIS 230
This course provides a training solution for support professionals working in a Microsoft Windows Server-based enterprise environment. Students must have previous experience supporting a Windows Server-based network. Students learn to design, implement and support the Windows Server network operating system in a multi-domain enterprise environment. The course is organized in four units, each covering support in different areas of the enterprise environment. In addition, this course will help to prepare students to successfully pass the MCSE certification exam.

250 Computer Science II   3 Credit Hours
Prerequisite: CIS 150
W

This course continues the exploration of computer science begun in CIS 150, Computer Science I. Topics to be covered include: object-oriented programming in C++, pointers, recursive algorithm design and implementation, sorting, searching and file processing. Data structures studied include: stacks, queues and linked-lists. This course is designed for students who wish to continue their computer science education beyond the community college level.

252 Advanced Visual Basic Programming 4 Credit Hours
Prerequisite: CIS 152
W

This course expands on the programming topics covered in CIS 152. After a rapid review of fundamentals, students will be introduced to more advanced techniques in Windows' Forms and Web-based applications. Students will work with objects, classes, data structures and relational databases using ADO.NET and ASP.NET technology. Course structure will be orientated to project work.

255 Microsoft SQL   4 Credit Hours
Prerequisite: CIS 155
In this course, students will learn how to develop relational database applications using Microsoft SQL client/server database. Concepts to be covered include creating and modifying database tables and data using SQL command-line environment. Additional topics will involve creating queries, transaction management, managing files and file groups and security management. The student will also learn how to install Microsoft SQL and perform day-to-day administration tasks in a Microsoft Windows based network.

266 Windows Programming in C++   3 Credit Hours
Prerequisite: CIS 150
Students will design and implement programs for Windows using RAD tools and C++. The speed and ease of use for RAD tools combined with the power of C++ will be utilized to create complete Windows applications. Programs will be developed that utilize many GUI features found in Windows such as buttons, menus, windows, scroll bars, text areas, etc.

267 Beginning Game Programming   3 Credit Hours
Prerequisite: CIS 250

W

This course will cover the fundamental principles and practices of designing and programming computer games. Students will design and implement several 2D and 3D games utilizing a variety of programming techniques and tools, including: C++ programming language, operating systems, graphics API, computer graphics, audio editing software, 3D modeling software and 3D collision detection.

268 Assembly Language and   4 Credit Hours
    Computer Architecture
Prerequisite: CIS 150
This course covers computer programming in one of its most basic forms and introduces computer architecture. The understanding and appreciation of assembly language is the foundation for the understanding of the digital computer and its programming. Assembly language is just one step removed from machine language, the language directly understood by the CPU. This course will cover: computer architecture, data representation, instruction sets, addressing modes, assembly language programming techniques, interrupts and exceptions, assemblers, peripheral programming and the relationship between assembly language and high-level languages.

272 Database Web Development   3 Credit Hours
Prerequisite: CIS 174 or CIS 177

F

This course covers the creation of Web sites that can display, insert, update and delete data from a database. It includes working with relational databases and other software and programming tools such as: SQL, MySQL, PHP, HTML, client-side and server-side scripts and advanced Dreamweaver MX 2004 development features to create dynamic, e-commerce Web sites. (It is recommended that CIS 179 be completed prior to taking this course.)

274 Advanced Database Web   3 Credit Hours
    Development (with ASP.NET)
Prerequisite: Two computer programming courses from (CIS 132, CIS 150, CIS 152, CIS 175, CIS 179) or any 200-level programming course.

W

This course covers advanced topics in the design and maintenance of interactive and dynamic Web applications using the server-based scripting environment. It will cover Web programming concepts and advanced topics, such as ASP.Net (Active Server Pages). CIS 112, CIS 177, and CIS 272 are recommended prior to enrolling in this course. Note: CIS 177 does not meet the programming language requirement for this course.

275 Advanced Java Programming   3 Credit Hours
Prerequisite: CIS 175
This course is a continuation of CIS 175. Topics include exceptions, cloning and RTTI, file I/O, object serialization, multithreading, GUI programming using Java, JavaBeans, Network Programming and Programming Server-Side Java.

276 Web Administration   3 Credit Hours
Prerequisite: CIS 208 or CIS 230
This course focuses on setting up and maintaining a World Wide Web server. Topics include putting pages on the site, Internet protocols, assigning user rights, network security and the basic setup of one or more HTTP servers. As new technologies emerge, these will be addressed and discussed.

CONSTRUCTION MANAGEMENT TECHNOLOGY (CONM)

100 Introduction to Design and   3 Credit Hours
    Construction

F

Based on experiences in the field of architecture and construction, this course explores the work of architects and their relationships with the various supporting technicians. Consideration is given to historical, aesthetic, functional, structural and economic aspects of design.

101 Materials of Construction   3 Credit Hours
A study of natural and manufactured building materials, including concrete and masonry, steel and non-ferrous metals, wood and composition materials, glass and plastics and exterior and interior finishing materials. In laboratory sessions, the physical properties of materials and methods of assembly are studied using material samples. Beginning sketching techniques are developed.

102 Construction Practices   3 Credit Hours
This course develops those supporting skills essential to the organization and management of construction projects, including material takeoff and bidding procedures, organization and interpretation of specifications, function preparation and use of the various construction documents, scheduling of construction operations and familiarization with building codes and zoning regulations.

103 Residence Drafting   4 Credit Hours
Prerequisite: CONM 110 or MDTC 101 or MDTC 151 or MDTC 160 or concurrent registration in CONM 110
Complete working drawings are developed for one building of frame construction, with emphasis on the interrelationships of the various views, including site and floor plans, exterior and interior elevations, sections and details. Accuracy of linework, lettering and scale are stressed.

105 Mechanical Building Systems   4 Credit Hours
    and Equipment
Prerequisite: CONM 110 or MDTC 101 or MDTC 151 or MDTC 160
The focus of the course is on water distribution and waste systems, calculation of heat losses and gains, "wet heat" and air handling comfort systems including air conditioning, electrical power and lighting. Mechanical and electrical layouts are developed.

107 Surveying   3 Credit Hours
Prerequisite: High school or college trigonometry

Sp

Theory and field practice in using tapes, levels and transits in land survey, building layout and contours and drainage are covered. This course includes a study of building site conditions and practice in taking field notes and in translating them into drawings.

110 Construction Blueprint Reading   3 Credit Hours
Covered in this course are fundamentals of construction blueprint reading: interpretation of basic symbols, terminology organization of construction drawing, sketching and material quantity takeoff.

120 Introduction to AutoCAD   3 Credit Hours
    for Architecture
Prerequisite: CONM 103 or CONM 110
This course is an introduction to computer aided design as it applies to the architecture and construction industry. The content examines typical hardware requirements and basic software (AutoCAD) commands used to create, edit and plot 2D architectural drawing files.

201 Site Planning and Development   **3 Credit Hours**
W

This course studies the processes required to develop a functional site plan, including basic designs of pavements, parking lots layout, storm drainage, public utilities, landscaping consideration and zoning requirements.

202 Construction Safety   **3 Credit Hours**
F

This course is designed to provide students with an opportunity for an in-depth study of construction safety and the importance of employee safety and health in the construction industry. The code of Federal regulations (29 CFR 1926) and MIOSHA construction standards are examined. Emphasis will be placed on the interpretation and application of government regulations. Students will develop a comprehensive safety program using the MIOSHA recommended format.

COOPERATIVE EDUCATION (CO-OP)

Cooperative Work Experience   **1 to 4 Credit Hours**
Cooperative education is for students interested in an introduction to the world of work. It is designed to give on-the-job experience which is related to the student's program of study. The co-op experience may be on a half-time or full-time basis. If employed from 15 to 20 hours per week in an approved coordinated program, the student is entitled to 2 hours credit upon successfully completing the semester. Full-time status generally represents 40 hours per week of coordinated work. Students electing full-time co-op should plan to limit their campus schedule to one or two courses. Arrangements for the co-op program must be made through the proper co-op coordinator or division dean.

CULINARY SKILLS AND MANAGEMENT (CSM)

Food Preparation I

101A Introduction to Culinary Arts   **4 Credit Hours**
Prerequisite: CSM 111
F

Students learn the fundamentals of food preparation in the food service business including safety skills, modern kitchen tools and equipment, properties and composition of food and basic knowledge of meats, poultry and seafood. The study of basic cooking principles, weights and measures and vegetables and starch preparation, along with basic recipe understanding are all stressed in this course to help prepare students for culinary careers. Students are required to register for all modules of CSM 101 concurrently.

101B Basic Restaurant Production   **2 Credit Hours**
F

Students study and demonstrate, through extensive hands-on training, daily food service production. Through rotations of training stations, students maintain and operate entree production, garnishes and salads, soups, stocks and sauces, beginning baking and basic food preparation. Students are required to register for all modules of CSM 101 concurrently.

101C Baking I   **2 Credit Hours**
F
Students study and demonstrate, through daily production, the basic baking skills used in modern food service establishments. This includes principles and mixing procedures for quickbreads and yeast doughs, weighing and portioning, recipe conversions and types of ingredients. The use of yeast doughs and sweet doughs is an important objective of this course. Students are required to register for all modules of CSM 101 concurrently.

101D Soups, Stocks, & Sauce Production   **2 Credit Hours**
F

In modern food service, a thorough understanding of soups, stocks and sauce production is vital for the successful cook. Through daily production, students demonstrate the proper preparation of stocks, reductions and glazes, as well as convenience bases. Roux and other thickening agents are taught with uses in sauce production. Soups, classifications and varieties such as bisque, consomme, puree soup and chowders are regularly prepared. Students are required to register for all modules of CSM 101 concurrently.

111 Food Sanitation   **2 Credit Hours**
Su

This course is an operations-centered certification course which will provide culinary students with basic principles of sanitation for food service. The course will include ways to apply these principles to practical situations, as well as methods of training and motivating employees to follow good sanitation practices. Students will study the laws and regulations related to safety, fire and sanitation and adhere to them in the food service operation. Upon successful completion of this course, students may take the examination for an Applied Foodservice Sanitation Certificate, which meets or exceeds FDA recommendations on content for sanitation courses. This is the most universally recognized and accepted sanitation certification. Students may also receive the State of Michigan Sanitation Certificate.

114 Nutrition   **2 Credit Hours**
Sp
The objectives of this course are designed to make the food service student aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation. Students also learn the characteristics, functions and food sources of the major nutrient groups and how to maximize human health.

Food Preperation II

116A Introduction to Buffet Preparation   **4 Credit Hours**
Prerequisite: CSM 101D
W

Students will obtain cooking and learning experience in this course, including the demonstration and practical application of preparing and serving salads and salad dressings, sandwiches and hors d'oeuvres, along with an introduction to food garnishing. The importance of breakfast is thoroughly covered, including breakfast cooking, dairy products, cheese, coffee and tea. Students also demonstrate how to cook with herbs and spices and wines and spirits, along with an introduction to ice carving. Students are required to register for all modules of CSM 116 concurrently.

116B Beginning Pastries   **2 Credit Hours**
Prerequisite: CSM 101D
W

This course is designed to introduce the student to the wide range of pastries used in commercial food service establishments. The preparation and uses of puff dough, Danish dough, French pastries and international pastries are studied and demonstrated by the student. Students also learn about and produce gateaus, wedding cakes, chocolate work, cookies and candies. Specialty pastry areas such as pulled and spun sugar are introduced. Students are required to register for all modules of CSM 116 concurrently.

116C Baking II   **2 Credit Hours**
Prerequisite: CSM 101D
                                                               W

Students study and demonstrate, through daily production,
the basic baking skills used in modern bakery facilities,
including the principles and mixing methods of pies and
cakes. Weighing and portioning, recipe conversions and
the study of ingredients are also explored. Students will
prepare and bake pies, as well as finish cakes with different
icings and decorations. Students are required to register for
all modules of CSM 116 concurrently.

116D Institutional Food Preparation   **2 Credit Hours**
Prerequisite: CSM 101D
                                                               W

Through daily hands-on production, students study and
demonstrate the proper techniques of institutional food
preparation. This area of food service is becoming more
upscale every day. Areas of study include an emphasis
on international and regional cuisines, as well as working
with Favoring, portion control and proper handling of
convenience food products in food service today. Students
are required to register for all modules of CSM 116
concurrently.

119 Bar Management   **1 Credit Hour**
                                                               W
This course familiarizes the student with laws related to
serving alcohol along with the server's responsibilities,
basic mechanics and principles of bartending. Students
also study the processes that produce different alcoholic
beverages, such as beer, wines, spirits and liqueurs.

Advanced Food Preperation I

201A Introduction to Hospitality   **2 Credit Hours**
       Industry
Prerequisite: CSM 116D
                                                               F
This course is designed to introduce the student to the
wide range of businesses in the hospitality industry.
Students study various food service organizations and
career opportunities which include business organizational
structures and basic functions of departments within food
service establishments. A close study of catering services
including on and off-premise catering, is also emphasized
in this course. Students are required to register in all
modules of CSM 201 concurrently.

201B Dining Room Procedures   **1 Credit Hour**
Prerequisite: CSM 116D
                                                               F
Through daily operations of the Cuisine 1300 restaurant,
students learn the various types of dining service
appropriate for different food service operations. Students
also learn how to service the public, including tableside
cookery, taking orders, serving food, and, through use of
a modern computer cash register system, cashing out and
end-of-the-day sales mix. Students are required to register
in all modules of CSM 201 concurrently.

201C Menu Planning I   **1 Credit Hour**
Prerequisite: CSM 116D
                                                               F
This course introduces students to one of the most
important aspects of the food service industry. The
principles of menu planning to various types of facilities
are applied. The course covers menu layout, selection and
development and pricing/food cost structure. Students
plan, cost and determine the menu used in the Cuisine
1300 restaurant. Students are required to register in all
modules of CSM 201 concurrently.

201D Purchasing and Receiving   **1 Credit Hour**
Prerequisite: CSM 116D
                                                               F
Students learn the principles and practices concerned
with the purchasing and receiving of food, supplies
and equipment for various food service operations. The
importance of developing a purchasing system, an effective
storeroom and proper use of checklists and bid sheets are
all covered in detail. Students are required to register in all
modules of CSM 201 concurrently.

201E a la Carte Food Preparation   **3 Credit Hours**
Prerequisite: CSM 116D
                                                               F
This course prepares the student for the wide variety of a la
carte food service establishments in the modern industry.
Through daily operations of the Cuisine 1300 kitchen
facility, students rotate through various stations obtaining
vital hands-on experience and training. The principles of
a la carte food preparation, such as menu development
and food/labor costs, are also emphasized to the student.
Students are required to register in all modules of CSM 201
concurrently.

207 Restaurant Management   **3 Credit Hours**
       and Supervision
                                                               W
This course provides instruction in the management
techniques involved in modern food service operations.
Particular topics include the study of restaurant and menu
planning. Through the assembly of a semester-long project,
students learn the tasks and responsibilities of operating a
restaurant from "conception to opening day." This includes
areas such as market surveys, scheduling needs and
management and supervisory concepts.

Advanced Food Preperation II

216A Garde Manger   **2 Credit Hours**
Prerequisite: CSM 201E
                                                               W
This course is designed to teach the student the art of
garde manger and food presentation. The focus is on
specialty work, including ice and butter sculptures,
vegetable carving, salt dough, charcuterie and tallow
sculpturing. Through a series of elaborate theme buffets,
students also are introduced to platter presentation and
salon competitions. Students are required to register for all
modules of CSM 216 concurrently.

216B Menu Planning II   **1 Credit Hour**
Prerequisite: CSM 201E
                                                               W
Students take the menu role and concept one step further
in this course. Students develop menus for buffets and
utilize them in the Cuisine 1300 restaurant and buffet
operations. Students learn to utilize past menus and buffet
statistics to aid in forecasting and planning. Students
are required to register for all modules of CSM 216
concurrently.

216C Ice Carving   **2 Credit Hours**
Prerequisite: CSM 201E
                                                               W
The art of ice sculpturing is becoming more popular every
day. Many employers look for cooks with this talent. This
course teaches the student, through demonstrations and
lectures, the art of ice carving. The students also have a
considerable amount of hands-on exposure through various
ice carving shows, as well as weekly sculptures for theme
buffets in Cuisine 1300. Students are required to register for
all modules of CSM 216 concurrently.

216D Advanced Buffet Preparation   3 Credit Hours
Prerequisite: CSM 201E
                                                              W

This course is designed to teach the student the art of creating and displaying hot and cold foods and to exhibit these foods. Emphasis of this course is on artistic presentation and layout of foods prepared for theme buffets that are served in the Cuisine 1300 restaurant. These popular buffets are open to the public and feature such items as ice carvings, charcuterie products and classical foods and pastries. Students are required to register for all modules of CSM 216 concurrently.

DANCE (DANCE)

151 Ballet I   1 Credit Hour
The purpose of this course is to introduce the student to the study of classical ballet through traditional ballet bar, center floor and traveling ballet exercises and combinations. Included in the class is basic alignment principles, ballet vocabulary and steps and beginning combinations of ballet technique. Music accompaniment will enhance and complement the types of movements inherent to ballet dance. Emphasis is on personal growth with each class and assignment being a new challenge. Proper attire, terminology and health and safety issues are discussed. Written and skills tests are part of this course. Due to the fact that ballet dance has aerobic components, a medical release may be required. This class may be repeated for credit twice (total 3 credits).

152 Modern Dance I   1 Credit Hour
The purpose of this course is to introduce the student to the principles of modern dance techniques designed for the inexperienced dancer. Toning, stretching and strengthening exercises are incorporated to promote the investigation of the body's overall range of motion. Music accompaniment may be utilized to complement the movement. Emphasis is on personal growth with each class and assignment being a new challenge. Attire, terminology and health and safety issues are explained and discussed. Written and skills tests are part of this course. Due to the fact that modern dance can be aerobic, a medical release may be required. This class may be repeated for credit twice (total 3 credits).

153 Jazz I   1 Credit Hour
The purpose of this course is to introduce the student to the study of jazz through movement, vocabulary and toning, isolations in jazz techniques and stretching and strengthening exercises inherent to this form of dance. Music will be utilized in each class to complement the jazz dance styles chosen for study. Emphasis is on personal growth with each class and assignment being a new challenge. Attire, terminology and health and safety issues are explained and discussed. Written and skills tests are part of this course. Due to the fact that jazz dance is aerobic by nature, a medical release may be required. This class may be repeated for credit twice (total 3 credits).

155 Dance Improvisation I   1 Credit Hour
The purpose of this course is to create an atmosphere in which students can realize and enhance their own creative resources by utilizing the dance medium. This course provides students with opportunities to discover the skills of creative thinking through problem solving exercises which are designed to uncover spatial, kinesthetic and emotional awareness as well as the discovery of movement qualities. Emphasis is on personal growth with each class and assignment challenging the student's own initiative to move physically and think quickly. Attire, terminology and health and safety issues are explained and discussed. Written and creatively challenging skills tests are part of this course. Because some of the class content may involve aerobic components, a medical release may be required. This class may be repeated for credit twice (total 3 credits).

170 Dance Composition I   2 Credit Hours
Prerequisite: DANCE 152 and DANCE 155
The purpose of this course is to introduce the student to the study of dance composition. The semester will be spent with the intent to obtain an understanding of the elementary components that may be utilized in choreographing a dance. The concept of dance language and symbol system will be introduced. Emphasis is on one's individual growth process in relation to the concepts of this course as presented in class. Written and skills tests are a part of this course. Because some creative processes are aerobic by nature, a medical release may be required. This class may be repeated for credit twice (total 6 credits).

251 History of Dance   3 Credit Hours
                                                              F

The purpose of this course is to give the student a foundation in which to develop a greater understanding of dance as a medium of expression. The student will examine dance as it has served as ritual, play and art from the past to the present.

EARLY CHILDHOOD DEVELOPMENT (ECDV)

101 Introduction to CDA   1 Credit Hour
This course is designed to help students planning to complete the Child Development Associate (CDA) Credentialing Assessment by providing information on the process. Students will learn how to apply, how to develop a portfolio, how to write entries, how to document entries and how to coordinate the readiness and assessment phases of CDA. The CDA Direct Assessment is done by a team composed of the advisor, a parent/community representative and a representative of CDA. Students must also provide verification of 480 clock hours of working with young children during the immediate past five years, in addition to the required course work. NOTE: The successful completion of this course does not guarantee receiving the CDA Credential.

102 CDA Training-Part 1   5 Credit Hours
                                                              F

This course is designed to help the CDA candidate demonstrate skills and knowledge in seven of the 13 functional areas described in the CDA Competency Goals. The student will also develop professional child care giving skills in specific performance areas: profiling for a child's safety, adequate supervision of children, maintaining a healthy environment, providing nutritional meals, offering a variety of developmentally-appropriate materials, enhancing physical development, fostering interactions through play, exploration and learning and engaging in conversation.

103 CDA Training-Part 2   **4 Credit Hours**
W

This course is designed to help the CDA candidate demonstrate skills and knowledge in six of the 13 functional areas described in the CDA Competency Goals. The student will also develop child care skills in specific performance areas: creativity, individual worth, encouraging self-help skills, mutual respect and acceptance, positive guidance techniques, multicultural awareness and sensitivity, competent and effective management skills and advocacy to promote quality child care services.

105 Child Growth and Development   **3 Credit Hours**
This course is intended to present to the student a comprehensive analysis of children from conception to eight years old. The student will gain an understanding of child development in all of the following areas: physical growth, cognitive development, psychological development, nutritional needs and socialization processes. The purpose of this course is to focus on enhancing child care skills as a practical application of the theoretical structure of the course.

106 Observing and Recording   **3 Credit Hours**
     Child Behavior
Prerequisite: ECDV 105
Students develop appropriate skills and experience for conducting objective child observations. Observation in a child care center and a case study are required. The physical, emotional, social, cognitive, language and creative needs of pre-schoolers will be analyzed in relation to sound child guidance techniques. Thirty clock hours of observation experiences will be required.

107 Programs for Young Children   **3 Credit Hours**
     Birth to Age Five
Prerequisite: ECDV 105
The development of curricula and activities for use with children from birth to age five will be emphasized in this course. Students will design a safe environment and plan developmentally appropriate activities. This course will include 60 contact hours of field experience.

150 Nutrition, Health and Safety for   **3 Credit Hours**
     Early Childhood Education
Best practices in health, safety and nutrition are presented. Students develop specific competencies in these areas, including establishing and maintaining a healthy, safe child care program, planning nutritional meals and snacks and teaching children and their parents about health, safety and nutrition. Communicable diseases, government funded child/family food and nutrition programs, playground and toy safety and resources for the child care provider are included.

207 Methods and Materials for   **5 Credit Hours**
     Early Childhood Education
Prerequisite: ECDV 105
The course is designed to develop students' skills in planning, implementing and evaluating developmentally appropriate learning experiences in children from kindergarten to age eight. A variety of curriculum areas – science, math, creative art, sensory, gross and fine motor, and language arts – are covered. Basic skills and concepts, resource materials and teaching methods are explored for each curriculum area. Community involvement, school partnerships and standards for school-age child care programs are also considered. This course will include 60 contact hours of field experience.

210 Administration of   **3 Credit Hours**
     Child Care Programs
Prerequisite: ECDV 105 and ENGL 101 or ENGL 151
This course will enhance the student's understanding of the total range of administrative responsibilities in early childhood programs. It is designed to offer an overview of interpersonal communication, financial responsibilities, licensing, personnel certification, staffing and evaluation of overall programs. Students will be responsible for developing budgets, job descriptions, health and safety programs and a variety of other materials used in administration.

218 Early Childhood Development   **5 Credit Hours**
     Externship
Prerequisite: ECDV 106 and ECDV 107 and ECDV 207
The Early Childhood Development Externship is intended for students to gain practical experience while working under supervision in a child care facility. In addition to weekly class meetings, a minimum of 150 hours of supervised experience in a licensed child care facility are required during the semester. The student will apply theories learned in the prerequisite classes to their field work.

EARTH SCIENCE (ESC)

151 Earth Science   **4 Credit Hours**
An introduction to earth sciences for beginning students. The course is designed to show the numerous and important ways in which geology and some aspects of meteorology, oceanography and solar-system astronomy interrelate with humankind and our environment. Emphasis is on broad concepts and fundamental principles of earth science and their application to environmental considerations. Course requires laboratory work.

ECONOMICS (ECON)

251 Principles of Macroeconomics   **3 Credit Hours**
F, W

This course is a survey of the economic system, including ideas relating to production, national income, national growth, money and banking, markets and prices and the distribution of income. This is a macro-economics course designed for both the student who needs one semester in economics and the student who will take further courses in the field.

252 Principles of Microeconomics   **3 Credit Hours**
F, W

This is a survey course of the microeconomic system including ideas relating to pricing and output determination, factor income, economic development, international economics and market structures.

256 Labor Problems   **3 Credit Hours**
This course examines labor history, labor legislation, wage determination, unions and collective bargaining. The collective bargaining process is strongly emphasized through the use of role-playing simulations.

257 Contract Administration   **2 Credit Hours**
This course is designed for students desiring investigation into areas of administering negotiated agreements between labor and management. The course focuses on problems encountered by the union steward or committee person and first-line supervisors regarding grievance procedures and grievance arbitration.

EDUCATION (EDUC)

151 Exploring Teaching   3 Credit Hours
F, W

This course is designed primarily for students who are considering entering the teaching profession. The course involves a minimum of 60 hours of field work where the student will have the opportunity to observe and participate in a public school as an aide to the professional staff. All students meet together on campus for 1-1/2 hours each week to hear guest speakers, discuss classroom experiences and review relevant readings. Placement schedules are worked out in cooperation with the participating teacher. Time in the host school averages about six hours per week. This course fulfills similar pre-teaching experiences required by several universities. Check with the college counselor regarding transfer to the university you plan to attend.

ELECTRONICS AND COMPUTER TECHNOLOGY (ELEC)

125 Fundamentals of Electricity   3 Credit Hours
Prerequisite: One year high school Algebra
F, W, Sp

This course is designed as a survey for electronics majors and non-majors. It covers safety, basic electrical theory (AC and DC), Ohm's Law, reading schematic drawings, electrical component identification and functions, sources of electrical power, motors, power distribution and basic solid-state devices. Laboratory exercises will include measurement of resistance, voltage and current with analog and digital meters, basic oscilloscope use, relays and transformers, circuit design and construction and component testing.

126 DC Motors and Controls   2 Credit Hours
Prerequisite: ELEC 125
F

This course is designed to provide students with a knowledge of DC motor operating characteristics and control circuits. It will provide hands-on experience with wiring control circuits, checking the operational characteristics of motors and use and installation of circuit protection devices. Development and application of ladder logic theory, diagrams and circuits will be covered.

128 AC Motors and Controls   3 Credit Hours
Prerequisite: ELEC 126
W

This course acquaints the student with concepts and applications of three-phase power, including wye and delta configurations. Basic operation and circuit characteristics of three-phase alternators and transformers will be covered. The construction and operation of three-phase induction motors and their related starting, control and protection circuits along with variable-frequency drives will also be addressed.

130 Introduction to Programmable   2 Credit Hours
Logic Controls
Prerequisite: ELEC 125
F, W

The course introduces the concepts and applications of the control and protection of industrial machines and systems through the use of programmable logic controllers (PLCs).

132 Electronics I   4 Credit Hours
Prerequisite: ELEC 125
W

An introduction to basic solid-state electronic circuits. Elementary mathematical techniques are used to analyze circuit performance and coordinated laboratory activities verify these predictions. Topics covered include diodes, basic power supplies, transistors and amplifiers in the common-emitter, common-base and common-collector configurations, as well as field-effect transistors, basic operational-amplifier circuits and electronic properties of digital ICs.

133 Circuit Analysis   4 Credit Hours
Prerequisite: ELEC 125 and MATH 124 or MATH 151 or MATH 159 or MATH 164
F

Topics covered are: Phasor analysis of series AC circuits, both resistor-capacitor and resistor-inductor; phasor analysis of parallel AC circuits, both RC and RL; magnetism; magnetic field in a coil (inductor); inductive transient response to switched DC; impedance of complex AC circuits; oscilloscope phase measurement techniques; power factor in AC circuits; series-resonant LC circuits; parallel-resonant LC circuits; filtering using resonant LC circuits; the j-operator; voltage-division in DC and AC; bridge circuit analysis in DC and AC; Thevenin's theorem in DC and AC and computer-aided circuit analysis in DC and in AC frequency domain.

134 Electronics II   4 Credit Hours
Prerequisite: ELEC 132
F

A continuation of Electronics I. Topics covered include: decibels, multistage and differential amplifiers, negative feedback, frequency limitations, op-amp applications, special-purpose ICs, oscillators, power amplifiers, regulated power supplies and an introduction to radio-frequency techniques. An important part of the course is the construction of a variable regulated power supply which the student may keep upon payment of the approximately $50 parts cost.

135 Digital Electronic Logic   4 Credit Hours
Prerequisite: ELEC 125. Taking ELEC 132 concurrently is recommended.
W

An introduction to digital components, circuitry and systems. Topics covered are: logic gates, networks and truth tables; logic-network description and simplification using Boolean Algebra; binary and hexadecimal numbers and arithmetic; various types of integrated-circuit flip-flops; digital counters and registers; digital arithmetic circuits; astable clocks; one-shots; decoders; memories and display devices.

136 Instrumentation   3 Credit Hours
Prerequisite: ELEC 132   W
This course examines the characteristics and limitations of common electronic instruments. Topics covered include safety and lab techniques, op-amp circuits, AC and DC meters, digital multimeters, oscilloscopes, potentiometers and potentiometric bridges, transducers, signal-processing circuits, fiber optics and automatic test equipment.

137 Microprocessors   **4 Credit Hours**
Prerequisite: ELEC 135

F

This course is devoted to assembling and programming microprocessor/microcontroller systems with an emphasis on using the 68HC11 microcontroller. Covered are: computer architecture, memory types, interfacing techniques and components and machine-language programming. Flowcharting, computerized program assembly and proper hardware and program documentation are emphasized. Lab projects include, but are not limited to, an electronic "player-piano," programmable timing circuits and an autonomous robot.

138 Machinery and Power Control   **4 Credit Hours**
Prerequisite: ELEC 132

W

This course deals with rotating machines and their control and industrial machine control systems. Topics covered include: construction and operating principles of DC generators and DC motors; voltage-vs.-current characteristics of various types of DC generators; speed-vs.-torque and current-vs.-torque characteristics of various types of DC motors; switchgear starting and control circuits; power control with silicon controlled rectifiers (SCRs) and triacs; characteristics of unijunction transistors (UJTs), diacs, and other thyristors; construction and operating principles of single-phase and three-phase alternators and three-phase AC induction motors; power measurement in three-phase systems; three-phase transformers and programmable logic controller (PLC) operation.

141 Industrial Automation and   **3 Credit Hours**
      Process Control
Prerequisite: ELEC 125

W

Topics covered: the three subsystems in industrial control systems–information-gathering, logic and output; some typical industrial control systems for machine tool processes and materials handling; programmable logic controllers; the differences between open-loop and closed-loop control; terms used in industrial closed-loop control; the five modes of control; effects of varying proportional band, integral (reset) time-constant and derivative (rate) time-constant; operating principles and applications of electrical transducers (thermocouples, photocells, tachometers, etc.); output devices (valves and valve-operators, AC and DC motors etc.) and principles and applications of DC drive systems.

144 PC-Based Data Acquisition Control   **2 Credit Hours**
Prerequisite: ELEC 132

W

This course will provide students with the necessary background, theory and laboratory experience to utilize Windows-based computers, LabView software, interface hardware and software for data recording, analysis and on-line control of industrial processes. Multiple inputs and data logging, A/D conversion and various computer interface bus standards are discussed and implemented.

211 Medium Voltage Power   **3 Credit Hours**
      Distribution Systems
Prerequisite: ELEC 125
The course deals with industrial applications of power distribution and circuit applications of voltages of 480 volts and higher. Safety is emphasized throughout the course. National Electrical Code requirements are referenced in all application areas.

214 National Electrical Code   **2 Credit Hours**
Prerequisite: ELEC 125

W

A study of the current National Electrical Code for the installation of electrical equipment and electrical systems. Topics covered include wiring methods and materials, general use materials, special occupancies, equipment for special conditions, requirements for communication systems and use of the tables and examples.

ENGLISH (ENGL)

Students who score below specified minimums on the ACT or COMPASS English placement test must successfully complete English 090 prior to enrolling in a 100-level or higher English course.

090 Basic Writing Skills   **3 Credit Hours**
F, W, Sp, Su

This is a basic writing course that examines the elements of sentence structure with some emphasis on grammar and punctuation, proceeding to topic sentence analysis, paragraph and essay development. The purpose of this course is to develop the writing skills necessary to perform acceptably in English 101 or English 151. This course does not count toward graduation. English 090 is meant for students whose first language is English.

101 Written & Oral Communication   **3 Credit Hours**
F, W

This course is designed for, but not limited to, students in technical and business career programs. It helps students develop their written and oral communication skills with the emphasis on writing.

102 Business Writing   **3 Credit Hours**
Prerequisite: ENGL 101 or ENGL 151

F, W, Sp

This course emphasizes communication skills for business and technical careers. Special emphases include preparing a resume, oral briefing and practicing skills for effective job interviews. Students will also develop skills in writing all types of business letters and reports.

151 English Composition I   **3 Credit Hours**
F, W, Sp, Su

This is the core course in English composition. It covers primarily expository writing, grammar, analysis and punctuation. Emphasis is placed on structure, style and appropriate usage. This course transfers to most four-year colleges and universities as the introductory writing course. Students will produce and edit a variety of written documents.

152 English Composition II   **3 Credit Hours**
Prerequisite: ENGL 151

F, W, Sp, Su

The emphasis of this course is on research and writing the research paper. Writings include topics taken from a variety of selected readings. The course is a continuation of English 151.

155 Technical Writing   **3 Credit Hours**
Prerequisite: ENGL 101 or ENGL 151 and basic word
  processing skills
                                                       F, W, Sp

Students will learn to analyze and interpret technical
information and to communicate effectively and efficiently
in writing using the vocabulary of the business and
technical worlds. Writing assignments and projects will
include a variety of business and technical applications
and report writing. Conducting research, analyzing various
writing, writing correspondence and instructions, preparing
an oral briefing and engaging in group projects will
promote critical thinking and teamwork.

240 African American Literature   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       F

This is a survey course of major literary works by African
American authors, mainly from the nineteenth and
twentieth centuries. This class is designed to develop
critical reading proficiency and to better understand our
multicultural society.

251 Introduction to Poetry and Drama   **3 Credit Hours**
Prerequisite: ENGL 151   F, W, Sp, Su
The course examines selected poetry and drama,
emphasizing the development of critical attitudes needed
to understand and enjoy these literary forms. About half a
semester is spent on each form.

252 Introduction to Short Story   **3 Credit Hours**
    and Novel
Prerequisite: ENGL 151
                                                       F, W

This course includes reading and analysis of short stories
and novels of major authors in order to develop the critical
attitudes needed for understanding and enjoyment of these
literary forms. This course will include writing assignments
and library work.

253 American Literature   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       F, W

This is a survey course of major literary works, mainly of
nineteenth- and twentieth-century authors, designed to
develop the ability to read critically with understanding
and appreciation.

254 Advanced Composition   **3 Credit Hours**
Prerequisite: ENGL 151. Faculty nominated and instructor
  approved.
                                                       F, W

This course offers selected students theory and practice
in peer tutoring and advanced composition. Emphasis is
placed on student writing conferences, process writing and
standard research methods. All students enrolled in this
course work as tutors in the Writing Center.

255 Women's Writings   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       F, W

This course will introduce the student to women's writings
from diverse cultures. Beginning with the eighteenth
century, this course will trace the development of women's
writings in a variety of genres: novels, short stories, poetry,
diaries, journals and essays. The student will also be
introduced to the social context of these writings as well as
a number of critical approaches to their interpretations.

256 Children's Literature   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       F, W

This course is intended for prospective teachers as well
as students preparing for careers in child care. Students
will survey a wide variety of children's books (classic and
contemporary) and will learn methods for introducing
literature to children from pre-school age to high school.
Coursework will include writing assignments, class
presentations and library research.

260 Introduction to Shakespeare   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       W

This course is a study of Shakespeare through reading and
discussion of six to nine plays selected from the comedies,
histories, tragedies and romances. The class may view
videos of plays being studied or attend a live performance.
The purpose of this course is to present the mastery of
Shakespeare's artistry in light of his world and ours.

261 Introduction to Creative Writing   **3 Credit Hours**
Prerequisite: ENGL 151
                                                       F, W

This course will introduce the student to the art and craft of
creative writing. Each student's work will receive attentive
individual scrutiny by the instructor and will be discussed
in class and in individual conferences. In addition, the
course will include analytic reading of the work of other
students and of professional writers.

267 British Literature: Anglo Saxon   **3 Credit Hours**
    to 18th Century
Prerequisite: ENGL 151
                                                       F

This course is a survey study of the literature of England
from the Anglo-Saxons through the eighteenth century.
Emphasis will be given to the major writers of the British
canon from the Beowulf poet to Samuel Johnson. Examples
of different genres (poetry, prose, drama, etc.) will be
read and discussed. Students will also explore the various
literary movements that shaped those writers.

268 British Literature: Romantic   **3 Credit Hours**
    to Modern
Prerequisite: ENGL 151
                                                       W

This course is a survey study of the literature of England
from the Romantic writers through the twentieth century.
Emphasis will be given to the major writers of the British
canon from William Wordsworth to Samuel Beckett.
Examples of different genres (poetry, prose, drama, etc.)
will be read and discussed. Students will also explore the
various literary movements that shaped those writers.

FINANCE (FIN)

151 Wealth Building Principles   **3 Credit Hours**
This course – formerly Personal Financial Planning – lays
out practical methods to increase one's net worth over
time by utilizing sound principles of money management
and understanding how money behaves. No knowledge
of accounting or business principles is required. Topics
include compounding and the "time value" of money,
investments, wills and estates, cohabitation and divorce,
taxes, mortgages, retirement plans and insurance.

FRENCH (FREN)

151 Elementary French I 4 Credit Hours
F

This course is an introduction to the French language. The emphasis will be on learning to read and interpret French. Students will study elementary grammar, pronunciation and basic vocabulary. Language laboratory work and/or instructional aids will be included.

152 Elementary French II 4 Credit Hours
Prerequisite: FREN 151 or one year high school French
W

This course is a continuation of French 151. There will be emphasis on aural and oral practices. Also, there will be a study of French contemporary life and reading selections. There will be instructional aids included. The primary purpose of this course is to have the students read and write the French language at a fluent elementary level, with comprehension at the same level.

251 Second Year French I 4 Credit Hours
Prerequisite: FREN 152 or two years high school French
F

This course will be a review of grammar and practice in oral and written French, based on selected readings and lectures. This course emphasizes writing and reading skills. Short papers and essays will be written in French. This class will culminate in the writing of a research paper in French.

252 Second Year French II 4 Credit Hours
Prerequisite: FREN 251 or three years high school French
W

This course is a continuation of French 251. There will be emphasis on aural and oral practices. Also, there will be a study of French contemporary life and literature. There will be instructional aids included. This course emphasizes reading French literature and will culminate in the writing of a report on a piece of French literature. Several pieces of French literature will be read during the course. The primary purpose of this course is to have the students read and comprehend French literature at a fluent intermediate level.

GEOGRAPHY (GEOG)

151 Elements of Physical Geography 4 Credit Hours
An introductory study of geography's physical elements. Topics include sun-earth relationships, maps, plate tectonics, climate, landforms, erosion, soils, rocks and minerals.

152 World Regional Geography 3 Credit Hours
This course provides a world regional survey emphasizing regional distinctions including population characteristics, environmental features, basic resources, political structure and economic activity within the major geographical regions with a focus on cause and effect and man/land relationships.

GERMAN (GERMN)

151 Elementary German I 4 Credit Hours
F

This beginning course in German provides an introduction to German language and culture. The student will learn basic structures and vocabulary of the target language as well as practice the four basic language skills: reading, writing, listening and speaking.

152 Elementary German II 4 Credit Hours
Prerequisite: GERMN 151 or one year high school German
W

The student will learn more advanced structures of the target language and additional vocabulary. The proficiency orientation of the class allows extensive practice in the four basic language skills: reading, writing, listening and speaking. This course is a continuation of GERMN 151.

251 Second Year German I 4 Credit Hours
Prerequisite: GERMN 152 or two years high school German
F

The student will learn additional structures and vocabulary of the target language and will continue practicing the four basic language skills: reading, writing, listening and speaking. Students will be introduced to authentic materials and literature. This course is a continuation of German 152.

252 Second Year German II 4 Credit Hours
Prerequisite: GERMN 251 or three years high school German
W

The student will continue exploring authentic materials and literature. Practice of the four basic language skills – reading, writing, listening and speaking will continue at an advanced level. This course is a continuation of German 251.

HEALTH SCIENCES (HLTSC)

110 Medical Terminology 2 Credit Hours
F, W, Sp

The purpose of this course, designed primarily for health and business students, is to provide basic medical terminology information including Greek and Latin derivations, prefixes, suffixes, root words and combining forms. It provides practice in building and defining medical terms and emphasizes correct spelling and pronunciation of medical words. Basic anatomy and physiology of systems is reviewed with an emphasis on disease conditions and diagnostic tests. This class utilizes a text/workbook, computer assisted instruction, audio tapes and classroom instruction.

120 Pharmacology 2 Credit Hours
Prerequisite: BIOL 158 or admission to PN Program
W, Sp

This course for nursing and allied health students is designed to introduce the major drug classifications, prototype and common drugs within those classifications and the specific drug actions and interactions. The course also emphasizes the physiologic effects of drugs on the human body, identifying therapeutic usefulness, adverse effects and contraindications.

136 ECG Basics 3 Credit Hours
Su

The purpose of this class is to teach the theory and skill of correctly administering an electrocardiograph and other forms of ECG testing. The class also covers related basic cardiac anatomy and physiology/electrophysiology of the heart; the normal ECG; basic identification of cardiac rhythms; infection control; lead systems and care of monitoring equipment, care of the patient undergoing testing including ECGs, holter monitors and stress testing; quality assurance guidelines; legal and ethical considerations and specific communication skills needed by an ECG technician.

137 ECG II   **2 Credit Hours**
Prerequisite: HLTSC 136
                                                           Su
The purpose of this class is to further advance the skill of
ECG testing. The course will include practical application of
ECG skills in the clinical setting. Students must be prepared
to spend at least 20 hours per week in the clinical setting
and be at least 18 years old.

151 Principle of Nutrition and   3 Credit Hours
       Diet Therapy
                                               F, W, Sp, Su
The purpose of this course is to study the role of nutrition
in promoting health throughout the life cycle. Basic
nutrition concepts are discussed, with emphasis placed on
the nutrition needed for the maintenance of health and the
prevention of disease. Personal nutritional practices are
analyzed in light of nutritional theory.

156 Phlebotomy Basics   6 Credit Hours
                                                     W, Sp, Su
The purpose of this class is to prepare students for the
role of the phlebotomist and to be a member of the health
care team. Infection, quality control and safety, specimen
collection, techniques for venipuncture and dermal or
capillary puncture, specimen transport and processing and
legal, ethical and professional conduct will be presented.

157 Phlebotomy II   3 Credit Hours
Prerequisite: HLTSC 156
                                                        W, Su
The purpose of this class is to apply venipuncture and
dermal puncture skills in the clinical setting. Students will
work 120 hours in the clinical setting and must be at least
18 years old.

160 Perspectives of Aging   3 Credit Hours
                                               F, W, Sp, Su
This course introduces students to the multiple dimensions
of aging – physiologic, psychological, cognitive and social.
The broad demographic, political and social frameworks
and policy considerations that impact the aging population
are also introduced.

HEALTH-PHYSICAL EDUCATION (HPE)

150 Personal Health   2 Credit Hours
                                                    F, W, Sp
This is a basic course designed to provide college students
with fundamental concepts and practices relating to
healthful living. Personal, local, state and national health
problems are studied in an effort to provide the student
with a broad knowledge and understanding of vital health
issues as they impact on the physical, mental, emotional,
spiritual and social well-being of the individual. Areas of
health which are studied include: chemical dependency;
cancer; heart disease and its related factors, such as
exercise, nutrition, weight management and hypertension;
marriage and family relationships. The critical thinking
skill in this course will coincide with the student's ability
to think critically in order to solve problems related to the
health, wellness and safety of individuals and society as a
whole.

151 First Aid and Safety   2 Credit Hours
                                                    F, W, Sp
The First Aid and Safety course will provide the student
with a basic knowledge and understanding of accidents,
illness and injuries that most commonly occur at home,
work, school, play or while traveling. The student is given
opportunities to analyze specific emergency situations
with emphasis on treatment, prevention and protection.
Major areas include: wounds; injuries to muscles, bones
and joints; shock; poisoning; burns; sudden illnesses; heart
attacks, and respiratory emergencies. Rescue breathing,
choking and CPR skills are learned and applied to adults,
children and infants.

152 Community Health   3 Credit Hours
                                                            F
This course is designed to introduce students to community
health and lay the foundation for later learning of more
in-depth health disciplines. Students will become familiar
with health-related agencies at all levels – local, state and
federal. A complete overview of community health will be
provided. Students will review and discuss controversial
current issues, including access to health care and quality
of health care. Political, social and economic dimensions of
community health will be analyzed. There will be a focus
on the common diseases particularly affecting persons
living in or near poverty. There will be an overview of the
types of data from which to identify community health
problems. Students will be provided the opportunity to gain
a good understanding of the realm of community health.

153 Mental Health   3 Credit Hours
                                                     W, Sp, Su
The purpose of this class is to develop a concept of mental
health and to increase awareness of mental health issues.
Students will examine the principles of mental health,
including risk factors associated with mental illness
and factors which lend toward positive mental health.
Various mental illnesses and treatment strategies will also
be explored. The education and roles of mental health
professionals will be reviewed, as well as mental health
facility options. Societal issues concerning mental health
status will also be discussed.

158 Effective Coaching for Team Sports   3 Credit Hours
                                                            F
Principles and effective coaching practices are introduced.
The role of the coach is explored, including aptitude and
skills/preparation needed. Basic information about physical
maturation, motor development and athletic characteristics
of children, adolescents and adults will be studied. Meeting
the athlete and team, selecting a team, motivating athletes
and developing appropriate behavior will be explored in
detail. An overview of typical administrative duties and
legal aspects will also be explored.

176 Iaido: Japanese Swordsmanship   1 Credit Hour
                                                     W, Sp, Su
The purpose of this course is to help the participating
student understand the art of Iaido, not only as a method
of swordsmanship, but as an art to develop coordination
between mind and body. Emphasis will be placed on
physical fitness, history of the art, self-discipline and the
culture of the Samurai. Involved are body movement
principles, a progressive exercise program and other
desirable health and technical aspects of the art of
Iaido. Written assignments and tests (both written and
performance testing) are a part of this course.

177 Weight Training   **1 Credit Hour**
F, W, Sp

The purpose of this course is to provide students with an opportunity to learn weight training skills and the knowledge and understanding of concepts related to those skills. Course content will include: components of physical fitness, selection of clothing, equipment, terminology, fundamental weight training skills and safety. Written and/or skills tests are a part of the course. Weight training skills will be centered on using Nautilus/Stairmaster resistance exercise machines. Emphasis will be placed on increasing muscle tones and strength through a circuit routine of one set of 8-12 repetitions at 60-85 percent of one repetition max. Students' strength and endurance will be assessed through a weight training program designed to meet class and personal objectives.

178 Weight Lifting   **1 Credit Hour**
F, W, Sp, Su

The purpose of this course is to provide students with an opportunity to learn weight lifting skills and the knowledge and understanding of concepts related to those skills. Course content will include: components of physical fitness, selection of clothing, equipment, terminology, fundamental weight lifting skills and safety. Written and/or skills tests are a part of the course. Weight lifting skills will be centered on using Hammer plated resistance equipment. Emphasis will be placed on increasing muscle size, power and strength through routines of three-to-four sets of three-to-four repetitions for each set at 85-100 percent of one repetition max. Student's size, power and strength will be assessed through a weight lifting program designed to meet class and personal objectives.

185 Snowboarding   **1 Credit Hour**
W

This course provides students an opportunity to learn snowboarding skills along with the knowledge and understanding of concepts related to snowboarding. Course content will include: selection of clothing and equipment, terminology, fundamental skills of snowboarding and safety. Written and/or skills tests are a part of this course. Students will benefit from the emphasis on individual lifetime sport and recreation activity while receiving one hour of credit toward a degree. This course meets off campus and will require significant physical effort. Students must be at least 18 years of age and be in good physical condition to participate.

193 Snow Skiing   **1 Credit Hour**
W

Course content for physical education activities will include: selection of clothing, equipment, terminology, fundamental skills and safety. Written and/or skills tests are a part of each course. The purpose of this course is to provide students an opportunity to learn snow skiing skills and the knowledge and understanding of concepts related to snow skiing. Students will benefit from today's emphasis on lifetime individual sport and recreational activities while receiving one hour elective credit for either their associate degree or for personal enjoyment. This course is also transferable to many four-year institutions as a P.E. credit for those students seeking a baccalaureate degree.

210 Foundations in Health Education   **3 Credit Hours**
Sp, Su

This course is designed to introduce students to the health education discipline and the competencies needed by health educators. Students will become familiar with learning experiences that promote voluntary actions and informed decisions conducive to improving health status and preventing injury. An overview will be provided about how health education is concerned with the health behavior of individuals and with the living and working conditions that influence their health. Students will learn about where health education services are offered and for whom. There will be a general overview of different health education services, including those provided for in schools and in community settings

212 Principles of Safety   **3 Credit Hours**
Sp, Su

This course is designed to introduce students to the field of safety and injury prevention. Accident control and disaster preparation are examined in different settings including: at home, in the workplace, during recreation and in motor vehicles. Safety management is studied as it relates to hazard identification, accident investigation and injury prevention. Accident data and sources of data are examined. Students will be instructed on how to plan, develop and execute safety and accident prevention control programs.

100 Level — Activity Courses   **1 Credit Hour**
Course content for physical fitness and aerobic activities will include: selection of clothing and equipment, terminology, components of fitness, benefits of exercise, basic fundamental skills and safety. Course content for individual and team sports activities will also include rules of play, scoring and a basic understanding of offensive and defensive strategy. Written and/or skills tests are a part of each course.

Skills require some physical exertion, gross and fine motor coordination, sufficient intellectual and emotional functions to implement skills and sufficient visual and auditory acuity to communicate needs in the activity. All students must sign a waiver to do activities, and a doctor's permit may be needed.

Please consult the latest class schedule for current information on offerings.

160 Archery	F, Sp, Su
161 Badminton	F, W
162 Bowling	W
163 Golf	Sp, Su
165 Karate	F, W
167 Physical Fitness	F, W, Sp, Su
170 Exercise Walking	F, Sp, Su
171 Jogging	F, Sp, Su
173 Aerobics	F, W, Sp, Su
174 Tae Kwon Do	Sp, Su
175 Kick Boxing	F
177 Weight Training	F, W, Sp
178 Weight Lifting	F, W, Sp
181 Volleyball	F, W
184 Basketball	F, W
185 Snowboarding	W
193 Snow Skiing	W
197 Hiking and Backpacking	Sp

200 Level - Continuing Courses   1 Credit Hour
Prerequisite: appropriate 100-level beginning course
A review of what was offered in the corresponding beginning course, along with more advanced skills. A greater emphasis will be on offensive and defensive strategies, with an in-depth evaluation of the individual skills and abilities for individual and team sports activities. For physical fitness and aerobic activities, more emphasis will be placed on individual goals that will challenge their upper level skills and abilities. Written and/or skills tests are a part of each course.

Skills require some physical exertion, gross and fine motor coordination, sufficient intellectual and emotional functions to implement skills and sufficient visual and auditory acuity to communicate needs in the activity. All students must sign a waiver to do activities, and a doctor's permit may be needed.

260 Intermediate Archery	**Sp, Su**
261 Intermediate Badminton	**F, W**
262 Intermediate Bowling	**W**
263 Intermediate Golf	**Sp, Su**
265 Intermediate Karate	**W, Sp, Su**
273 Aerobics II (Step Aerobics)	
285 Intermediate Snowboarding	**W**
293 Intermediate Snow Skiing	**W**
297 Intermediate Hiking and Backpacking	**Sp, Su**

HISTORY (HIST)

151 Western Civilization to 1650   3 Credit Hours
F, Sp
This course introduces the cultural and institutional development of Western civilization from its beginning to 1650. It emphasizes the contributions of past civilizations to the present. Students planning a major in history should elect both 151 Western Civilization and 152 Western Civilization in their freshman year.

152 Western Civilization 1650   3 Credit Hours
    to Present
W
This course, a continuation of Western Civilization 151, introduces the cultural and institutional development of post-1650 Western civilizations. Understanding the contributions these civilizations made to the present is emphasized.

153 History of Michigan   3 Credit Hours
W
This course is a survey of Michigan history from the French exploratory period to the present. It will examine how the economic, political and social development of Michigan relates to American history. Local history and the collection and interpretation of primary historical materials are emphasized. This includes utilizing primary historical materials and fitting this information into a local and a national context.

154 History of the U.S., 1607-1877   3 Credit Hours
F, Sp
This course is a survey of American history from the time of exploration and the Colonial Era to the end of Reconstruction. It will examine the institutions of the peoples of America – native and immigrant – and the changes fashioned in the new environment. Special emphasis is placed on the growth and development of American democracy. The purpose of this course is to have the student understand the complexity and essential content of the American past.

155 History of the U.S., 1877-Present   3 Credit Hours
W
This course is a survey of American history from the end of Reconstruction to the present. It will examine industrialization, urbanization, ethnic and racial diversity, economic conditions, political, social, cultural and intellectual trends, the growth of America as a world power, the Cold War and the growth of the federal government. The purpose of this course is to have the student understand the historical roots of modern America.

158 World History to 1500   3 Credit Hours
F, Sp
This course introduces the social, economic and cultural development of world history from its beginning to 1500. It emphasizes the formation of world empires and imperialism, contours of world religions and movement of goods and people from a comparative perspective.

159 World History 1500 to Present   3 Credit Hours
W, Su
This course introduces the social, economic and cultural development of world history from 1500 to the present. It gives a comparative overview of the movement of goods and people, revolutions, technological developments and new regional and public identities in the modern world.

160 Civil War and Reconstruction   3 Credit Hours
This course is a survey of the Civil War era in U.S. history. Special emphasis is on modernization, slavery, the causes of the war, the military aspects and the reconstruction process.

255 History of East Asia   3 Credit Hours
F
This course surveys the history of East Asia from its beginning to modern times. It emphasizes the social, political and economic institutions that have shaped the civilization of this region.

256 African-American History   3 Credit Hours
F
This course examines the history of African-Americans from their African origins to the present. Special emphasis is placed on the cultural development and contributions of black Americans and the ever-changing dimensions of racism and discrimination in American society. This course will help the student understand the integral role that African-Americans have played in our nation's history, and to perceive that the very foundation of the American experiment rests on cultural diversity.

HUMANITIES (HUMAN)

151 Introduction to Humanities   3 Credit Hours
F, W
This course is a survey of the humanities that focuses on painting, poetry, drama and music with emphasis placed on what the humanities tell us about human values. Extra cost may be incurred for field trips. Schedules may have to be adjusted because of field trips, which may be on weekends.

152 Exploring Creativity   **3 Credit Hours**
                                              F, W

This class will examine in detail the creative process and the factors that surround it. Beginning with the trinity of creation – the person, the process and the product – the course will explore those characteristics of creative people that enhance creativity and also those elements that inhibit it. The class will be based on the experiences of those who are productive creators. We will note their thinking and feeling habits, examine their products, discover their processes and understand how creativity is part of everyone. Creative and lateral thinking processes will also be explored. A creativity project will be presented to the class by each student.

250 Visual Media Literacy   **3 Credit Hours**
Prerequisite: ENGL 151
                                                 W

This class will acquaint the student with the cultural messages that are created and manipulated by movies and television programming. Each student will be provided with the vocabulary and critical tools necessary for discussing and writing about these vital media. Upon successful completion of this course, the student will be able to analyze the visual media and their role in shaping his or her world.

HUMAN SERVICES PARAPROFESSIONAL (HSP)

100 Nurse Aide Practice   **4 Credit Hours**
This course is designed to prepare an individual to fulfill the role of direct caregiver/nursing aide. The course emphasizes the skills and behaviors that are significant to employers of nurse aides, including cardiopulmonary resuscitation. This course includes classroom activities, skills practice time in the laboratory and supervised clinical practice at a long-term care facility. Written assignments and tests (both written and performance testing) are a part of this course. Upon completion of this course, students will be eligible to take the clinical and written exams required for certification as a nurse's aide.

INDEPENDENT STUDY

                                  1 to 4 Credit Hours
Prerequisite: Approval of the respective division dean
A student may have an interest in a topic or an area of specialization not covered by regular MCCC class offerings. In order to further the student's learning in these areas, the divisions (Business, Health-Science, Humanities-Social Sciences, Industrial Technology and Science-Mathematics) may offer an Independent Study class in which the student would complete selected readings, research projects and/or papers under the guidance of an instructor.

JOURNALISM (JOURN)

161 Introduction to Journalism   **3 Credit Hours**
                                                 F

Students in this course will learn how to determine what is newsworthy as well as the basics of news and feature writing, journalistic style, copy editing and gathering of information with an emphasis on interviewing techniques. Students may hear presentations by professional journalists and/or visit a newspaper operation.

162 Journalism Workshop I   **3 Credit Hours**
Prerequisite: JOURN 161
                                              F, W

In this course, students will be given practical experience in journalistic writing, photography, layout procedures and newspaper production. They will have the responsibility for producing the college newspaper, the *Agora*.

261 Journalism Workshop II   **3 Credit Hours**
Prerequisite: JOURN 162
                                              F, W

This course is a continuation of Journalism 162.

262 Journalism Workshop III   **3 Credit Hours**
Prerequisite: JOURN 261
                                              F, W

This course is a continuation of Journalism 261.

MANUFACTURING TECHNOLOGY (MECH)

102 Manufacturing Processes   **4 Credit Hours**
                                              F, W

This is a survey course providing a comprehensive introduction to various manufacturing techniques used to produce products from metals, plastics, ceramics and composite materials. Classroom discussion will center around the major families of processes: forming, separating, conditioning, fabricating and finishing. Laboratory experience will include welding, foundry, sheet metal forming, machining and plastics manufacture.

103 Basic Machine Tools   **4 Credit Hours**
                                              F, W

This course deals with the care and use of hand tools, measuring instruments and layout tools as they are used in fundamental fabrication of industrial products. Basic theories and operation and typical applications of lathes, milling machines and surface grinders are also stressed.

104 Machine Tool Operations   **4 Credit Hours**
Prerequisite: MECH 103
                                                 W

This course covers advanced machine tool techniques and applications with emphasis on lathes, mills and surface grinders. The theory, use and means of producing machined projects is incorporated into the course along with a detailed coverage of machine speeds, feeds and cutter materials. Students are also introduced to the field of computer numerical control (CNC) of machine tools. There will be laboratory experiences in programming and operating CNC machine tools.

105 Advanced Machine Tools   **4 Credit Hours**
Prerequisite: MECH 104
                                                 F

The major emphasis of this course is the programming and operation of computer numerically controlled (CNC) machine tools. Laboratory experiences will include writing and editing programs and parts production on both CNC milling machines and lathes. Programming and editing will be done directly on the CNC machines as well as off-line on microcomputers. Wire Electrical Discharge Machines (EDM) are also covered.

111 Introduction to Fluid Power   **3 Credit Hours**
Prerequisite: One year high school algebra
                                              F, W

This course is an introduction to hydraulic principles and equipment used in industry. Basic hydraulic circuit design along with actual set-up and operation of hydraulic circuits is stressed.

112 Pneumatics   **3 Credit Hours**
Prerequisite: MECH 111

                     W

This course covers advanced circuit design, hardware theory and application and circuit construction and operation in pneumatic systems. Emphasis is on circuits and components commonly covered in automated manufacturing. Circuits encountered will include pneumatic, electrical/electronic control and feedback.

116 Industrial Plumbing and Pipefitting   **3 Credit Hours**
This course is designed to allow the student to gain an understanding of the basic scientific principles that apply to the plumbing/pipefitting trade. Various hand and power tools will be used to install and join the different types of piping systems used in the trade. Additional topics include: installing pumps and piping systems, basic mathematics as it applies to the plumbing/pipefitting trade, producing and interpreting basic shop drawings and piping sketches as used at a typical work site, use of the trade code book and applying code regulations to the installation piping.

117 Basic Air Conditioning and   **3 Credit Hours**
     Refrigeration
This technician-level course covers the basic compression refrigeration cycle, refrigerants available for use, major refrigeration system components and fundamentals of system operations. Using small-scale, basic refrigeration systems, participants will apply theory to hands-on knowledge as they become familiar with evacuation and charging procedures and basic troubleshooting techniques.

127 Advanced Air Conditioning and   **3 Credit Hours**
     Refrigeration and Refrigerant
     Certification
Prerequisite: Take MECH-117
The course covers advanced air conditioning and refrigeration, theory, application, electrical circuit construction, operation and troubleshooting. The ninth through thirteenth week of the course will consist of lecture preparations to pass the "EPA Refrigerant Technician Universal Type IV Certification Test," which will be administered on the fourteenth week of class.

131 Introduction to Automated   **3 Credit Hours**
     Manufacturing

                     F, W

This is a survey course for the world of robots. Included will be automation safety, justification, design and classification, applications, end-of-arm tooling, power sources, future trends and societal impact. Laboratory experiences will include robot programming and operation through both teach pendants and microcomputers. Basic configurations with programmable controllers will be included, with an abbreviated introduction to fluid power and ladder logic.

134 Machine Tool Theory   **2 Credit Hours**
Prerequisite: MECH 103

                     W

This course covers advanced machine tool techniques with emphasis on lathes and mills. There will be detailed coverage of machine speeds, feeds and cutter materials. Students are introduced to the field of computer numerical control (CNC) of machine tools. Basic diemaking is also covered.

201 Introduction to CAD/CAM   **3 Credit Hours**
Prerequisite: MDTC 121 or MDTC 160 and MECH 104 or
     MECH 134

                     W, Sp, Su

This course introduces the theory and application of computer programs which provide the automatic generation of CNC machine tool codes from the entry of part geometry. Operator designs and runs tool path for CNC machines in 2D and 3D. This technology eliminates the need for the CNC programmer to master the traditional M and G codes and dramatically shortens CNC programming time.

216 Industrial Plumbing and   **3 Credit Hours**
     Pipefitting II
Prerequisite: MECH 116
This course is designed to assist individuals with the understanding and application of plumbing systems, maintenance materials, tools and techniques. Students will be introduced to the basic skills used in the plumbing and pipefitting trades. Emphasis is placed on piping supply and DWV systems, fixture installation and backflow prevention. The information presented will be based on the Michigan International Plumbing Code.

MARKETING COMMUNICATIONS (MCOM)

201 Principles of Marketing   **3 Credit Hours**
                     F, W
The focus of this course is the study of the fundamental marketing principles. Topics include the marketing environment, marketing planning and research, consumer behavior, market segmentation, international marketing and the marketing mix.

MATERIALS TECHNOLOGY (MATL)

101 Industrial Materials   **3 Credit Hours**
Prerequisite: One year high school algebra
                     F, W

This course presents an introduction to materials of industry, including iron and steel, nonferrous metals, plastics and ceramics, from the standpoint of properties and applications. Major topics include material classification, mechanical and physical properties, metallurgy and heat treating. Laboratory experience will be gained in mechanical testing, microscopy, heat treating and materials identification.

215 Metallurgy   **3 Credit Hours**
Prerequisite: MATL 101
This course builds on the foundation of Industrial Materials (MATL 101) to explore, in-depth, the physical and mechanical properties of metals and alloys. Laboratory work will include industrial metallographic techniques and metals testing.

225 Plastics and Ceramics   **3 Credit Hours**
Prerequisite: MATL 101
This course builds on the foundation of Industrial Materials (MATL 101) to explore, in-depth, the physical and mechanical properties of plastics and ceramics. Laboratory work will include processing and testing techniques of polymers, composites and ceramics.

MATHEMATICS (MATH)

Students who score below specified minimums on the ACT or COMPASS math placement test must successfully complete Math 090 prior to enrolling in a 100-level or higher math course.

090 Basic Mathematics Skills   3 Credit Hours
This class does not count toward graduation.
Basic Mathematics Skills will provide instruction in elementary arithmetic skills, mathematical operations and their applications, with early introduction to integers and algebraic concepts. This approach provides for students the necessary tools to succeed in developmental math and prepares them for future math courses. The content of the course includes operations with whole numbers, whole-number and decimal fractions, ratio and proportion, percent, introduction to variables and algebraic concepts, emphasis on problem-solving skills, vocabulary comprehension, real-world applications and calculator fundamentals. Some topics must be completed without the use of a calculator. The purpose of the course is to prepare students for the transition from arithmetic to algebra. The Basic Mathematics Skills course will be graded on a Pass/Fail mastery basis. The institutional credits earned in this course do not count toward graduation. This course does not fulfill the math competency requirements.

118 Introduction to Metric Systems   1 Credit Hour
This course is designed to introduce students to the metric system of weights and measures commonly used in industrial settings. With the prevalence of international trade and organizations with worldwide locations, drawings, specifications, tolerances and other measurements in trade and commerce are being prepared and presented in the metric system.

121 Technical Mathematics I   4 Credit Hours
Prerequisite: MATH 090 or qualifying score on ACT or
    COMPASS test
This course provides basic mathematics preparation for students in technology programs. It emphasizes fundamental operations of algebra and the solution of linear equations relating to technical applications. The course also includes binary and hexadecimal numbers, estimation, scientific and engineering notation, engineering calculation form, proportion and variation, measurement systems and conversion methods, precision, accuracy and error. The purpose of this course is to acquaint students with the type of mathematics that is used in the technical area.

124 Technical Mathematics II   4 Credit Hours
Prerequisite: MATH 121
This course is designed to provide advanced mathematics preparation for students in technology programs. It emphasizes concepts and applications of algebra, geometry and trigonometry to technical areas. The course includes geometry, graphs and charts, functions and graphs, trigonometry, vectors and polar coordinates, systems of equations, logarithms and statistics.

125 Mathemathics for Allied Health   3 Credit Hours
Prerequisite: MATH 090 or qualifying score on ACT or
    COMPASS test
This course covers practical application of addition, subtraction, multiplication, division, decimals, fractions, conversion of units, ratio and proportion problems, estimation (including reasonableness of numerical result), precision, accuracy, variation, measurement systems, conversion methods, review of the Roman numeral system, use of algebraic formulas and solving algebraic word problems as related to the medical profession. The purpose of this course is to give the student competency in the mathematics used in the medical profession.

150 Beginning Algebra   4 Credit Hours
Prerequisite: MATH 090 or qualifying score on ACT or
    COMPASS test
This course covers fundamental concepts of algebra such as symbols, signed numbers, rational numbers, factoring and solutions to linear equations. It also includes solutions of rational equations, quadratic equations, and systems of equations. This course is intended for students who have had no high school algebra or feel a need to review elementary algebra.

151 Intermediate Algebra   4 Credit Hours
Prerequisite: MATH 150 or qualifying score on ACT or
    COMPASS test which satisfies the mathematics general
    education graduation requirement

                                        F, W, Sp, Su
This course covers properties of real numbers, solutions of first- and second-degree polynomial equations and inequalities, systems of equations and their graphs, basic properties of logarithms, complex numbers, basic right triangle trigonometry and laws of sines and cosines. The purpose of this course is to prepare students for the transition to college algebra.

154 Mathematics Explorations   4 Credit Hours
Prerequisite: MATH 150 or higher or qualifying score on
    ACT or COMPASS test which satisfies the mathematics
    general education requirement
This is a college-level course designed primarily for non-math and non-science transfer majors with the purpose of introducing them to the nature of mathematics as it applies to both the practical and the abstract. Students will gain understanding in the areas of sets, logic, probability, statistics, algebra, geometry and math as they apply to the present modern world. The history and the future of mathematics will be interspersed throughout the course as they apply to each topic. Topics will be explored with the use of computers, problem solving, critical thinking and group/self-discovery.

156 Math for Elementary Teachers I   3 Credit Hours
Prerequisite: MATH 150 or higher or qualifying score on
    ACT or COMPASS test which satisfies the mathematics
    general education requirement. MATH 151 is strongly
    recommended
This course is an introduction to the theory of arithmetic to develop understanding and skill in mathematical processes. It consists of set theory, logic, number bases, properties of natural numbers, integers and rational and real numbers. An emphasis is put on the use of manipulatives and problem solving. The purpose of the course is to provide the future elementary teacher with a perspective for understanding the mathematics taught in the elementary school.

157 College Algebra   3 Credit Hours
Prerequisite: MATH 151 or two years high school Algebra
    and one year high school geometry
This course covers the topics of polynomial equations, inequalities, exponential equations and logarithmic equations. Also included are systems of equations and complex numbers. The purpose of this course is to introduce students to college level mathematics at a more gradual pace than MATH 164. MATH 157 and MATH 159 are the equivalent of MATH 164.

159 Trigonometry and   **3 Credit Hours**
    Analytical Geometry
Prerequisite: MATH 157 or two years high school algebra
    and one year high school geometry
This course covers the topics of circular functions, trigonometric functions, inverse trigonometric functions, trigonometric identities, conic sections, polar coordinates, sequences and induction. The purpose of this course is to teach students trigonometry and conic sections so that the students will have the prerequisites needed for the study of calculus. MATH 159 is a continuation of MATH 157. MATH 157 and MATH 159 are the equivalent of MATH 164.

160 Math Applications in   **2 Credit Hours**
    Engineering Technology
Prerequisite: MATH 124 or MATH 159 or MATH 164
This course is an introduction to the concepts of statistics and calculus as they apply to engineering technology, focusing on the application of spreadsheet and math analysis software. Computer resources provided include Microsoft Excel and the Maple computer algebra packages. Topics range from experimental data reduction to numerous examples from mechanical and electrical systems.

162 Introduction to Statistics   **3 Credit Hours**
Prerequisite: MATH 151 or 157 or 159 or 164 or 171 or 172
    or 251 or 271 or 273 or two years high school algebra
A basic course to acquaint the student with the theory and application of statistical methods to engineering, health, social and business problems. Topics considered are graphical representation of data, central tendency measures, bivariate data, probability, distribution, sampling, hypothesis testing and correlation aspects. Out of classroom use of microcomputers will be expected.

164 Precalculus   **4 Credit Hours**
Prerequisite: MATH 151 or two years high school Algebra
    and one year high school geometry
This course emphasizes the study of polynomial, exponential, logarithmic and trigonometric functions. Other topics considered are complex numbers, trigonometric identities, systems of equations and analytic geometry. The purpose of this course is to provide knowledge and skills in mathematics of advanced algebraic and trigonometric concepts for applications in situations that require the use of quantitative processes. This course serves as a core requirement in many baccalaureate programs and provides prerequisite concepts and skills needed in business, mathematics, engineering and in the physical sciences for continued study in calculus.

166 Math for Elementary Teachers II   **3 Credit Hours**
Prerequisite: MATH 156
This course is a study of elementary probability and statistics, geometry, computer and calculator applications. An emphasis is put on the use of manipulatives and problem solving. The purpose of this course is to provide the future elementary school teacher with a perspective for understanding the mathematics taught in the elementary school.

171 Calculus I   **4 Credit Hours**
Prerequisite: MATH 159 or MATH 164 or three years high
    school mathematics including algebra, geometry and
    trigonometry
An introductory course in the study of single variable calculus covering both differentiation and integration. The types of functions covered include algebraic and transcendental. The purpose of the course is to study analysis of single variable functions primarily through differentiation and integration.

172 Calculus II   **4 Credit Hours**
Prerequisite: MATH 171
This course is a continuation in the study of calculus with an emphasis upon integration. Topics included are algebraic and transcendental functions, techniques of integration, improper integrals, infinite series, plane analytic geometry, parametric equations and polar equations. The purpose of the course is to continue the study of calculus of single variable functions with a more in-depth study of integration and various infinite series.

251 Introduction to Linear Algebra   **3 Credit Hours**
Prerequisite: MATH 171
                                           W

This course is an introduction to linear algebra. The content of the course includes methods for solving systems of equations, matrices, vector spaces, inner product spaces, eigenvalues and eigenvectors and linear transformations. The purpose of this course is to introduce students to linear algebra. Specifically, the course prepares students to work with abstract mathematical structures and multivariate problems.

271 Calculus III   **4 Credit Hours**
Prerequisite: MATH 172
                                           F

Calculus III is the continuation of the principles of calculus applied to multivariable functions. The content of the course includes partial differentiation, multiple integration and vector analysis. The purpose of the course is to continue the analysis of functions with calculus to multivariable functions.

273 Introduction to Differential   **3 Credit Hours**
    Equations
Prerequisite: MATH 172
                                         W

This is an introduction to ordinary differential equations. The content of the course includes methods for solving first- and second-order ordinary differential equations, systems of differential equations, power series solutions and Laplace transforms. The purpose of this course is to introduce students to the theory and application of differential equations. Specifically, the course prepares students to apply differential equations to scientific, engineering and economic problems.

MECHANICAL DESIGN TECHNOLOGY (MDTC)

109 Mechanical Blueprint Reading   **2 Credit Hours**
                                           F, W

This course covers the basic principles essential for interpretation of blueprints and engineering drawings. Fundamental symbols, signs and techniques, as well as size and shape description, are emphasized.

116 Plant Layout and Material Handling   **3 Credit Hours**
Prerequisite: MDTC 101 or MDTC 109 or MDTC 151 or
    MDTC 160 or MDTC 161
This course is an introduction to the practices and procedures for developing optimum plant layouts for production and material handling. Students will follow the process of analyzing and developing information to produce a plant layout. Print reading skills will be developed with an emphasis on reading industrial equipment drawings for equipment installation and movement of materials including conveyers.

152 Descriptive Geometry   **4 Credit Hours**
Prerequisite: MDTC 160 or MDTC 151

                                                       W

This course consists of lectures, discussions and home and classroom drawings. Major topics and applications will include: fundamental theory of the point, line and plane with application to solids, generation and classification of lines and surfaces, tangent planes, sections, intersections, development and applications to engineering problems.

160 Mechanical Drafting and CAD I   **4 Credit Hours**
Prerequisite: Students who have taken MDTC 101 and MDTC 121 should not take MDTC 160

                                                       F, W

This course is a first exposure to the drafting and design field. Sketching, drafting equipment, basic drafting techniques, geometry, multiview drawings, dimensioning and sectional views will be taught using both sketching techniques and computer aided drafting (CAD) software. A major emphasis will be placed on current drafting standards and procedures.

161 Mechanical Drafting and CAD II   **4 Credit Hours**
Prerequisite: MDTC 160 or MDTC 101 or MDTC 121 or two years high school mechanical drafting and CAD. Students who have taken MDTC 151 and MDTC 122 should not take MDTC 161.

                                                       F, W

This course is designed as a continuation of the Mechanical Drawing and CAD I course. Auxiliary views, fasteners, pictorial drawings and working drawings will be taught using both sketching techniques and computer aided drafting (CAD) software. 3D concepts and solid modeling will also be included in this course.

224 CAD Applications-Mechanical   **3 Credit Hours**
Prerequisite: MDTC 121 and MDTC 101 or MDTC 151 or MDTC 160 and MDTC 161

                                                           F

This course focuses on the process of interpreting complex engineering drawings and developing the detail drawings which are used in manufacturing parts. The course is designed to simulate the engineering environment from a detailer's perspective and provide application-based drawings/projects commonly found in industry. The projects will consist of commercial details, machine from solid details, casting details and weldment details. This course will pull together the skills acquired in MDTC 121 and MDTC 151 and will enable the student to develop and critique their research skills. CAD lab is required to complete drawings.

226 Geometric Dimensioning and Tolerancing   **3 Credit Hours**
Prerequisite: MDTC 101 or MDTC 151 or MDTC 160

                                                              F

This course covers fundamental concepts and applications relating to geometric dimensioning and tolerancing (GD&T). This includes tolerance of form, profile, orientation, runout and location as they relate to the ANSI/ASME Y14.5M-1994. Emphasis is placed on how GD&T is utilized by engineering, manufacturing and inspection departments.

240 Tool and Die Design   **4 Credit Hours**
Prerequisite: MDTC 152 and MDTC 224 and MDTC 226. Students who have taken MDTC 101 and MDTC 121 should not take MDTC 160.

                                                        W

Keeping pace with the latest advances in jigs and fixtures, this course covers thoroughly how and why jigs and fixtures are designed and built. From simple template and plate-type workholders to complex channel and box-type tooling, economy and simplicity in tool design is stressed throughout. This course is also a step-by-step introduction to the design of stamping dies including material, punches, die sets, stops, strippers, gages, pilots and presses. Special attention is given to the use of standard parts catalogs. The function of the course is to call upon the knowledge and skills acquired by the student in supporting and related courses to analyze and solve specific design problems. CAD lab is required to complete drawings. Students who have successfully completed both MDTC 229 and MDTC 230 may not enroll for credit in this course.

MECHANICAL ENGINEERING TECHNOLOGY (METC)

170 Introduction to Parametric CAD/CATIA   **3 Credit Hours**
Prerequisite: MDTC 121 or MDTC 160
In this course, students learn concepts in the use of profiles and parametric features as building blocks for 3D solid models, using the CATIA/DELMIA part and assembly modeling software. Advanced topics of NURBS surfacing and assemblies, as well as the creation of 2D drawings will be discussed. Software specific topics of Boolean Operations and best practices will also be explored.

172 Introduction to Parametric CAD/ProE   **3 Credit Hours**
Prerequisite: MDTC 121 or MDTC 160
In this course, students learn concepts in the use of profiles and parametric features as building blocks for 3D solid models using the Pro Engineer part and assembly modeling software. Advanced topics of NURBS surfacing and assemblies and the creation of 2D drawings will be discussed. An analysis of models using Finite Elements Analysis (FEA) tools will be attempted (time permitting).

180 Statics   **1 Credit Hour**
Prerequisite: MATH 124 or MATH 159 or MATH 164

                                                       F, W

This course is an introduction to the concepts of vector resultant and equilibrium of coplanar force systems, solution of truss problems by method of joints and method of sections and calculation of static friction. The course is intended to expand on the related material from METC 208 Strength of Materials (which includes determination of area centroids and moments of inertia).

208 Strength of Materials   **3 Credit Hours**
Prerequisite: MATH 124 or MATH 151 or higher

                                                       F, W

This course is concerned with the selection of machine and building members of adequate strength and rigidity and the investigation of existing load carrying members. Consideration is given to economy of weight and cost. Topics covered include: stress, strain and deflection calculations, shafts, centroids and moments of inertia, beams and columns, Mohr's circle and combined stress. Computer software resources will be available to assist students in completion of homework assignments.

210 Computer Applications in   **4 Credit Hours**
    Machine Design
Prerequisite: MATH 160 and METC 170 and METC 180 and
    METC 208
This course covers the application of the principles of
engineering mechanics (stress/strain, impact, dynamic
loading and fatigue) through computer analysis to
the design and/or selection of machining elements.
Components discussed include fasteners, springs, bearings,
belt and chain drives, brakes and clutches, power screws
and gears. Students are exposed to use of CAD to model
designs, FEA stress verification and a variety of math tools
to reproduce equations from industry handbooks and
component supplier guides.

270 Advanced Parametric CAD   **3 Credit Hours**
Prerequisite: METC 170
This course provides the dual opportunities to explore
advanced topics in parametric CAD and to gain valuable
design experience through its application to a team based
project. Topics begin with a brief review of the introductory
course, METC 170. Participants will then choose to either
complete a minimum of ten additional topic modules,
through the use of tutorial exercises, or to form teams that
together will share these topic modules while applying
the knowledge gained to a semester-long design project. A
partial list of topics include top-down assembly modeling,
surfacing, dynamic analysis of mechanisms, rendering and
animation, sheet metal and plastics design techniques and
fundamentals of Finite Element Analysis. The software
of choice is currently CATIA-DELMIA, and students are
encouraged to purchase student editions and to have a
reliable Internet connection to enroll.

MEDICAL OFFICE ADMINISTRATION (MOAD)

104 Medical Office Administration I   **4 Credit Hours**
Prerequisite: EOS 131 or ADMN 131 or WPR 102
An overview of medical office procedures for the medical
assistant or the medical office coordinator. Students will
study theory and participate in practical applications such
as preparing the office and reception area, welcoming
patients, scheduling appointments, creating medical office
correspondence and managing medical records. The use of
computers in medical offices will be stressed throughout
the course.

204 Medical Office Administration II   **3 Credit Hours**
Prerequisite: MOAD 104
A continuation of Medical Office Administration I. Covers
theory and practice in the areas of patient billing and fee
collection, basic bookkeeping and banking procedures and
general office management.

206 Medical Insurance Billing   **3 Credit Hours**
    and Coding
Prerequisite: BIOL 155 and HLTSC 110
A hands-on approach to insurance coding and billing.
Students will learn to use the Current Procedural
Terminology (CPT-4) and International Classification
of Diseases (ICD-9-CM) manuals to accurately identify
medical procedures and assign the appropriate billing
codes. Manual and computerized billing systems will be
reviewed as well as third-party reimbursements. Students
should have a thorough understanding of basic human
anatomy and physiology and medical terminology to
successfully complete this course.

MUSIC (MUSIC)

150 Agora Chorale   **1 Credit Hour**
                                                F, W
The Agora Chorale is a mixed vocal ensemble comprised
of singers from the community and college. The Chorale
presents concerts, no less than two each semester, both on
and off campus. The class meets one evening each week
and may be elected in sequence four times. The course is a
requirement for students on a choir scholarship.

151 Agora Chorale   **1 Credit Hour**
Prerequisite: MUSIC 150
                                                F, W
The Agora Chorale is a mixed vocal ensemble comprised
of singers from the community and college. The Chorale
presents concerts, no less than two each semester, both on
and off campus. The class meets one evening each week
and may be elected in sequence four times. The course is a
requirement for students on a choir scholarship.

152 Voice Class   **2 Credit Hours**
                                                F
This course is open to all students who wish to improve
their singing abilities.

154 College-Community Symphony Band   **1 Credit Hour**
                                                F, W
The College-Community Symphony Band is open to
instrumentalists having previous music experience.
Membership includes college students and citizens from the
community. The band performs for college functions and
concerts as well as for community programs. Admission is
by application and audition to the director. This course is a
requirement for students on a band scholarship. The band
rehearses once each week, and the course may be elected
in sequence four times.

155 College-Community Symphony Band   **1 Credit Hour**
Prerequisite: MUSIC 154
                                                F, W
The College-Community Symphony Band is open to
instrumentalists having previous music experience.
Membership includes college students and citizens from the
community. The band performs for college functions and
concerts as well as for community programs. Admission is
by application and audition to the director. This course is a
requirement for students on a band scholarship. The band
rehearses once each week, and the course may be elected
in sequence four times.

157 Listening to Classical Music   **2 Credit Hours**
                                                W
This class is designed for people seeking greater awareness
of the aesthetic content of "classical" music. The forms,
styles, methods of composition and composers are
discussed and analyzed as a basis for intelligent listening
and appreciation.

NOTE: Transferability of applied music classes may be limited.

161I Applied Music Instrument   **1 Credit Hour**
                                                F, W
This course provides private lessons in piano, guitar, wind
or percussion instruments (providing qualified teachers
are available). The student will be assigned a teacher
with whom he/she will study. One half-hour lesson will
be attended each week. The student will pay the teacher
directly for each lesson. At the end of the semester, each
student will perform in a recital. The course may be
selected as a humanities or elective credit four times in
sequence. A permission slip is required to register. The
purpose of this course is to improve the student's ability to
perform musically.

161V Applied Music Voice 1 Credit Hour
F, W

This course provides private lessons in voice (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

162I Applied Music Instrument 1 Credit Hour
Prerequisite: MUSIC 161I
F, W

This course provides private lessons in piano, guitar, wind or percussion instruments (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

162V Applied Music Voice 1 Credit Hour
Prerequisite: MUSIC 161V
F, W

This course provides private lessons in voice (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

165 Music for Classroom Teachers 3 Credit Hours
F, W

This course is highly suggested for future elementary teachers but open to all students. The instructor assumes the students have not had previous formal music instruction. The course covers basic knowledge and skills needed to incorporate music into the regular classroom as well as methods of using music to enhance teaching of academic subjects.

170 Introduction to Music Theory I 3 Credit Hours
F

Music Theory I will examine the basic knowledge and skills of music theory in order that the student can understand and analyze musical compositions, write music in several classical styles and transcribe music played on a keyboard. The knowledge that the course will teach includes understanding the concepts and experiencing aurally the following: pitches, intervals, all types of triadic and seventh chords, voice leading, cadences and musical form.

250 Agora Chorale 1 Credit Hour
Prerequisite: MUSIC 151
F, W

The Agora Chorale is a mixed vocal ensemble comprised of singers from the community and college. The Chorale presents concerts, no less than two each semester, both on and off campus. The class meets one evening each week and may be elected in sequence four times. The course is a requirement for students on a choir scholarship.

251 Agora Chorale 1 Credit Hour
Prerequisite: MUSIC 250
F, W

The Agora Chorale is a mixed vocal ensemble comprised of singers from the community and college. The Chorale presents concerts, no less than two each semester, both on and off campus. The class meets one evening each week and may be elected in sequence four times. The course is a requirement for students on a choir scholarship.

252 Voice Class 2 Credit Hours
Prerequisite: MUSIC 152
F

This course is a continuation of Music 152.

254 College-Community Symphony Band 1 Credit Hour
Prerequisite: MUSIC 155
F, W

The College-Community Symphony Band is open to instrumentalists having previous music experience. Membership includes college students and citizens from the community. The band performs for college functions and concerts as well as for community programs. Admission is by application and audition to the director. This course is a requirement for students on a band scholarship. The band rehearses once each week, and the course may be elected in sequence four times.

255 College-Community Symphony Band 1 Credit Hour
Prerequisite: MUSIC 254
F, W

The College-Community Symphony Band is open to instrumentalists having previous music experience. Membership includes college students and citizens from the community. The band performs for college functions and concerts as well as for community programs. Admission is by application and audition to the director. This course is a requirement for students on a band scholarship. The band rehearses once each week, and the course may be elected in sequence four times.

NOTE: Transferability of applied music classes may be limited.

261I Applied Music Instrument 1 Credit Hour
Prerequisite: MUSIC 162I
F, W

This course provides private lessons in piano, guitar, wind or percussion instruments (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

261V Applied Music Voice 1 Credit Hour
Prerequisite: MUSIC 162V
F, W

This course provides private lessons in voice (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

262I Applied Music Instrument   1 Credit Hour
Prerequisite: MUSIC 261I

F, W

This course provides private lessons in piano, guitar, wind or percussion instruments (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

262V Applied Music Voice   1 Credit Hour
Prerequisite: MUSIC 261V

F, W

This course provides private lessons in voice (providing qualified teachers are available). The student will be assigned a teacher with whom he/she will study. One half-hour lesson will be attended each week. The student will pay the teacher directly for each lesson. At the end of the semester, each student will perform in a recital. The course may be selected as a humanities or elective credit four times in sequence. A permission slip is required to register. The purpose of this course is to improve the student's ability to perform musically.

265 History and Appreciation of Jazz   3 Credit Hours
The emphasis of Music 265 is upon the various styles of jazz that have shaped the history of jazz music from its roots in blues and ragtime to its inception as a distinct musical form and its evolution through to the present time. This will include dixieland, swing, bebop, cool and fusion. The course will also examine jazz within its historical and sociological contexts. The purpose of this course is to expand students' knowledge of a musical style indigenous to America that has helped to shape the nation's cultural history.

266 History of Rock Music   3 Credit Hours
Music 266 will examine various styles of rock music, from its roots in blues, rhythm and blues and country to its inception as rock and roll and through various styles that have been popular through the late 1960s. This will include early rock and roll pioneers, folk-rock, the surf sound, the Motown sound, the British invasion and psychedelia. When possible, references and comparisons to more contemporary styles will be made. Styles and genres studied will be examined from a historical and sociological perspective.

268 Popular Music in America   3 Credit Hours
The emphasis of Music 268 is upon the various styles of music that have been popular throughout America's history from the colonial period to the present. This will include folk, blues, jazz, country and rock. This course will also examine these musical styles from a sociological and historical perspective. The purpose of this course is to expand students' knowledge of styles of music that have been an integral part of America's cultural history.

NURSING (NURS)

103 Adapting Throughout the Life Cycle   9 Credit Hours
Prerequisite: Acceptance into the nursing program. Must also register for BIOL 157.

F

This course provides an introduction to the concepts of nursing practice. The program's organizing framework – based on the content threads of stress-adaptation, holistic health, nursing process, communication, human needs, growth and development, community and accountability – are introduced. Critical thinking, which is integral to the nursing process, will be emphasized as a means of facilitating the client's adaptation to stressors throughout the life cycle. Special focus will be placed on the needs, culture and lifestyle and community resources available to the elderly. The clinical content will be applied 12 hours weekly utilizing the campus laboratory, hospital and nursing home settings.

104 Adapting to Common Stressors I: 4 Credit Hours
    Psychiatric Nursing
Prerequisite: BIOL 157 and either NURS 102 or NURS 103. Must register for NURS 105.

W

This course utilizes a holistic view to study the nursing care of the adult, mentally ill client's adaptation to stressors and crises. The student will use critical thinking to integrate psychopathology in assessing, planning, implementing and evaluating care of clients with health care needs in the mental and spiritual spheres. Special focus will be placed on communication, therapeutic use of self, nurse-client relationship, stress adaptation and holistic health in the care of the mentally ill. During this course, the student will have 12 hours per week for five weeks of clinical instruction in the acute psychiatric care setting.

105 Adapting to Common Stressors II:
    Medical-Surgical Nursing   5 Credit Hours
Prerequisite: BIOL 157 and either NURS 102 or NURS 103. Must also register for NURS 104.

W

This course utilizes a holistic view to study the adult client's adaptation to commonly occurring health problems. The student will use critical thinking to integrate holistic theory and basic pathophysiology in assessing, planning, implementing and evaluating care for clients with medical-surgical health care needs. Special focus will be placed on chronic illness and perioperative care. During this course, the student will have 12 hours per week for 10 weeks of clinical instruction in the acute care setting.

204 Family Adapting I: 4.5 Credit Hours
    Obstetrical Nursing
Prerequisite: NURS 105

F

This course utilizes a holistic view to study the family and its adaptation to pregnancy and childbirth. Critical thinking skills are emphasized through the application of nursing process. Core components of this course include family growth and development; health promotion and maintenance; cultural and ethnic variations regarding health and illness; psychological, social and spiritual stressors impinging on families; community resources available to families and disease pathologies in relation to the maternity cycle. During this course, students will have 12 hours per week of obstetrical nursing clinical instruction in the hospital and selected community settings.

205 Family Adapting II: **4.5 Credit Hours**
    Pediatric Nursing
Prerequisite: NURS 105

F

This course utilizes a holistic view to study the childrearing family and its adaptation to stressors. Critical thinking skills are emphasized through the application of nursing process. The focus of this course includes child and family growth and development; health promotion and maintenance; cultural and ethnic variations regarding health and illness; psychological, social and spiritual stressors impinging on families and community resources available to families. Special emphasis will be placed on pediatric pathophysiology. During this course, students will have 12 hours per week of pediatric clinical instruction in the hospital and selected community settings.

209A Adapting Multiple Stressors I   **10 Credit Hours**
Prerequisite: NURS 205

W

This course utilizes the holistic view to study adult patients and their adaptation to severe stressors. The student will become increasingly sophisticated in the use of nursing process and critical thinking skills to facilitate adaptation to serious physiologic insults. Students will have an opportunity to gradually increase organizational skills through an expanding client care workload in medical-surgical settings. During this course, students will have 12 hours per week of clinical instruction in the hospital, community or short-stay settings.

209B Adapting Multiple Stressors II   **3 Credit Hours**
Prerequisite: NURS 209A

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This four-week capstone course provides theoretical content related to managing groups of clients and in communicating with health team members. During the final three weeks, students have the opportunity to increase their client-care workload in a medical-surgical setting utilizing a full-time preceptorship arrangement. Critical thinking skills continue to be emphasized through active clinical decision making. Clinical practice during this time will be full-time work for three weeks.

210 Nursing Seminar   **3 Credit Hours**
Prerequisite: NURS 205

W

This course facilitates the student's socialization into the nursing profession. Critical thinking skills are emphasized through discussion related to the following topics: historical perspectives of nursing; nursing education; issues, trends and problems of health care and nursing practice, and legal, professional, ethical and social responsibilities of the nurse. Special focus will be on basic management skills, preparation for employment and career development.

260 Nursing Care of Adults (I, II)   **8 Credit Hours**
Prerequisite: Admission to the on-line RN from LPN program. This is an on-line class that is only available to students enrolled in the RN from LPN on-line program.

F

This course is designed to facilitate the student in using the nursing process to give care to adults who are acutely or chronically ill or who have multiple health problems. Nursing interventions to assist the client and family in their holistic adaptive responses to illness and stress are discussed. Emphasis is placed on the nurse's role in health care management (disease prevention, health promotion and maintenance and teaching). Information is designed to build upon the theory learned in all completed coursework and will enable the student to apply previously learned knowledge and skills.

272 Nursing Care of Special   **2 Credit Hours**
    Populations: Obstetrics
Prerequisite: NURS 260 and PSYCH 151 or equivalent

W

This course is designed to facilitate the student in using the nursing process to give care to special populations, specifically the childbearing family. Nursing interventions to assist the client and family in their holistic adaptive responses to growth and development, illness and stress are discussed. Emphasis is placed on the nurse's role in health care management (disease prevention, health promotion and maintenance and teaching). Information is designed to build upon the theory learned in all completed coursework and will enable the student to apply previously learned knowledge and skills.

274 Nursing Care of Special   **2 Credit Hours**
    Populations: Pediatrics
Prerequisite: NURS 260 and PSYCH 151 or equivalent.

W

This course utilizes a holistic view to study the childrearing family and its adaptation to stressors. Critical thinking skills are emphasized through the application of nursing process. The focus of this course includes child and family growth and development; health promotion and maintenance; cultural and ethnic variations regarding health and illness; psychological, social, and spiritual stressors impinging on families, and community resources available to families. Special emphasis will be placed on pediatric pathophysiology.

276 Nursing Care of Special   **4 Credit Hours**
    Populations: Mental Health
Prerequisite: NURS 260 and PSYCH 151 or equivalent

W

This course is designed to facilitate the student in using nursing process to give care to special populations, specifically those experiencing mental illness. Nursing interventions to assist the client and family in their holistic adaptive responses to growth and development, mental illness and stress are discussed. Emphasis is placed on the nurse's role in health care management (disease prevention, health promotion and maintenance and teaching) as it relates to psychiatric nursing. Information is designed to build upon the theory learned in all completed coursework and will enable the student to apply previously learned knowledge and skills.

277 NCLEX-RN Review Course   **2 Credit Hours**

Sp

The purpose of this course is to review content in preparation for the registered nurse licensing examination. The areas of medical, surgical, pediatric, obstetric and psychiatric nursing, plus test taking techniques, will be covered. It is recommended only for students who have completed, or nearly completed, a registered nursing program.

280 Clinical Applications of Nursing Care 8 Credit Hours
Prerequisite: Admission to the on-line RN from LPN
program. This class is only available to students
enrolled in the RN from LPN on-line program.
This is an eight-credit hour clinical course that focuses on
the practice of nursing in selected settings (in-patient, out-
patient and community settings) and with varying client
populations. Students apply nursing process to assist clients
and families to achieve maximum holistic health through
continuous adaptation and growth and development.
Students will respond to health changes ranging from
normal childbearing to severe illness and crises. Students
will manage care for increasing numbers of clients within
selected settings. Communication skills with clients,
peers and the health care team are emphasized, as are
professional nursing behaviors. Knowledge is demonstrated
by the safe and effective clinical care to clients in the
mental health, childbearing, childrearing and medical-
surgical settings over 15 weeks of clinical experience. The
student receives a "P" or "F" rather than a letter grade.

290 Nursing Leadership   3 Credit Hours
Prerequisite: Admission to the on-line RN from LPN
program. This is an on-line class that is only available
to students enrolled in the on-line RN from LPN
program.
W

This course explores the professional nurse's role in
management, including priority setting, delegation,
supervision and resource management in the health care
setting. Content includes leadership/management issues,
career development and current health care trends as they
impact the professional nursing role.

PHILOSOPHY (PHIL)

151 Introduction to Logic   3 Credit Hours
F, W

This course includes basic and standard systems of formal
and informal logic, embracing both logical theory and the
practical application of logic. This course examines critical
thinking and inductive and deductive analysis. Material
includes the leading topics of traditional Aristotelian logic,
together with insight into symbolic logic. This course will
include writing assignments.

152 Introduction to Western Philosophy   3 Credit Hours
F, W

This course provides an introduction to the types
of philosophy and the study of the great thinkers'
contributions to studies which investigate the principles
and facts of reality, human nature and basic problems
of conduct relevant to man. Emphasis is on early Greek
philosophy: Plato and Aristotle. This course will include
writing assignments.

253 Introduction to the Philosophy   3 Credit Hours
   of Religion
F, W

This course presents an introductory inquiry into the
study of religion and its meaning and truths, emphasizing
the historical and structural aspects of religion, religious
experience and religious symbols exemplified through
various religious traditions. The concern of the course is
not to inculcate any particular faith or doctrinal position
but to develop an understanding and appreciation of basic
religious concepts and ideas which influence our century.

PHOTOGRAPHY (PHOTO)

151 History of Photography   3 Credit Hours
F

This course is an exploration of the photographers and
evolution of the photographic process from its inception
to the present. Emphasis will be placed on individual
photographers and the various artistic photographic
progressions.

PHYSICAL SCIENCE (PHYSC)

151 Physical Science   4 Credit Hours
This course serves as an introduction to physical science
for both applied and non-science majors. Selected topics on
astronomy, chemistry, geology and physics are included.
Emphasis is placed on understanding the fundamental
principles of the physical sciences. It will also include a
discussion of the limitations and potential applications of
the physical sciences. This course requires laboratory work.

PHYSICS (PHY)

101 Technical Physics   4 Credit Hours
Prerequisite: MATH 124 or MATH 151 or higher
W

This course is designed for technical majors to provide
an understanding of physical principles and their
application to industry and certain technical occupations.
Topic coverage reflects the general needs of the various
technician programs while giving a broad overview
of the physical world around us. Topics included are
measurement, kinematics, mechanics, rotational motion
and dynamics, simple machines, matter, fluids and fluid
flow, heat and thermodynamics, waves, sounds, optics and
some electricity and magnetism. Course requires laboratory
work.

151 General Physics I   4 Credit Hours
Prerequisite: MATH 151 or high school algebra and
trigonometry. Recommended: MATH 157 and 159 or
MATH 164.
F

This is a liberal arts course in the fundamental principles
of physics. Units include measurement, kinematics,
mechanics, rotational motion, fluids, temperature and heat
and waves and sound. This course is designed to fulfill
the physics requirement in pre-medicine, pre-dentistry,
pre-law, pre-architecture, pre-chiropractic and similar pre-
professional programs. This course should not be taken
as a substitute for pre-engineering physics or other related
disciplines. This course requires laboratory work.

152 General Physics II   4 Credit Hours
Prerequisite: PHY 151
W

This course is a continuation of General Physics I; units on
electricity and magnetism, light and optical phenomena,
relativity, atomic, quantum and nuclear physics are
included. Course requires laboratory work.

251 Engineering Physics I   5 Credit Hours
Prerequisite: MATH 171. MATH 172 is highly
recommended.
F

This course is designed to satisfy the requirements
of engineering and physics majors. It will include the
development of ability to marshal physical principles
and mathematical techniques in the solution of problems
encountered in measurement, kinematics, mechanics,
relativity, rotational and wave motion, waves, sound and
fluid mechanics. This course requires laboratory work.

252 Engineering Physics II   **5 Credit Hours**
Prerequisite: PHY 251. MATH 251 and 273 are highly
  recommended.

W

This course is a continuation of PHY 251 and is designed
to satisfy the requirements of engineering and physics
majors. Topics include temperature and heat, electricity
and magnetism, electromagnetic waves, optics, quantum,
atomic and nuclear physics. This course requires laboratory
work.

POLITICAL SCIENCE (POLSC)

151 Introduction to Political Science   **3 Credit Hours**
F, W, Sp, Su

This course emphasizes American political institutions,
policy formulation, diverse political groups and key issues.
This course also provides a foundation for responsible
citizenship. Emphasis is given to the federal level of
government with a critical look at contemporary problems
in American democracy.

154 Introduction to Law Enforcement   **3 Credit Hours**
F, W

This course addresses the basic elements of our legal
system, the nature of crime and criminal responsibility, the
criminal justice process and the role of the professionals in
the criminal justice system.

156 Fundamentals of Criminal   **3 Credit Hours**
    Investigation
This course examines investigation procedures including
the theory, conduct, collection and preservation of physical
evidence.

211 Introduction to Comparative Politics   **3 Credit Hours**
Prerequisite: POLSC 151

W, Sp, Su

This course addresses key concepts, theories and academic
approaches for the study of comparative politics and for
understanding differences among governments and political
systems in today's complex world. Students will explore
concepts such as authoritarianism, democratization,
legitimacy, sustainability, globalization and modernization
and will understand how these concepts influence political
activity within and among states. Examples of different
government structures will be introduced, including the
key factors that affect policy decisions within various
government systems and structures and how those
structures and decisions shape society. Students will
also obtain a greater understanding of various political
and social cultures from both Western and Non-Western
cultures. Whenever possible, students will research
the Internet and museums and travel to enhance their
learning of the differences between political systems and
institutions.

221 State and Local Government   **3 Credit Hours**
Prerequisite: POLSC 151

W

This course is a study of state and local government units,
including types of organizations and their structures,
functions and activities. Students will explore and evaluate
the everyday activities of local government units as well as
special problems in local politics and policy development.
Consideration is given to intergovernmental relations
between the various local levels of government and the
federal government.

251 Criminal Law   **3 Credit Hours**
F

This course traces the history and development of criminal
law and gives attention to definitions of crimes and their
elements, penalties and defenses.

252 International Relations   **3 Credit Hours**
Prerequisite: POLSC 151 or HIST 154 or HIST 155
Students will examine the fundamental and persistent
forces which influence world politics and the foreign
policies of states. Through theoretical, ideological and
pragmatic approaches students will explore the historical,
economic, geographical, social and cultural phenomena
that impact international politics.

255 Police Organization and   **3 Credit Hours**
    Administration
F, W

The administration of police-line operations including
patrol, the investigative functions, traffic, vice control,
youth services and non-crime functions are emphasized.
The purpose of this course is to have the student
understand the administrative role a police department has
in order to provide police services to a community.

256 Police Operations   **3 Credit Hours**
W

This course focuses on the day-to-day line operation of the
police department. Emphasis focuses on patrol, reports,
communications, arrests, officer survival skills, community
relations and jail operations.

PRACTICAL NURSING (PNUR)

120 Fundamentals of Practical   **7 Credit Hours**
    Nursing for Cnas
W

This course builds on the basic skills of a nurse's aide,
but further examines the scientific principles and rationale
for previously learned skills. This course serves as the
foundation from which other courses will build and
expand and introduces the role of the licensed practical
nurse and concepts of nursing practice for the licensed
practical nurse. The program's organizing framework,
based on the Stress-Adaptation Model, holistic health, basic
human needs, growth and development concepts, nursing
process (clinical problem solving), communication and
documentation, health promotion and maintenance (which
includes psycho-socio-cultural awareness and teaching/
learning sub-concepts) and accountability is introduced.
Meeting the needs of clients experiencing change in
health status is the nursing focus. The course includes
mathematics for medicine administration and skills related
to oral and parenteral medicine administration as well as
other routes. Additionally, special emphasis will be placed
on the needs of the elderly and nutritional support for
all clients. The clinical component will be applied in the
campus laboratory, hospital and nursing home settings.

121 Fundamentals of Practical Nursing   9 Credit Hours
                                                    W

This course serves as the foundation from which other courses will build and expand. This course includes skills and concepts basic to nurse and nurse aid training and also introduces the role of the licensed practical nurse and concepts of nursing practice for the licensed practical nurse. The program's organizing framework, based on the Stress-Adaptation Model, holistic health, basic human needs, growth and development concepts, nursing process (clinical problem solving), communication and documentation, health promotion and maintenance (which includes psycho-socio-cultural awareness and teaching/learning sub-concepts) and accountability, is introduced. Meeting the needs of clients experiencing change in health status is the nursing focus. The course includes mathematics for medicine administration and skills related to oral and parenteral medicine administration as well as other routes. Additionally, special emphasis will be placed on the needs of the elderly and nutritional support for all clients. The clinical component will be applied in the campus laboratory, hospital and nursing home settings.

123 Mental Health for Practical Nursing   2 Credit Hours
                                                    W

This course introduces common mental illnesses and usual treatment modalities that a licensed practical nurse will commonly see in the hospital or nursing home. The course will also include nursing measures that support emotional, mental and social well being and coping and adaptation mechanisms that assist clients in adapting to disabilities, unexpected changes, stressful events and so on. The student will have planned observational experiences in an acute care facility or clinics but no clinical experiences.

124 Practical Nursing Care of Adults I   6 Credit Hours
Prerequisite: PNUR 120 or PNUR 121
                                                    Sp, Su

The focus of this course is the use of clinical problem-solving skills and nursing process to assist adults with common medical-surgical problems and select acute and chronic disorders in meeting health care needs. The course builds on the program's organizing framework. Students will study in the classroom and campus laboratory and provide basic nursing care to adults in medical-surgical acute care clinical settings.

125 Practical Nursing Care   3 Credit Hours
of Pediatric Clients
Prerequisite: PNUR 120 or PNUR 121
                                                    Sp, Su

The focus of this five-week course is practical nursing care of hospitalized infants, children, adolescents and their families and caretakers. Special emphasis will be placed on common pediatric disorders, prevention and early detection of disease, as well as growth and development of the pediatric client and the family. Pharmacologic and nutritional needs of the pediatric client and variations of diet are integrated into content. Students will study in the classroom, campus laboratory and clinical settings.

126 Practical Nursing Care of   3 Credit Hours
Obstetric Clients
Prerequisite: PNUR 125
                                                    F

The focus of this five-week course utilizes a holistic view of the childrearing family and its adaptation to pregnancy and childbirth. Practical nursing students will study in hospital and clinic practical nursing care related to ante/intra/postpartum and newborn care. Basic family growth and development, family health promotion and maintenance, common cultural and ethic variations in childrearing practices, common childrearing complications, influences of other health disorders and family planning are also covered. Students will study in the classroom, campus laboratory and clinical settings.

127 Practical Nursing Care of Adults II   4 Credit Hours
Prerequisite: PNUR 124 and PNUR 125
                                                    F

The focus of this six-week course is the nursing care for clients with more demanding or acute health alterations and complications related to these pathologies. Concepts in this course build on previously learned material in Nursing 124 and continue to build on the program's organizing framework. Dealing with medical emergencies, complicated but common treatments and procedures for practical nurses will also be covered. Students will study in the classroom, campus laboratory and acute care settings.

128 Issues in Practical Nursing   2 Credit Hours
Prerequisite: PNUR 125
                                                    F

This course will focus on issues related to practice of the licensed practical nurse, such as legal and ethical practice issues, historical perspectives of LPN education, career development and job seeking, trends in health care and the professional responsibilities of being an LPN.

129 Management Concepts for   3 Credit Hours
the Practical Nurse
Prerequisite: PNUR 125
                                                    F

This four-week capstone course will focus on managing multiple clients in the clinical setting, both theoretically and in practice. Students will care for increasing numbers of clients as their skill increases and will begin to manage care given by unlicensed assistive personnel (UAPs). Communication, both oral and written, is a special emphasis in this course. Students will work collaboratively with registered and licensed practical nurses and nursing assistants. Supervised clinical practice for this course will be approximately 32 hours per week and will take place in long-term care facilities or acute care settings with an emphasis on geriatrics.

PSYCHOLOGY (PSYCH)

151 General Psychology   3 Credit Hours
Subject matter begins with an introduction to the major models of human behavior along with appropriate research methodology, including applied statistics. The operational framework is then applied to the following topics: physiological processes, sensation, perception, learning, motivation, emotion, stress, development [life span], personality, adjustment, mental health and therapeutic techniques, personal growth and social processes. Useful information regarding "real life" application is emphasized throughout the course. It is assumed that in the majority of cases this may be the only psychology course the student will experience; as the field of psychology has shifted from theory-based to fact-based, it appears both desirable and possible to expose students to useful information for everyday living while providing a comprehensive coverage of the current major concepts, exploratory models and research procedures inherent in an introductory psychology course.

152 Psychology of Personality and Adjustment   3 Credit Hours
Prerequisite: PSYCH 151
This course applies psychological principles to the problems of the individual's adjustment to everyday life. Topics include adjustment processes, personality development, theories of personality, behavior disorders, psychotherapy techniques, human relationships, defense mechanisms and mental health.

153 Social Psychology   3 Credit Hours
This course emphasizes the individual as a member of society. The development of changing values, attitudes, social behavior and an awareness of current problems of socialization are explored. Several theoretical frameworks, including attribution and social-cognitive processes, are examined. The purpose of this course is to present concrete, factual materials and applications to the students.

156 The Exceptional Person   3 Credit Hours
This course is designed to give students an understanding of persons with special problems. The gifted, the physically challenged, the emotionally challenged and the mentally challenged are considered.

251 Child Psychology   3 Credit Hours
This course involves the investigation of the child's emotional, intellectual, social and physical development from birth to age 12. The purpose of this course is to provide students with scientific facts of children's behavior for study, presented along with practical application for parents, teachers, etc.

254 Life Span Psychology   3 Credit Hours
This course will explore the developmental stages of human behavior during the life cycle. The stages of infancy; childhood; adolescence; early-, middle- and late-adulthood; late-late adulthood, and death and dying will be covered. Various issues and concepts will be dealt with related to the typical psychological, sociological and biological changes that occur during each phase or stage of life. The purpose of this course is to provide the student with the opportunity to explore their own stages and those of their family, relatives, friends and others.

255 Psychology Nonverbal Communication   3 Credit Hours
This course studies the use and meaning of the language of body movement and gestures, facial expressions, eye contact, clothing, space, etc., as related to the communication process. This science attempts to correlate nonverbal behaviors with underlying conscious/unconscious feelings, attitudes, emotions, mood and state. Students will be provided with the knowledge of the psychological processes underlying nonverbal communication: learning and using communication in interpersonal relations. Applications to education, mental health, business, government, religion, speech and drama will also be covered. Effects of communication themes, techniques, symbols and formats on the thoughts, attitudes and personality of others will be covered.

QUALITY SYSTEMS TECHNOLOGY (QSTC)

105 SPC Basics   1 Credit Hour
An introductory course for those who need a basic understanding of variation, statistical fundamentals, data gathering and control charting.

111 Quality Management   3 Credit Hours
F, W
This course will introduce students to the management approach that developed from principles of total quality. Students will study the principles, concepts and practices of quality management as developed by experts like Deming, Juran, Crosby and others. Students will examine the role of organizations involved in world-class competition. Emphases will be placed on customer satisfaction, employee empowerment, process identification and measurement and continual improvement.

115 Statistical Process Control   3 Credit Hours
Prerequisite: MATH 121
This course focuses on the basic concept of variation, sampling methodology and basic six-sigma improvement tools including control charting, significance testing, process capability and DOE. Techniques used are relevant to manufacturing and service environments.

120 Introduction to Quality Systems   3 Credit Hours
This course is designed to provide students with a working knowledge of the major systems of a modern industrial quality assurance program. Students will examine opportunities for quality improvement through the implementation of lean systems and mistake/error proofing. Emphasis will be placed on quality engineering elements dealing with quality planning, corrective and preventive action, measurement and continual improvement. Techniques used are relevant in manufacturing and service organizations.

150 Introduction to Metrology   3 Credit Hours
Prerequisite: MDTC 101 or MDTC 109 or MDTC 151 or MDTC 160 or MDTC 161
This course introduces the fundamentals of dimensional measurement, production gages and gaging techniques. Interpretation of geometric tolerances will also be covered with respect to their implications for inspection. Measurement techniques will emphasize proper use of open-setup equipment, including hand tools, gage blocks, surface plates and accessories, analog and digital measuring devices, optical comparator, pneumatic gages and coordinate measuring machines (CMM).

160 Team Problem Solving   3 Credit Hours
This course is designed to build the student's ability to
respond to the needs of groups as a team member and
team leader. Students will study team structuring, roles
of team members and tools used in facilitating teams that
contribute to organization quality. Kaizen, Six-Sigma, 8D
and other effective team-based solutions will be modeled.
Techniques used are applicable to manufacturing and
service environments.

210 Advanced Metrology   3 Credit Hours
Prerequisite: QSTC 150
This course covers advanced metrological techniques,
including CMM operation, Optical and Electronic
Measuring and Graphical Inspection Analysis (paper
gaging). Laboratory work concentrates on CMM operation
and programming using the PC DMIS operating system.

220 Calibration and Gage R & R   3 Credit Hours
This course covers techniques of gage calibration and gage
repeatability and reproducibility studies (measurement
system analysis). Hands-on work includes calibration of
measuring tools and computerized gage documentation
using Gage-trak software.

230 Documentation & Audit Prep   3 Credit Hours
Prerequisite: QSTC 111
This course examines techniques for the development and
implementation of quality systems. Participants explore
internal auditing techniques and preparation for third-
party audits. The focus is on understanding quality system
requirements and effective documentation alternatives
to meet those requirements. ISO9000:2000, QS9000
(including the TE supplement), TS16949, ISO14000 and
other assessment criteria are defined and applications are
explored for service businesses and manufacturing.

READING (RDG)

090 Basic Reading Skills   3 Credit Hours
                                              F, W
This is a basic reading course emphasizing essential skills
for building literal and critical comprehension proficiency.
A COMPASS test score and a counselor's consultation
provide the basis for selecting this reading instruction.
This course does not count toward graduation. This course
helps students accomplish the following: (1) develop basic
reading skills which provide students the opportunity to
succeed in college courses selected in the future, (2) show
reading proficiency progress as measured by a post-test
COMPASS score and (3) work toward gaining admission
status to enroll in regular college courses. This course is
meant for students whose first language is English.

RESPIRATORY THEARPY (RTH)

100 Respiratory Care Techniques I   8 Credit Hours
Prerequisite: Acceptance into the respiratory therapy
    program. Must also register for RTH 104.
                                              F
This classroom and laboratory course is an introduction
to the duties and responsibilities of respiratory care
practitioners. Topics covered include a review of physical
science, cardiopulmonary anatomy and physiology,
cardiopulmonary resuscitation, basic nursing skills, medical
gas and aerosol administration, employee health and safety,
pulmonary medications and an orientation to clinical sites.

104 Cardiopulmonary Assessment   2 Credit Hours
Prerequisite: Acceptance into the respiratory therapy
    program. Must also register for RTH 100.
                                              F
This course is an introduction to basic physical and
laboratory assessment of cardiopulmonary patients.
Topics include basic pulmonary function and medical lab
values, blood gas analysis and bedside patient assessment
equipment and techniques.

110 Respiratory Care Techniques II   5 Credit Hours
Prerequisite: RTH 100. Must also register for RTH 116.
                                              W
This classroom and laboratory course continues the
introduction to basic duties of respiratory care practitioners.
Emphasis will be placed on patient assessment, basic
therapy modalities, airway management, cardiopulmonary
diagnostic equipment and techniques and an introduction
to continuous mechanical ventilation.

111 Respiratory Care Clinical Practice I   5 Credit Hours
Prerequisite: RTH 100. Must also register for RTH 110.
                                              W
This course provides a hospital experience in which
previously acquired classroom theory and laboratory skills
can be exercised. Skills practiced include those associated
with patient respiratory assessment, oxygen therapy, a
wide range of bronchopulmonary hygiene therapies and
equipment processing. In addition, weekly clinic seminars
will be held on campus to facilitate student learning.

116 Cardiopulmonary Pathophysiology   3 Credit Hours
Prerequisite: RTH 100. Must also register for RTH 110.
                                              W
This course gives the student an introduction to the
most common cardiopulmonary diseases and conditions
encountered in the clinical setting. Topics include
lung defense mechanisms, common cardiopulmonary
manifestations of disease, obstructive lung diseases and
restrictive lung diseases.

120 Respiratory Care Techniques III   5 Credit Hours
Prerequisite: RTH 110
                                              Sp, Su
Mechanical ventilation topics are continued in this
classroom and laboratory course. Topics presented
include volume pre-set and pressure pre-set ventilator
equipment and application techniques and basic ventilation
management of adult and neonatal patients.

121 Respiratory Care Clinical Practice II   2 Credit Hours
Prerequisite: RTH 111. Must also register for RTH 120.
                                              Sp, Su
This clinical course provides three types of experience
for the respiratory therapy student. First, there will be a
continuation of basic respiratory care modalities from the
previous semester. Second, the diagnostic areas of basic
pulmonary function testing, arterial blood gas puncture
and analysis and 12-lead electrocardiography will be
introduced. Third, the student will receive an orientation to
volume control ventilation in the adult ICU environment. In
addition, weekly clinic seminars will be held on campus to
facilitate student learning.

209 Respiratory Care Specialty Clinic I   2 Credit Hours
Prerequisite: RTH 121
                                              F
This clinical course provides the certified therapist student
with experience in long-term respiratory care, home care and
neonatal patients needing mechanical ventilation. Clinical
assignments will be with institutions and companies that
employ respiratory therapists to care for patients in a variety
of settings. In addition, weekly clinic seminars will be held
on campus to facilitate student learning.

211 Respiratory Care Clinical Practice III   5 Credit Hours
Prerequisite: RTH 121

F

This clinical course allows students to assist in the pulmonary management of adults on mechanical ventilation. An integrated approach to patient care will be stressed through accurate patient assessment and application of various equipment and therapies. Students will function as a member of the health care team. In addition, weekly clinic seminars will be held on campus to facilitate student learning.

212 Advanced Cardiopulmonary   4 Credit Hours
**   Anatomy and Physiology**
Prerequisite: RTH 120

F

This course advances the student's knowledge of cardiopulmonary physiology. The cardiac sections cover gross and histologic cardiovascular anatomy, neural/endocrinological control of cardiac function, hemodynamics, microcirculatory disorders and a review of common cardiac arrhythmias. The pulmonary section covers broncho-pulmonary anatomy, gas diffusion, blood flow, ventilation/perfusion relationships, gas transport, mechanics and control of ventilation and lung responses to changing environments and conditions.

214 Adult Critical Care Management   4 Credit Hours
Prerequisite: RTH 120. Must also register for RTH 211.

F

This classroom and laboratory course covers the cardiopulmonary equipment, techniques and management theory for the adult patient in an intensive care unit. Topics include critical care patient assessment, review of fundamental concepts in ventilation techniques and management of adult patients in surgical, medical, pulmonary, cardiothoracic and neuro intensive care settings.

216 Perinatal/Pediatric Management   2 Credit Hours
Prerequisite: RTH 120

F

This classroom and laboratory course covers topics including fetal growth and development, patient assessment, commonly encountered equipment and the clinical management of common neonatal/pediatric diseases and conditions.

219 Respiratory Care Specialty Clinic II   4 Credit Hours
Prerequisite: RTH 216 and RTH 209
This clinical course is designed for the certified therapist student who has returned to complete the registered therapist program. A major emphasis will be in assisting with the pulmonary management of neonatal patients on mechanical ventilation. Other rotations will be in a variety of advanced diagnostic laboratories and alternate site venues where respiratory therapists are employed. In addition, weekly clinic seminars will be held on campus to facilitate learning.

220 Pharmacology for Respiratory   2 Credit Hours
**   Therapists**
Prerequisite: RTH 110

Sp, Su

This course provides an overview of general pharmacology with an emphasis on drugs used in the critical care management of cardiopulmonary conditions.

221 Respiratory Care Clinical   5 Credit Hours
**   Practice IV**
Prerequisite: RTH 211 and RTH 216. Must also register for RTH 226.

W

This clinical course provides a varied experience for students who are about to graduate. A major emphasis will be in assisting with the pulmonary management of neonatal patients on mechanical ventilation. Other rotations will be in a variety of advanced diagnostic laboratories and alternate site venues where respiratory therapists are employed. In addition, weekly clinic seminars will be held on campus to facilitate student learning.

222 Seminar   2 Credit Hours
Prerequisite: RTH 214 and RTH 216

W

This course presents a wide variety of topics for discussion. Included are respiratory care history, management and supervision, trends in allied health, research, job acquisition skills and credentialing exam preparation.

226 Respiratory Care Techniques IV   3 Credit Hours
Prerequisite: RTH 214. Must also register for RTH 219 or RTH 221.

W

This course covers a variety of diagnostic and therapeutic settings. Pulmonary function and stress testing equipment and procedures used in advanced labs will be presented. Additional emphasis will be made in the interpretation of pulmonary function test results. Delivery of respiratory care in alternate sites will also be emphasized. Included will be goals, procedures and equipment associated with pulmonary rehabilitation, home care and subacute and long-term care settings.

SOCIAL WORK (SWK)

106 Child Welfare   3 Credit Hours
This course is designed to introduce the student to the broad field of child welfare. Topics include the history of child welfare, the role of private and government agencies, legal aspects of child welfare and case planning and investigation.

108 Practicum   2 Credit Hours
Prerequisite: SWK 105 and SWK 106 and SWK 107
The practicum for the child care technology associate degree is intended for students to gain practical experience while working under supervision in a child care facility. In addition to weekly class meetings, a minimum of 60 hours of supervised experiences in a licensed child care facility are required during the semester. The student will apply theories learned in the prerequisite classes to their field work.

151 Introduction to Social Service   3 Credit Hours
This course is intended to present an overview of the field of social work. The student will develop an understanding and beginning knowledge of what social work entails. Included will be the gamut of roles available to social work in a variety of different settings – schools, hospitals, mental health centers and social service agencies – all of which require different educational backgrounds. This course will focus on the needs and problems of clients (defined as individuals, families, groups and community); the variety of methods used to help solve these problems; the social, cultural, political and economic values which affect these needs, and problem solving.

296A Work Experience I **1 Credit Hour**
Students may earn credit by voluntarily participating in a predetermined, prescribed set of activities at various social service agencies. Credit may be earned at the rate of one hour per semester and requires a minimum of 45 hours of participation during that semester.

296B Work Experience II **1 Credit Hour**
Students may earn credit by voluntarily participating in a predetermined, prescribed set of activities at various social service agencies. Credit may be earned at the rate of one hour per semester and requires a minimum of 45 hours of participation during that semester.

296C Work Experience III **1 Credit Hour**
Students may earn credit by voluntarily participating in a predetermined, prescribed set of activities at various social service agencies. Credit may be earned at the rate of one hour per semester and requires a minimum of 45 hours of participation during that semester.

296D Work Experience IV **1 Credit Hour**
Students may earn credit by voluntarily participating in a predetermined, prescribed set of activities at various social service agencies. Credit may be earned at the rate of one hour per semester and requires a minimum of 45 hours of participation during that semester.

SOCIOLOGY (SOC)

151 Principles of Sociology **3 Credit Hours**
F, W, Sp, Su
This course introduces the concepts of culture, socialization, social structure, social stratification, racial and ethnic relations and deviancy. These topics are used principally to examine life in contemporary United States. Whereas psychology focuses on individual behavior, sociology focuses on behavior that results from membership within and between groups.

152 Marriage & Family **3 Credit Hours**
F, W, Sp, Su
This course examines marriage and family at various periods in American history in order to assess the same today. Topics include the variety of households, divorce, working parents, male-female relationships and economic influences on marriage and family. Partisan political views on the family are discussed.

153 Women in Society **3 Credit Hours**
F
This is a foundation course in women's studies. Emphasis is placed on how women have been perceived historically and the progress they have made in the context of today's society. The concept of "voice" will be examined in each of the four units, looking at how women have been silenced and how, and if, they have recovered their "voice."

160 Social Gerontology **3 Credit Hours**
F
This course focuses on the aged as a social subculture of the United States. How roles and status change with age in relation to family and major social institutions and the adjustments that individuals make to these changes are examined. The impact of an aging population on society is also discussed. Special attention will be placed on similarities and differences in aging and change related to an individual's gender, race, ethnicity and socioeconomic status.

161 Death, Loss and Grief **3 Credit Hours**
W
This course analyzes the historical, socio-cultural, psychological and political construction of death, dying and bereavement in the United States. Ethical debates in the right-to-die movement and other social issues about the quality of life will be explored. This course will also address the challenges and rewards in working with the dying and grieving.

170 Introduction to Corrections **3 Credit Hours**
W
This course is an introduction to the field of corrections. The focus will be on the historical development of correctional systems and practices, the role of corrections in the criminal justice system, theories concerning the characteristics and treatment of the offender, sentencing guidelines and important issues facing the correctional system today. Field trips and observation visits are an integral part of the course.

251 Modern Social Problems **3 Credit Hours**
Prerequisite: SOC 151
W
A number of social problems will be examined and interrelated as time permits. Topics include the global workplace, poverty, crime, power and wealth. Problems are analyzed with a set of sociological perspectives developed early in the semester.

252 Juvenile Delinquency **3 Credit Hours**
Prerequisite: SOC 151
F
This course deals with theories of causation and prevention with emphasis on juvenile courts, institutional treatment and community resources for prevention.

SPANISH (SPAN)

151 Elementary Spanish I **4 Credit Hours**
F
This course emphasizes the audio-lingual aspects of learning basic Spanish. The basic structure of the Spanish language with oral and written practice is the focus.

152 Elementary Spanish II **4 Credit Hours**
Prerequisite: SPAN 151 or one year high school Spanish
W
This course is a continuation of grammar practice in oral and written Spanish with selected readings. Emphasis is on spoken Spanish.

251 Second Year Spanish I **4 Credit Hours**
Prerequisite: SPAN 152 or two years high school Spanish
F
This course continues the review of grammar practice in oral and written Spanish, based on selected readings and lectures. Conversation skills are emphasized.

252 Second Year Spanish II **4 Credit Hours**
Prerequisite: SPAN 251 or three years high school Spanish
W
This course emphasizes aural and oral practices. The study of Spanish contemporary life and literature will be a major focus. This course is a continuation of Spanish 251.

SPEECH (SPCH)

151 Communication Fundamentals   3 Credit Hours
F, W, Sp, Su

This course is designed to acquaint the student with the principles of the communication process: intrapersonal, interpersonal and public. It is a broad-based approach to aid the student in becoming a more effective communicator. Each student will present formal speeches to inform, persuade and demonstrate and be expected to participate in class discussions.

152 Public Speaking   3 Credit Hours
Prerequisite: SPCH 151

W

This course is designed as an intensive study of the principles of effective public speaking. Focus is placed upon improving speech skills in a variety of public speaking situations.

155 Interpersonal Communication   3 Credit Hours
Prerequisite: SPCH 151

F, W, Sp

Students will explore the role that communication plays in the evolution of relationships in friendship, a professional setting, marriage/romance and family. Students will practice and develop effective interpersonal skills such as self-disclosure, conflict resolution and ethical communication by working with a partner, in small groups and an open-discussion forum.

THEATER (THEA)

151 Introduction to Theater   3 Credit Hours
F, W

This course is a comprehensive survey of the theater and its drama. The goal is to familiarize the student with theater as an art form and as an implement of education and entertainment. The following aspects of theater may be considered in the course: play and play structure, scene design, scene construction, lighting and sound, costume and make-up, theater history, directing and acting.

152 Directing and Production   3 Credit Hours
Techniques
Prerequisite: THEA 151 and instructor's approval

W

Directing and Production Techniques offers a survey of directing principles and a study of fundamental elements in the analysis and production of a play. Although the materials consider the relationship of directing to other production crafts (set design, lighting, sound, costumes), the main focus is on the work of the director and particularly on the relationship with the script and the actor. This initial exploration provides a foundation for a more detailed look at varieties of theater experience and the processes of theatrical production.

153 Readers' Theater   3 Credit Hours

This course is a survey and practicum in readers' theater materials and performance. The goal is to familiarize the student with readers' theater as an art form and to give experience to the student with readers' theater as a performance craft. The following aspects of readers' theater are considered in the course: selection analysis; voice/speech development; body development; interpretation of prose, poetry, and drama, and performance of readers' theater.

161 Theater Workshop   3 Credit Hours
Prerequisite: instructor's approval

W

Theater Workshop offers an opportunity to study the basics of theater production with special emphasis on the practical crafts of theater (acting, directing, set design and construction, lighting, sound, costuming and management activities). Through practical experience with particular productions and related possible projects, the relationships among some of these elements may be studied. This course enables the student who has the requisite background in theater to focus upon individual theater projects and to learn more about the varieties of theatrical experience and the processes of theatrical production.

251 Fundamentals of Acting   3 Credit Hours
W

This course is designed to improve acting techniques through the use of exercises and scenes from world drama. The course will be supplemented by work on the production of a long scene, one-act or full-length play. If possible, a public presentation of students' work will be made.

WELDING TECHNOLOGY (WELD)

100 Introduction to Welding Processes   4 Credit Hours
F, W, Sp

This course is an in-depth introduction to the technical concepts pertaining to the more common industrial welding and cutting processes. Machine functions and filler metal chemistry will be emphasized as well as code and procedure requirements for a variety of industrial needs. Welding/cutting processes covered (including laboratory applications) include: oxy-fuel cutting (OFC), plasma arc cutting (PAC), shielded metal arc (SMAW), gas tungsten arc (GTAW) and gas metal arc (GMAW) welding.

101A Introduction to GMAW   2 Credit Hours
F, W

The student is introduced to manufacturing's most common welding process. Emphasis is placed on machine setup and Fat position welding techniques on various weld joints.

101B Basic SMAW   2 Credit Hours
F, W

The student is introduced to Fat position stick welding using various common welding electrodes. Emphasis is placed on welding technique in the Fat and horizontal positions.

101C Arc Applications   2 Credit Hours
Prerequisite: WELD 101B

F, W

A continuation of WELD 101B, the student progresses to vertical-up welding and is introduced to low hydrogen electrodes and vee groove weldments.

102 Advanced SMAW   6 Credit Hours
Prerequisite: WELD 100

F, W

The major emphasis of this course is the development of welding skills utilizing the Shielded Metal Arc (SMAW) welding process. Students will be welding vertical up, over-head and multipass with varied rods and metal thicknesses.

102A Multi-Pass Arc Welding   2 Credit Hours
Prerequisite: WELD 100

F, W

Students perfect their welding skills by welding thick section fillet welds in all positions. Expertise is developed using fast freeze and low hydrogen electrodes.

102B Code Welding Techniques   **2 Credit Hours**
Prerequisite: WELD 102A
<div align="right">F, W</div>

Students perform several common code welds in all positions. Completion of the course requires successful guided bend tests in all positions using fast freeze and low hydrogen electrodes.

102C Multi-Pass Pipe Fillet Welding   **2 Credit Hours**
Prerequisite: WELD 102A
<div align="right">F, W</div>

Students master weld pool control and all position welding techniques on an eight-inch, pipe-to-plate welding exercise. The finished project requires approximately 84 stringer and weave bead combinations in all positions.

103 Weldment Evaluation and Testing   **3 Credit Hours**
Prerequisite: WELD 100 or MECH 102
<div align="right">F</div>

This course provides an introduction to the various methods used to inspect weldments for reliability using both nondestructive and destructive techniques. Weld quality and procedure requirements of the AWS Structural Welding Code will be introduced. The knowledge and skills required for certification as an AWS welding inspector will be covered in-depth. Laboratory experience will be gained in non-destructive test methods (visual, ultrasonic, magnetic particle, radiographic, eddy current and dye penetrant testing).

104A Introduction to GTAW   **2 Credit Hours**
Prerequisite: WELD 100
<div align="right">F, W</div>

Students are introduced to Gas Tungsten Arc Welding. All assignments are completed on mild steel in the Fat and vertical positions on various types of weld joints.

104B Introduction to GMAW   **2 Credit Hours**
Prerequisite: WELD 100
<div align="right">F, W</div>

Students perform GMAW welding on a variety of weld joints in all positions. Weld integrity is determined by guided bend testing.

104C GTAW-Stainless Steel   **2 Credit Hours**
Prerequisite: WELD 100
<div align="right">F, W</div>

Students perform GTAW welds in a variety of weld positions and joint designs on thin gage stainless steels. Bead color and base metal distortion are greatly emphasized.

104D GTAW-Aluminum   **2 Credit Hours**
Prerequisite: WELD 100
<div align="right">F, W</div>

Students are required to master welding techniques particular to aluminum. Metal chemistry and weld perfection are emphasized.

105 Welding Metallurgy   **3 Credit Hours**
Prerequisite: WELD 100
<div align="right">W</div>

This course covers the physics and metallurgy of welding steel, aluminum and cast iron. In addition, the course covers welding procedure qualifications, welding design, industrial welding processes, equipment and parameter selection for production applications.

106 Basic Pipe Welding   **6 Credit Hours**
Prerequisite: WELD 100 and WELD 102
<div align="right">F, W</div>

This course deals with vertical-up, fixed position pipe welding on standard pipe diameters and thicknesses. Emphasis is placed on fit-up preparation, code-making organizations and standards and destructive/non-destructive pipe welding tests.

106A Pre-Pipe Welding Skills   **2 Credit Hours**
Prerequisite: WELD 100 and WELD 102
<div align="right">F, W</div>

Students are required to thoroughly master tie-in and rod pick-up welding techniques on three-eighths of an inch mild steel plate in all positions. The satisfactory completion of guided bend testing is a course requirement.

106B SMAW Pipe Welding–Uphill   **2 Credit Hours**
Prerequisite: WELD 106A
<div align="right">F, W</div>

Students are required to weld eight-inch diameter, schedule 40 pipe in the 2, 5, and 6G positions. Four guided bend tests are required for course completion.

106C SMAW Pipe Welding–Downhill   **2 Credit Hours**
Prerequisite: WELD 106A
<div align="right">F, W</div>

Students are required to weld two, eight-inch diameter, schedule 40 pipes in the 5 and 6G position, vertical down weld progression. All procedures relating to the A.P.I. code are adhered to.

110 Welding Symbols and   **2 Credit Hours**
    Blueprint Reading
<div align="right">F, W</div>

This course is designed to introduce the basic concepts of blueprint reading and welding symbols. A programmed, audio-visual training technique provides the vehicle to blueprint reading and welding symbol experience and is reinforced with classroom lectures, workbook assignments, hands-on projects and written evaluations.

114 GMAW and GTAW Applications   **6 Credit Hours**
Prerequisite: WELD 100
<div align="right">F, W</div>

A continuation of basic concepts learned in WELD 100, this course is designed to develop the skill levels of GMAW and GTAW welders and introduce pulse transfer in both processes. Acceptable levels of weld quality are significantly increased in this course as welders begin welding nonferrous metals, weld in all positions and complete more demanding destructive tests on their projects.

216 Basic Pipefitting   **4 Credit Hours**
Prerequisite: WELD 110 and WELD 102 or WELD 114
<div align="right">Sp, Su</div>

This course will cover basic fabricating techniques of various pipe intersections, pipe runs and sheet metal layout for heating, plumbing and power plant installations.

240 AWS Qualification and   **4 Credit Hours**
    Certification Entry Level
Prerequisite: WELD 100 and WELD 110 and WELD 114

This course is designed to meet the skill and knowledge requirements established by the American Welding Society for entry-level welders. Successful course completion meets the welding and cutting processes standards established in the requirements of AWS QC10 Specification for the Qualification and Certification for Entry Level Welders. Testing includes SMAW, GMAW and GTAW on aluminum, stainless and mild steel, on Fat stock up through three-eighths of an inch.

**250 AWS Qualification and
     Certification Advanced Level   4 Credit Hours**
Prerequisite: WELD 102 and WELD 106
This course is designed to meet the skill and knowledge
requirements established by the American Welding
Society for intermediate level welders. Successful course
completion meets the welding and cutting processes
standards established in the requirements of AWS QC11
Specification for the Qualification and Certification for
Intermediate Level Welders. Testing includes SMAW, GMAW
and GTAW on three-eighths of an inch Fat aluminum,
stainless and mild steel, and on eight-inch mild steel,
stainless and aluminum pipe, one-eighth of an inch thick.

WORD PROCESSING (WPR)

102 Word Processing I   3 Credit Hours
Prerequisite: EOS 102 or ADMN 102 or equivalent
   keyboarding skills
Word Processing I is designed to develop proficiency
in the operation of word processing software using a
microcomputer system. Course content focuses on creating,
saving, retrieving, editing, formatting, enhancing, printing
and merging a variety of documents. Content also includes
file management, introduction to microcomputer operating
systems and terminology and use of the Internet and e-
mail.

103 Advanced Word Processing   3 Credit Hours
Prerequisite: WPR 102
                                          F, W
Advanced Word Processing develops proficiency in the
advanced word processing functions of Microsoft Word
such as macros, sorting, tables and columns. A simulation
will give additional practice in the advanced features of
the software. Any student who has received credit for WPR
104, Word Processing for Administrative Assistants, may
not receive credit for WPR 103.

110 Personal Word Processing   2 Credit Hours
Personal Word Processing is a practical approach to the
efficient use of Microsoft Word. This course emphasizes
proper style and format in the creation of documents
ranging from business and personal correspondence
to reports and research papers across the curriculum.
The course also covers file management, includes an
introduction to microcomputer operating systems and
terminology and offers practice in using the Internet and
e-mail. No previous computer or keyboarding experience is
required.

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   B.A.A. Central Michigan University

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            Community Events Coordinator

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   B.A. University of Akron

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